

BRITISH BICONICAL URNS : THEIR CHARACTER
AND CHRONOLOGY AND THEIR RELATIONSHIP
WITH INDIGENOUS EARLY BRONZE AGE CERAMICS

BY

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TO
MY PARENTS
AND TO MY
WIFE

WITH GRATITUDE

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ABSTRACT

FACULTY of ARTS

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Doctor of Philosophy

BRITISH BICONICAL URNS; THEIR CHARACTER AND CHRONOLOGY AND THEIR
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The writer re-appraises the established terminology based on Abercromby's classification of food vessels and enlarged food vessels and advocates unification in a single Food Vessel/Urn Series in which four new classes (forms 1, 2A, 2B and 3) may be ordered chronologically en echelon. The abandonment of the size criterion is justified by analysis of some unpublished East Anglian domestic assemblages in which the contemporary occurrence of a wide range of sizes is observed. The homogeneity of the series is demonstrated by textural analysis in which the quantity and particle size mode of tempering materials is measured. These analyses reveal a predilection amongst both food vessel/urn and collared urn potters for certain grog preparations. Stressing the consistency of these two groups in their choice of temper recipe and decorative motifs, the writer proceeds to reject Longworth's thesis and proposes form 2A as the principal progenitor of the Primary Series of collared urns.

Analysing British biconical urns the writer identifies a Combined Series of intrusive urns which are chiefly characterised by their siliceous temper. These are further subdivided into an Inception Series and a Supplementary Series. In discussing the decoration and motor-habit patterns associated with these urns the contrast with indigenous food-urn pottery is stressed. In a third group the term Form 3 biconical urn is applied to grog tempered urns which represent replication by indigenous potters. Form 3 food urns, encrusted food urns and collared food urns are considered as more generalised examples of an indigenous response.

In conclusion it is proposed that British biconical urns represent the establishment of an immigrant sub-culture introduced from Northern France and the Middle Rhine as a result of increased cross-Channel contact developed during Wessex II. The relationship of cordoned urns, whetstone pendants, penannular ringworks, pit burials and Arreton bronzework is specifically discussed.

ABBREVIATIONS

AC.	'Anglesey collar' or 'Anglesey neck'
ang. cal.	angular calcined (flint)
Ant.	<u>Antiquity</u>
Ant. J	<u>Antiquaries Journal</u>
Arch J.	<u>Archaeological Journal</u>
BAP.	Abercromby, J., 1912
BM	British Museum
B.S.P.F.	<u>Bulletin de la Société Préhistorique Française</u>
C.	Cowie, T.G., 1978
Cal.	Calkin, J.B., 1964
CFPF	'Communications from Personal Friends' (in Warne, 1866)
CMH.	Centraal Nordbrabants Museum, s'Hertogenbosch
Com. Ser.	Combined Series
DCM.	Dorchester County Museum
D.C.	Devizes Catalogue (also given as Dev. Cat.)
Dev. Cat.	Annable, F.K. and Simpson, D.D.A., 1964
DM.	Devizes Museum
FN.	Fingernail decorated
FT.	Fingertip decorated
Gib	Gibson, A.M., 1978
In. Ser.	Inception Series
M.	Mortimer, J.R., 1905
N.I.C.A.	No information currently available
P.S.A.S.	Proceedings of the Society of Antiquaries of Scotland
psm	particle size mode
RML	Rijksmuseum, Leiden
S	Simpson, D.D.A., 1965
Supp. Ser.	Supplementary Series
TOVP	'Tumuli Opened at Various Periods' (in Warne, 1866)
V.	Vine, P.M., 1982
V.C.H.	<u>Victoria County History</u>
WAM.	Wiltshire Archaeological Magazine
Y.	Young, A., 1951

A. INTRODUCTION

INTRODUCTION

A1 Since Anglo-Dutch ceramics in the form of 'Wessex biconical urns' and 'Hilversum urns' were critically examined in two seminal works more than two decades ago (Butler and Smith, 1956; Smith, 1961), few additions have been made to the body of published Dutch and British material available for further discussion. The caveats and conclusions reached by Dr. Smith in her second paper have been well served by the test of time. In 1961 Dr. Smith regarded her Wessex biconical urns as a characteristic of a particular people who might also be identified by their use of disc barrows with internal or double banks and by urn burials in slab-lined or stone-packed pits. The floruit of these features was placed during Wessex II when a migration to Holland on the lines previously proposed by Glasbergen (1954) was generally accepted.

As a corollary to these events Dr. Smith observed that the bucket-like urns of the Dutch Drakenstein series and the true bucket urns of the British Deverel-Rimbury series developed along closely similar lines. In conclusion it was observed that the origin of the British bucket urn must pre-date the Deverel-Rimbury culture and it was further intimated that any future re-appraisal of this culture should give due regard to the ancestral elements present amongst the biconical urns. It was also observed that the parallelism in British and Dutch ceramics during both the Hilversum and the subsequent Drakenstein phase might arise from regular maritime contact between the two regions. In the course of such contact it was suggested that the passage of bronze goods, especially from Britain to Holland, played an important role.

Despite the appeal of a specific British migration to the Low Countries, there remained some disquieting elements in the 1961 case. A notable impediment to compatibility between the Dutch and British urns, and one readily identified by Dr. Smith, was the proliferation of horse-shoe handles in Wessex and the comparative deficiency of such handles in Holland. A more serious source of disquiet lay in the question of relative dating for, although the Wessex biconical urns were proposed as the source of the Hilversum urns, there remained considerable uncertainty concerning the date and origins of these urns in Britain.

In 1961 the origin of the Wessex biconical urn was believed to be somewhere within the general ancestry of the collared urn and Trevisker urn series; the latter being assumed to play a dominant role (Smith, 1961,

100). Further discussion on the question of origins was deferred in favour of J.B. Calkin's forthcoming work but when his analysis appeared in 1964 Calkin was able to advance a convincing argument for the origin of bucket urns but failed to substantiate the Cornish origin for biconical urns which had been intimated in 1961. (Section C1.3).

Uncertainty in 1961 concerning the origins of the British biconical urns was to be deepened by an element of discord regarding the relative dates of the Dutch and British urn groups. In Britain Dr. Smith observed that the faience bead associations placed biconical urns within Wessex II but 'although the associated finds at Bircham, Ringwouled, Winterslow and Winterbourne St. Martin would qualify these particular urns for a position well within the ambit of the second phase of the Wessex Culture, the general paucity of grave-goods probably mean(nt) that most of the group were later . . . ' In Holland, however, the paired FN decoration on the Vorstenbosch urn pointed to contact with 'people who were still using beakers.' It was also observed at this time that the small bases found on a number of Hilversum urns were reminiscent of pot beaker forms. Although these matters were discussed no further in 1961, it was already implicit that a number of Hilversum urns could ante date the earliest British examples and that the case for the eastward migration might be critically weakened.

Despite the latent seeds for re-appraisal sown in 1961 the concept of eastward migration continued to gain ground. In 1969 Professor W. Glasbergen reiterated the established case for British immigrants spreading their ceramic and funerary customs in Zuid_Holland (Glasbergen, 1969). This view was affirmed in the same year by Dr. J.J. Butler who observed that the presence of primary graves, such as Toterfout 1B and the use of cord decoration on a number of Continental urns provided a clear indication that 'before 1500 BC early groups of English urn folk must have crossed the sea to land on the coasts of Picardie and Flanders and must have spread in a northern direction to the regions of Brabant and Utrecht'. (Butler, 1969, 45). As late as 1977 Southern Britain was still considered to be the natural hunting ground for analogous barrow designs which might generally be considered to have been transferred eastwards along with the movement of the biconical urns (Beex and Van Impe, 1977).

In the past two decades major commentaries dealing with the origins of Hilversum urns and French biconical urns have been published almost entirely by our Continental colleagues. In the works of Glasbergen, 1969 ;

Butler, 1969; De Laet, 1974 and Blanchet, 1976, the general acceptance of a British genesis or a major British contribution has remained implicit. Despite the sustained support for this general hypothesis some small notes of caution have occurred. In 1974, De Laet viewed with a cautious eye the presence in Northern France of coarse pots decorated with cordons and FT impressions which 'had yet' to be proved to show any connection with the Hilversum series (De Laet, 1974, 326). In the same year some cogent opposition to the migration hypothesis was assembled and published by Dr. L.P. Louwe Koojimans who was able to demonstrate in the Late Beaker occupation at Molenaarsgraaf that a process of ceramic change had taken place during the 16th century bc. This change in beaker ceramics was marked by the select use of barbed wire stamps, pinched or 'nipped' FN decoration and the increased use of plain wares. These changes, it seemed, heralded the transition to the early Hilversum phase in which similar decoration is known to have persisted. Louwe Koojimans considered that these earlier changes, coupled with the use of inverted Dutch pot beakers as cremation receptacles provided the essential progenitors of the Hilversum Culture which, he considered, could now be more readily explained by autochthonous developments rather than by the pure immigration of the type proposed by Glasbergen.

A2 It is in the light of the new questions raised in the Low Countries and in Northern France during the mid 1970's that I have approached the problem of the origins of the British biconical urn. In 1961, Dr. Smith had exhausted fruitful enquiry into the meagre funerary associations of these vessels whilst demonstrating that the British inception might be placed within the timespan of Wessex II yet not without difficulty at the beginning of that period. As an avenue for future research Dr. Smith had also left unresolved her observations of 1956 concerning the general similarity in technique between the decoration of the British biconical urns of the Lowland Zone and the relief decoration of urns of the 'encrusted' and cordoned type in the Highland Zone.

Before his death in 1972, J.B. Calkin ear-marked for further consideration some thirty-nine urns of biconical form which were generally to be found in the same region as the encrusted urns and cordoned urns of Northern Britain. This further avenue of enquiry was rigorously tested by Arthur ApSimon in 1972 when he observed that the use of Secondary Series cord motifs suggested the parallel use of cordoned urns in a funerary

tradition which was already known to share a similar regard for razor burial with the biconical urn users of the south (Butler & Smith, 1956).

With the data base of British funerary biconical urns remaining essentially unchanged and with a number of avenues of research having been already at least reconnoitred, it has seemed prudent to devise some new means by which the problem of the British inception might be examined. The guarded references made by our Continental colleagues to the essential British nature of applied cord decoration had provided a clear indication that the relationship between food vessel urns, collared urns and biconical urns raised questions of characterisation and differentiation which remained to be resolved. Such questions are no better epitomised than in the character of the South Afflington urn (D.B45) which defies almost any attempt to impose a rigid distinction between food vessel urn, collared urn and biconical urn classes.

In attempting to classify the South Afflington urn and those of similar style from Arne G10 (D.44), Nymet Tracy (Dv.1) and Morvah Hill (C.13) it becomes readily apparent that some independent measure must be called upon when definitions based upon general consistencies in shape and decoration fail to identify an underlying parent tradition. During the first twelve months of my part-time research a one month study tour was made amongst the Ila and Lozi tribes of Zambia. Transport and an interpreter were kindly provided by the Livingstone Museum and the Information Office of Zambia. An area of the Kafue Flats was examined where tell mounds provide evidence of pottery styles practised from the eleventh to the nineteenth century A.D. The evidence collected showed that rather than indicating prescribed human group traditions, motif and style are of lesser significance amongst pottery traits. All potters interviewed were however meticulous in the preparation of their clay. The size and proportion of temper, the viscosity of the clay and the time of the month must all accord with prescribed requirements. Girls were taught the craft in their teens. A poor firing could bring bad luck and the recipe for success was consequently never varied.

These observations coupled with the comments of the ethnographers cited in section C6.6 offer an alternative means by which the group tradition of biconical urn potters might be identified. Temper ingredients appear to offer a wide technological choice to the potter but the ethnographic record suggests that his course is more often tightly channelled within the traditional expectations of his peers. In seeking

the identity of biconical urn potters and users it is clearly important that we should examine textural qualities to establish what the group expectations in this field might have been.

A3 Captains J. Blundell Hollingshead and Abraham Levy offer the earliest observations on the textural characteristics of biconical urn fabric in their Ms. account dated October, 1805. In their account of the opening of a barrow on the Dorset Ridgeway these two officers observed that 'the urn appeared to be made of a bad species of clay and was very soft on exposure to the atmosphere but by degrees became harder'. This account provides some tenuous grounds to suggest possible membership of the form 3 biconical urn series.

In 1818 John Skinner provided some further textural observations when recording his excavation of urn IW.B5 from Chessel Down, Isle of Wight. His observations that this urn comprised 'coarse unburnt black clay mixed with the fragments of small shells' enables this lost find to be reconciled with the other shell tempered biconical urns IW.B1 and IW.B4 found in the same area (Skinner, 1818, Dennett Ms.) Writing of an inverted secondary cremation urn (which was possibly an Inception Series biconical urn) found at Studland G9, Charles Warne (1866, TOVP.70) observed that 'the clay of which this vessel was composed had been made mixed with small fresh water shells instead of the quartz sand which was customarily made use of in the manufacture of British pottery'.

It was generalisations such as those expressed by Warne which were to lead to a more refined scheme for some standardised descriptions of British prehistoric ceramics. This scheme, based on some 17 years excavations in Cranborne Chase was advanced by Pitt-Rivers in 1897 and provided a fourfold textural classification for the ceramics of that region. Pitt-Rivers formulated his classes or 'qualities' according to surface texture, thickness, hardness and temper. The scheme, which was never commonly adopted, was undoubtedly over simplified yet it embodied a significant observation that the characterisation of prehistoric ceramics might be approached by means other than the analysis of formal and decorative features arranged in accordance with intuitively defined groups.

Textural analyses concerning the selection of tempering ingredients is clearly a neglected field and one which, in more recent years, has undoubtedly been eclipsed by the revelations of ceramic petrology. The objectives of these two analytical approaches are however widely divorced for, whereas the petrologist will primarily seek a source of manufacture,

the temper analyst will seek to determine the behavioural consistency exercised by the potter during the preparation of his clay.

A4 In seeking an independent measure by which to assess the conflicting configurations of pot shape and decoration I have developed a means by which the underlying group traditions of the potter might be probed. For this purpose simple textural analyses have been carried out on a broad sample of British biconical urns and are presented in graphic form in the illustrated corpus. The analyses are presented in the form of radial diagrams in which the relative quantities of grog and other temper ingredients are indicated. The use of grog temper is the definitive characteristic of the British food urn tradition of Southern Britain and the form 3 biconical urns. The latter represent an adaptation by similar groups of indigenous potters.

For ease of reference grog only is always indicated on the left hand side of the diagram. On the right hand side of the temper diagrams temper ingredients other than grog are shown. The principal temper ingredients of this type are flint, quartz, stone, sand and shell. A standard key for all of these principal ingredients is given in fig. 2.

For the calculation of temper quantity, Shvetsov charts have been employed whilst examining the sherds in polished section at X12 magnification. In the case of some unbroken vessels, temper quantity has been similarly calculated from a scraped and dampened abrasion usually sited on the base. Temper quantity occurring at 20% or more is indicated by shading extending to the median line in the diagram. Refinements in the use of the Shvetsov method are described in section E4.1.

For an indication of the particle size mode of grog and other inclusion the horizontal scale at the base of the diagram has been employed. For ease of use, the mode sizes for the grog and non grog inclusions are read from the outer edge inwards. The mode sizes are rounded up to 0.25 divisions expressed within each 1mm graduation. The scale accommodates a particle size mode up to 5mm in either the grog or non grog classes. In the rare event of a modal size exceeding the centre division, the size is still expressed as 5mm. The true figure in this case may be found by reference to the relevant corpus entry. Details of the method of particle size mode calculation is given in section E4.1.

A5 In the presentation of this study a number of new terms have been introduced and a further number of archaic or restricted terms have been borrowed in discussion or used in retrospective description. These terms primarily concern the British food urn tradition and they are qualified here.

In the review of the British food urn ceramics presented in section B it has been necessary to alternate a number of synonymous terms to achieve fluent discussion. For the purpose of discussion the term 'pot, urn, receptacle' and 'vessel' are all used synonymously and none are intended to convey any more specialised meaning unless specifically stated. No funerary connotation is attached to the term urn. The term 'series' is generally employed as a collective term intended to embrace a substantial number of pots which may be grouped together for the purpose of discussion or used in comparison with another group of pots. In the past certain 'series' have been assembled in which group likeness has been maintained over an appreciable time trajectory. The principal examples are the Primary Series and Secondary Series of collared urns. These series are acknowledged in capital letters in the manner used by Longworth. An important word in need of qualification is the term 'tradition'. It is the writer's view that at the outset of the period under discussion (from c1700 bc) only two indigenous traditions may be recognised. These two traditions concern the production of Beaker pottery and the production of food vessel or food vessel/urn pottery. The second of these two elements is of major relevance to this study and it is here referred to by the new name 'Food Urn Tradition'. In section B4 it is observed that in the early part of this tradition the relevant pottery comprised 'food vessels' and 'food vessel urns'. In section B4.2 it is further observed that the former and latter may be justifiably combined under the name 'food vessel/urn', a term which carries the implication that both large and small vessels of this type are present.

The food urn tradition comprises a common array of vessel shapes, rim forms, decorative motifs and temper characteristics which may be traced over a substantial time trajectory. During the development of this tradition vessel shapes become adapted into a small number of readily recognisable 'forms' whilst the choice and deployment of decorative motif drifted into new combinations and positions formulated over time. During the progression of these changes two essential qualifying attributes concerning the behavioural characteristics of the potters remain unaltered.

In section C6.5 it is observed that in the choice and execution of decorative motifs the motor-habit patterns of the potters remain constant. In the matter of clay preparation, temper selection and firing, the behaviour pattern traced across time, is similarly unchanged.

During the later progression of the food urn tradition further terms concerning formal changes occur. In section B6 it is argued that the development of the collar comprises one such change and that consequently the logical new term for the Collared Urn Series, in the terms set out in this study, is the 'collared food urn'. Despite this proposal the established term 'collared urn' or 'collared urn series' is commonly retained in the text. Other important forms occurring in the later phase of food urn production are 'encrusted food vessel/urns' and 'form 3 and form 4 food vessel/urns'. Due to their membership of a single unifying tradition it is observed that these forms may equally well be termed 'encrusted', 'form 3' or 'form 4' food urns.

Terms which require special qualification are 'form 3 food vessel/urns' and 'form 3 biconical urns'. In section B4.3 it is observed that the incompatible numbering of Abercromby's 'food vessel' types and 'enlarged food vessel' types make it impossible to unite the former and latter in an all-embracing size range whilst retaining the traditional type numbers. In devising an acceptable rationalised version of the traditional scheme the term 'form' has been employed as an alternative to Abercromby's earlier term 'type'. In discussing the development of form 3 food vessel/urns it is stressed in sections B4.6 to B4.9 that this particular form demonstrates an indigenous response which may be attributed to new innovative changes promoted by the arrival of biconical urns. In section C2.4 it is further observed that the replication of biconical urns by British potters in some cases became so exact that the presence of the indigenous grog temper recipe remained the only identifying trace. Such pots have been termed 'form 3 biconical urns'.

Under the above conditions it is clear that differences between form 3 food vessel/urns and the indigenous replicas of the intrusive biconical urns may be no more than nuance, especially when the biconical urns concerned may lack further distinctive attributes. In order to stress the continuity in these graduated levels of response to the biconical form the term 'form 3 biconical urn' has been employed even though the distinguishing feature of such an urn need only be based upon temper and not on form. It should be observed, however, that in a number of

form 3 biconical urns the presence of the indigenous ceramic tradition is also betrayed by the use of other techniques such as tooled incisions being substituted for FN shoulder impressions.

In the ordering of British biconical urns it has proved practical to employ only simple means of classification. The difficulties in establishing some fixed points in the chronological development of these urns was clearly revealed in 1961 when Dr. Smith reviewed the meagre array of helpful associations. A new avenue of research explored in sections C4.3 and E4 to E6 is the analysis of settlement site material. Whilst the timespan represented by individual assemblages remains unknown it has been possible to examine some differences in rim form and decoration which appear to demonstrate a consistent pattern of change ranged over time.

In classifying the British biconical urns I have acknowledged the current difficulties of typological ordering and have consequently recognised a single major body of urns in which temper, form and mode of decoration offer a total contrast with the indigenous food urn tradition. Within this body, termed the 'Combined Series' I have defined a sub group in which I have suggested that the presence of nine non-functional attributes signifies the survival of some vestigial features. These features are attributed to some widely dispersed sources within the parent Continental biconical urn tradition. Such attributes, I have suggested, would most likely survive best during the inception of British biconical urns although each attribute may of course have sustained an independent timespan of unknown duration. It is also possible that the arrival of some of these attributes may have occurred on independent occasions but, in the absence of absolute guide-lines, this possibility cannot at present be satisfactorily investigated.

Due to the limited number of complete urns it has not been possible to assemble adequate numbers of pots displaying consistent use of the nine attributes of the Inception Series. As a consequence it must be acknowledged that the use of attributes 1 and 2 have so far been confirmed only on urns tempered in the manner of the indigenous tradition where it is assumed that they have been copied directly from intrusive urns tempered in the Continental tradition.

A6 Final comments concern the presentation of food urn and biconical urn data. In surveying the very large body of food vessel/urn material I have become acutely aware of both the need for a general corpus and the impediments

which have been produced by the traditional division of food vessels and food vessel urns. Whilst collared food urns must undoubtedly be viewed as a major component of the food urn tradition, their numerical superiority and the forthcoming corpus of Dr. Longworth makes their inclusion in this work impractical.

In section E1 a compendium of British food urn pottery, excluding collared food urns and cordoned urns, has been assembled under individual counties: In the north I have been greatly assisted by the work of T.G. Cowie (1978) and I have retained his county reference numbers intact. In doing so it has been necessary to allocate new numbers to pots of food vessel size omitted from Cowie's corpus. It has also become necessary to abandon any attempt at alphabetical or locational ordering in accordance with the numbers assigned.

The county references used accord with the traditional county boundaries as employed before the Local Government Re-organisation of 1972. It has been my experience that very few county museums have shown signs of relinquishing material relevant to the new counties and few county archaeological proceedings adequately reflect the boundary changes which have now been imposed.

The compendia of both food urn ceramics and Continental biconical urns are not intended to be exhaustive but have been drawn up as a guide to the basis upon which certain statistical statements are made in the text. These compendia also attempt to cover all major associations.

B. THE INDIGENOUS CERAMIC TRADITION

B1 THE DEVELOPMENT OF FOOD VESSEL TERMINOLOGY

"British fictile vessels may be divided into two classes; the culinary and sepulchral, of which the latter alone has as yet been much studied. Of the sepulchral pottery three forms were discriminated by Hoare, the cinerary urn, the drinking cup and incense cup. To these Mr. Bateman added the food vessel."

The above comment made by John Thurnam in 1871 (336) summarises the endemic problem which has bedevilled the study of early bronze age ceramics. Hoare in his 'Ancient Wiltshire' imposed no real distinction between culinary and sepulchral pottery, a choice which no doubt arose fortuitously when all his material was solely obtained from funerary contexts (Hoare, 1812). Although ipso facto all examples were sepulchral, Hoare did not apparently consider his pottery to have been specially fashioned for the grave although he certainly believed that his 'incense cups' had been employed for the burning of 'balsams and precious ointments suspended over the funeral pyre'. Under the general heading 'Sepulchral Urns', Hoare identified 'sepulchral or funereal urns; drinking cups and incense cups' as his three fundamental types. The 'drinking cups' and 'urns' Hoare considered to be 'appropriated to distinct purposes'. His phraseology here suggests that the vessels were probably considered to be 'appropriated' from domestic use, a role which he clearly confirms when employing the term 'drinking cup'.

The term food vessel which was first employed by Thomas Bateman in 1855 was appended by him to Hoare's three fundamental ceramic types in 1861. Bateman records:-

"Our experience in barrow-digging will justify the statement that all vessels exhumed from Celtic Tumuli may be arranged in one of four classes".

Changing the order of Hoare's classes Bateman then introduces

"Class III 'Small Vases'- probably intended to contain an offering of food is usually found with unburnt bodies but not infrequently with burnt bones though never containing them".

Bateman goes on to observe that the 'vases', as he terms them, vary from $4\frac{1}{2}$ to $5\frac{1}{2}$ inches in height and have generally a wide mouth and small bottom. By 1870 Bateman's colleague and illustrator Llewellyn Jewitt was to confirm, with a hint of scepticism, the new term 'food vessel' when illustrating six examples from Bateman's and Greenwell's excavations in Derbyshire and Staffordshire. "Food vessels (so called)," he states "are supposed to have contained an offering of food." (Jewitt, 1870, 84).

Jewitt's account of 1870 suggests that the term vase was currently being supplanted and in the following year Thurnam reinforces the new terminology when discussing the general distribution of food vessels. Thurnam subdivided his food vessels into four types. His first two types were generally 'urn-shaped' but poorly defined and in his second example he illustrated the small collared urn from Collingbourne Ducis G11 (Thurnam, 1871, 379). In his third and fourth types, which he termed bowls, Thurnam cited Yorkshire vases and Irish bowls respectively. The Yorkshire vases were loosely combined with forms later defined by Abercromby as types 2 and 2a. In his fourth category Thurnam cited the distinctive Irish bowl which he termed 'the decorated shallow bowl-shaped food vessel'. "This variety", he writes, "in which the ornamentation reaches its highest developments is I believe confined to Ireland. The Irish food vessels present almost endless modification of form". To illustrate his point Thurnam illustrated the Irish bowl from Altegarnon, Co. Antrim and the food-vase from Ballybit, Co. Carlow.

Thurnam employed loose nomenclature in first describing the Irish examples, observing them to vary between urn, bowl, compressed types and jug shapes. In his ensuing discussion however the term Irish food-vase is re-introduced and although not explicitly stated this term seems to differentiate the taller examples of Irish food vessels which cannot be described as Irish bowls.

Elsewhere in his description of cinerary urns Thurnam illustrated the fine example of a ridged and stopped food vessel urn from Mountblairry (Ban.4; Thurnam, *ibid*). This illustration was borrowed from the earlier account by Jewitt. Here, separated from the Semer food vessel (Yor.140) by only a few pages of text is a prima facie example of the size range parameters of the food vessel ceramic tradition (fig. 1).

Had this relationship been taken up by Thurnam we should, no doubt, have been spared much of the terminological difficulties we have inherited today. Unfortunately the nineteenth century regard for classical erudition held sway. Thurnam roundly observed "the classical name of 'urn' often given to every variety of vessel from the barrows attaches of right to those only which contain, or were even designed for the reception of, burnt bones". By this means cogent evidence for a single explicit ceramic tradition was divided arbitrarily into vessels, vases and urns. The terms of reference were now set, but not entirely without dissent. Six years after Thurnam's publication Canon Greenwell reviewed the range of vessels

recovered from British barrows. These vessels he observed, "vary almost indefinitely in size shape and ornamentation . . . They have been divided into 'cinerary urns', 'incense urns', 'food vessels' and 'drinking cups'. This nomenclature is to some extent as regards some of them misleading but it has become so commonly used as to render it difficult and perhaps unadvisable to alter it . . . If the intention of these vessels or the object with which they have been buried with the dead could be ascertained then it would become imperative to make such an alteration in the names given to them as would bring the manner into harmony with their actual purpose. But as it is impossible to say with absolute certainty what they were originally intended for . . . it is perhaps better to adhere to the existing nomenclature. It must however be premised that it is merely a conventional one and the reader must be guarded against forming any conclusion as to the purpose of the vessel from the name which has been popularly assigned to it." (Greenwell, 1877, 61-2).

Greenwell's contention with the nomenclature arose primarily from questions concerning the funerary purpose of his vessels and he seems to have given little thought to any other role "if indeed," he adds, "they ever had any other purpose beyond the sepulchral one."

Intimations of further dissent may be detected in 1892 when the large collection of bronze age pottery in the National Museum of Antiquities of Scotland was illustrated in the new catalogue of that year. The term urn was now employed in its general sense to embrace robust receptacles of all sizes. This catalogue followed the traditional four-fold division of bronze age ceramics but two classes were now re-named. The term 'small cup-shaped urns' was introduced for vessels 'which used to be fancifully called 'Incense Cups''; and Thurnam's food-vessels were now introduced as 'Urns of Food-vessel type' (S.A.S., 1892).

B1.1 The Abercromby Scheme

The terminology of Early Bronze Age ceramics was to undergo its final major review in 1912 when Abercromby introduced some simple Linnaean principles in his magnum opus. Abercromby was already conscious in 1904 of wider geographic implications and he introduced the term 'beaker' to replace the traditional name 'drinking cup'. In doing so he consequently brought British terminology into line with the becherkulturen and gobelets campaniformes of the continent. In 1912 Abercromby defined a number of geographic regions in which beakers and food vessels could be identified in distinct groups. These ceramics he divided into classes based on shape.

For the beakers Abercromby modified Thurnam's original three fold classification but for food vessels he introduced a division into six types for those found in Britain south of the Tweed.

Type -	1	2	3	4	5	6
sub type	1a	2a		4a	5a	
	1b			4b		

A further series of five types was used to classify Hiberno-Scottish varieties. Of these latter, types A to D were used to subdivide Irish bowls and type E was employed to distinguish Irish food-vases.

Abercromby gave no ready explanation of his classification scheme other than his opening comments that 'an attempt should be made to arrange the chief types of British and Hibernian pottery in chronological order.'. For types 1, 4 and 5 he defined what he termed sub-types or by-forms but no specific evolutionary sequence seems to have been implied.

Ireland was considered by Abercromby to have played an important role in the development of food vessel pottery and northern British forms he believed were derived from Irish prototypes. Food vessel types A-D were therefore placed at the head of the British types 1-6. Type D was considered to be generally contemporary with British type 4, 4a and 4b.

The type A Irish bowl found in both Ireland and Scotland Abercromby took to be the precursor of British types 1a and 2. A bowl probably from Ulster and then housed in the Bell collection at Edinburgh was cited as an example of a type 1a vessel signifying the transition from an Irish bowl. Further examples of type 1a from northern Britain convinced Abercromby that the Yorkshire and Derbyshire examples evolved at a date subsequent to the emergence of the earliest examples in the Irish series.

In presenting his new chronological order Abercromby reviewed the position of beakers. Thurnam, perhaps biased by their superior quality, had placed them subsequent to 'cinerary urns' and in restoring them to their correct position Abercromby automatically created a cremation horizon. Six types of cinerary urn were now enumerated to which pygmy vessels were added as an accompanying ceramic type. (In a curious inconsistency Abercromby lists pygmy cups as type 2 of his cinerary urns).

Overhanging rim urns (collared urns) classed as type 1 urns were identified as the earliest examples of cinerary urn. In defining this type Abercromby made a significant observation concerning relationships with the food vessel series. Urns with 'moulded rims' or incipient collars such as Winterbourne Stoke G28 (W.11; BAP., 2,11) and Wilsford G65

(W.5; BAP., 2,14) were now embraced in the collared urn class. The significance of the incipient collar had at last been grasped but the new illusion of a cremation horizon had now introduced a further impediment. No collared urn had ever been found in a closed context with a food vessel so a southern genesis for collared urns was now envisaged in the region where food vessels were noticeably scarce (BAP., 2,23). Before the collared urn tradition was carried north of the Thames Abercromby proposed that a process of food vessel enlargement had taken place during an intervening period. Abercromby enumerated his enlarged food vessels as 'cinerary urn type no.7' but he never equated them with a graduated range in a domestic repertoire. Encrusted urns were further divorced from their conventional food vessel urn counterparts and assigned ^{to} the latest stage of the Bronze Age.

The most notable achievement of 1912 was the recognition of a collared urn genesis in the food vessel series (BAP., 2,A2). Less satisfactory was the proposition that the collared urns should in turn be responsible for enlargement and changes amongst the food vessel urns. The terms overhanging rim urn, food vessel and enlarged food vessel had again been re-affirmed and this made further terminological difficulties inevitable.

B1.2 The Abercromby Aftermath

Since Abercromby's corpus of 1912 much of the conceptual framework of 1812 has, regrettably, been perpetuated. In summarising his corpus study of collared urns in 1961, Longworth revived the Thurnam specification and divided an allotropic sample of collared urns into 'urns' and 'accessory vessels' identified by the presence or absence of cremated contents. The term collared urn was however retained, without prejudice, when describing the tradition collectively.

The small number of Early Bronze Age domestic vessels has provided little to abate preoccupations with funerary wares. In re-appraising the British beaker succession in 1970 Clarke found it acceptable to omit from his sample the domestic assemblages (Clarke, 1970). More recently in a corpus of collared and cordoned urns in Ireland, assemblages from occupation sites have been discarded as 'a domestic variant' of what has been considered to be a 'great Cinerary Urn tradition' (Kavanagh, 1977, 293, 330).

The divorcing, by Thurnam and Abercromby, of food vessels from their larger urn-like counterparts has also had notable repercussions. At

present no unambiguous term has been employed to describe the collective tradition and a consequence has been the production of specialised studies such as those by Kitson Clarke (1937), Manby (1957) and more recently Cowie (1978). In each of these studies the established terminology has imposed an artificial ceiling based on size.

Since 1912 the collective tradition has been further encumbered by special terms for the Irish varieties of the food vessel series. Abercromby had used the terms food vessel types A to E for the Irish series but in 1935 in a paper delivered to the British Association Miss Chitty revived John Thurnam's terminology and re-introduced the term Irish bowls for types A-D (Manby, 1957, 1.n). Figuratively speaking it would seem that on this occasion Ireland was being depleted of its food vessel population and this was indeed confirmed in 1958 when the remaining type E was presented by ApSimon in Thurnam's terminology as the 'Irish vase' (ApSimon, 1958). Since this time reference to this particular group has undergone a number of modifications in which the terms Hiberno-Scottish vase, Irish-Scottish vase and urn and Drumnakilly series have been employed (ApSimon, 1969). Moreover ApSimon has drawn attention to the presence in Ireland of an intrusive group of ceramics which remain classified as food vessels and which show affinity with North East England. The distinct nature of the Irish series has clearly warranted special terms but in the revival of old names, which may seem historically appropriate, there has emerged a real danger of distorting the collective identity of the British food vessel/urn tradition. Simpson was undoubtedly aware of this danger in 1968 when he qualified his introduction to the Irish vase by adjoining the term 'Irish vase food vessel' (Simpson, 1968, 197).

Despite the plethora of terms defining morphological types, regional varieties and size categories, there remains an unifying lineage in the British food vessel/urn ceramic a tradition. This lineage is inferred not by the occurrence of vessels as cremation receptacles but by a number of evolutionary stages which may be seen to link the more developed forms such as cordoned urns, collared urns and encrusted urns to a primary range of food vessel types. If such a lineage can be confirmed it would be appropriate to devise a term which might identify the entire tradition. Before pursuing this question it will be necessary to re-examine the role of the collared urns.

B2 COLLARED URNS AND THEIR RELATIONSHIP WITH THE FOOD VESSEL/URN SERIES

Six years after the completion of Dr Isobel Smith's survey of Neolithic ceramics in 1956, 'The Origin and Development of the Primary Series in the Collared Urn Tradition' was published. (Longworth, 1961). As the result of an exhaustive corpus Longworth identified a series of collared urns which persistently exhibited varying combinations of a number of formal and decorative traits which could be attributed to an archetypal or primary series. A total of eight traits were identified and urns exhibiting two or more traits were considered to qualify. The maximum number of traits observed in a single urn was six. An analysis of trait loss demonstrated that decorative traits showed a decline proportionately greater than formal traits. (Such a differential would seem to suggest that in this ceramic tradition decorative motifs were the first and most sensitive medium to reflect change).

In devising the qualifying traits Longworth was heavily influenced by the presence of similar characteristics in the Late Neolithic Peterborough tradition and in particular those aspects of rim, collar and neck formation and decoration that occur in the transition between Mortlake and early Fengate styles (Longworth, 1961, 272).

Applied to some 400 Primary Series collared urns, primary trait analysis worked with considerable success. On 33 sites where stratigraphical evidence was available trait loss could be shown to operate in the approved direction. On a further 19 sites where contemporaneity could be shown the vessels generally showed no greater variation than 2 traits. On four sites trait loss occurred in reverse order but the urns in these cases carried notably low trait scores and could be claimed to represent a break-up of convention towards the end of the series.

In classifying the formal and decorative characteristics of the entire collared urn population, Longworth recognised eight basic urn forms and fifteen types of decorative motifs. The motifs were executed by a total of seven decorative techniques. (In the current study Longworth's motif classes, with some minor additions, have been adopted for the description of all relevant ceramics)

In general the Primary Series showed considerable conservatism in form with 80% of the vessels being confined to tripartite shapes with concave necks. (Longworth, 1970; forms 1, 1A and 2). The dominant motifs in the Primary Series were types A and J and the major decorative techniques were non-linear incision and whipped cord impressions.

The temporal evidence for progressive trait loss, the persistence of

Late Neolithic whipped cord impressions on both collar and neck and the common occurrence of internal moulding and internal decoration convinced Longworth that origins for his Primary Series lay in the collared rim of vessels of the Peterborough tradition. For reasons which we may examine later, Longworth also concluded that it was no longer necessary to interpolate a Food Vessel phase between the Peterborough bowl form and a collared rim vessel. (Longworth, 1961, 264).

The evidence for the Primary Series is extremely persuasive but there remains a number of disquieting anomalies which require further discussion.

B2.1 The lack of progenitors

Longworth rightly considered it unwise to treat the actual number of traits present in any individual urn as a precise indicator of its relative chronological position within the series. He stressed however that the absence and decline on the number of traits implied divergence away from an ancestral tradition (Longworth, 1961, 268).

When assembling those urns with the maximum number of traits the evidence for the early character of this tradition suggests a very accomplished product in which time and care has been particularly expended both in the modelling of the internally moulded rim and in applying decoration on the rim neck and body of the pot.

The traits identified by Longworth provide evidence for the devolution of what might be described as mature or developed series of urns but there is no such evidence for the evolutionary steps which are necessary to formulate the series.

Longworth found it extremely difficult to demonstrate the transition from Peterborough vessels to collared urns. In the Late Neolithic wares no direct progenitors could be cited and to acquire the appropriate components it seemed necessary to borrow select characteristics from the Mortlake and Fengate styles while discarding those inappropriate to the scheme. The cylindrical bodies and flattened collared rims of the Fengate style were acceptable but the common FN decoration and the weak neck elements in this style were not. From the Mortlake style the deep cavetto neck and the common use of whipped and line cord amended the deficiencies of the Fengate style but the neck pits and the rounded rims and bases of Mortlake were quite inappropriate.

Due to the absence of direct Late Neolithic progenitors, Longworth

proposed that the origins for his Primary Series lay in a conjectured ceramic form springing from the transition between Mortlake and Early Fengate styles. The absence of corroborative examples was attributed to the dearth of Peterborough vessels then available from late contexts. Longworth observed at this time that "the possibility must remain that other collared vessel forms which do not seem at present to represent primary translation may yet have direct progenitors still to be discovered." In view of the major increase in the excavation of Late Neolithic sites since 1961 there would now seem to be rather less grounds for optimism.

B2.2 The presence of Food Vessel Urn characteristics in the earliest examples of the primary series

In presenting the collared urn end of the transition, considerable emphasis has been placed on those urns which approximate in form to the Peterborough tradition. Some nine urns have been cited and special emphasis has been placed upon those from Canwick (Ln.3) and Hanging Grimston (Yor. 45; Longworth, 1961, 264). Rather than search for hypothetical Mortlake-Fengate progenitors both these urns may be happily accommodated within that class of pottery which has been conventionally termed the food vessel urn. The narrow footed base, wide carinated shoulder and concave neck are typical of the form which would be classified by Abercromby as type 3. It is the exaggerated external rim bevels on the Canwick and Hanging Grimston urns which underline the paradox of the collared urn classification. It is certainly pertinent to question the point at which an exaggerated or descending bevel becomes a collar. The decorative motifs employed on both of the pots are typical of the food vessel/urn series and it seems appropriate to compare these urns with two further examples from Wales (fig. 3).

The cist burial at Llangwm, Denbighshire contained two pots belonging to the food vessel/urn series. The large example (Dh.9) presents a body profile which, although restored, is closely comparable with the Canwick urn. The shoulders at Canwick and Llangwm are similarly carinated and both urns carry fingertip grooving on their concave necks. At Canwick a deep internal bevel carries incised decoration (motif J) which spills over the rim and is repeated on the external bevel. These vessels differ in only one significant element and that is the degree to which the external bevel is everted. Despite only the slightest suggestion of projection the external rim bevel on the Llangwm urn has surprisingly been cited as a

qualifying feature for a Primary Series collared urn (Longworth, 1961, 283, 302). The second example from Wales will demonstrate the ambiguous effect that an everted bevel may confer.

It is appropriate that the Clocaenog food vessel urn (Db.11) should be compared with both the Canwick and Hanging Grimston urns. Although this urn does not qualify as a Primary Series collared urn, its everted external rim bevel might be favourably compared with both former examples from Yorkshire. Like Canwick the internal decorative motif has been allowed to spill over the rim to be repeated on the external bevel.

Despite the more everted or developed collar present at Clocaenog this urn fails to convey the conventional appearance of a collared urn. The vestigial shoulder groove and the applied relief decoration on the neck are both very firm indications of its food vessel urn pedigree.

A comparison of the Llangwm and Clocaenog vessels with those from Canwick and Hanging Grimston is a reminder to us that the division between those urns which have been considered on typological grounds to be the earliest in the Primary Series of collared urns and those urns which may be currently described as food vessel urns is indeed an arbitrary one. The time has now come to review the nature of the collared rim phenomenon within the typological range of the British food urn tradition.

B2.3 Textural characteristics

There are major and consistent textural differences between collared urns and vessels of the Peterborough tradition. The firing technique employed for Peterborough wares used little oxygen to produce hard dark grey reduced pots. The collared urns by contrast were fired in an oxidising environment which generally produced a light reddish brown burnished fabric with a soft carbon rich core. Peterborough potters are likely to have maintained an effective means of oxygen control during firings and the hardness of their wares was enhanced by liberal tempering with sand and calcined flint fragments. Although no direct attempts at replication have been made it is likely that the consistency throughout the wall thicknesses of Peterborough sherds reflects an effective temperature of at least 500°C maintained over a period in excess of 40 minutes. (Hodges, 1962).

Unlike the Peterborough tradition the firing method employed for collared urn production is likely to have involved a rapid open conflagration in which an effective temperature need be sustained no more than 5 minutes. Experimental firings by Hodges have certainly demonstrated that similar fabrics with superficially oxidised surfaces and carbon-rich cores may be effectively produced by this method.

The recognition of fundamental technological differences between Peterborough wares and the collared urn tradition is not new. Grog temper, which is consistently found in Primary Series collared urns has been contrasted by David Peacock with the widespread use of calcined flint in Mortlake and Fengate wares (Peacock, 1970, 375-6). Peacock notes that grog tempering may occasionally be found in Fengate vessels but the overall evidence suggests that a major technological change divides the two series.

In citing the technological division Peacock has raised the question of innovation and has proffered inspiration from the grog tempering traditions of Beaker potters. Although a few Primary Series urns display some zoned motifs common to the beaker series the evidence for Beaker influence in the collared urn tradition is generally weak. (Longworth, 1961, 280). Longworth has cited a small number of collared urn inhumation burials of Beaker character but no instance can be given of direct beaker associations. If grog tempering techniques were acquired from Beaker potters it seems surprising that other more attractive techniques were not similarly transferred. These would include all-over burnishing, thorough firing and the construction of thin walls for smaller vessels.

A more appropriate comparison for the textural characteristics of collared urns is to be found, not unsurprisingly, in the food vessel urn tradition. A control sample showing the temper quantity and particle size measurements for thirty food vessel urns from Wessex (fig. 4) shows preference for grog quantities generally ranging from 8 to 15% with a preferred particle size mode of 1.8 to 3mm. Measurements for ten Wessex food vessels shows similar grog quantities with a predictable preference for a slightly reduced particle size range of 1 to 2.5mm for these smaller pots (fig. 5).

When compared with a control sample of 52 collared urns from Wessex these measurements present a complementary image rather than a concordant one (fig. 6). The particle size mode preference for collared urns is generally more carefully regulated and shows a preference between 0.8 and 2mm. The quantities of added grog are similarly reduced showing a marked preference for less than 7%. In general the grog tempering tradition for collared urn production seems to demonstrate a refinement of the similar technique employed in the production of food vessel/urns.

A further sample of 32 pots of the food vessel/urn series from the domestic assemblage of Hockwold-cum-Wilton confirm the presence in East Anglia of tempering traditions similar to those found in Wessex (fig. 7). The Hockwold sample is not however identical and it reveals a greater

degree of agreement with the more restricted temper quantity range of the collared urns. It should also be noted that the textural characteristics of three collared urn fragments also recovered at Hockwold-cum-Wilton (Vol.2, 480, sherds N.B8.) are indistinguishable from the food vessel urns from the same site.

B2.4 Attribute compatibility between the decorative characteristics of the Food Vessel/Urn Series and the Primary Series of Collared Urns

In a preceding section we observed that the Primary Series of collared urns appears as a mature tradition without evidence of the evolutionary steps which are necessary for its formulation. We have also observed a lack of direct progenitors amongst the vessels of the Mortlake and Fengate traditions.

In defining the Primary Series Longworth has identified fifteen basic decorative motifs of which four (A, E, O and J) may be seen to dominate the tradition. These collared urn motifs may be examined in two ways.

Firstly the motifs may reveal the major decorative conventions employed at the inception of the Primary Series. To identify these, the percentage frequency of the motif classes may be plotted for those urns in the primary series which appear on typological grounds to be the earliest. Those with 6 to 4 traits are most appropriate for this purpose and most closely resemble the ancestral tradition from which they have developed. In fig. 8 the motif frequency for 6 - 4 trait collared urns has been plotted in histogram form against the percentage frequency of decorative motifs in a substantial sample of 280 pots of the food vessel/urn series drawn from England, Scotland and Wales. The diagram demonstrates that the incidence of decorative motifs in the food vessel/urn series and the Primary Series of collared urns displays virtually absolute concordance.

A second approach to collared urn motifs may reveal the temporal span or ontogeny of specific decorative themes. In advocating divergence from an ancestral tradition Longworth has demonstrated that changes in decorative themes have proceeded with trait loss. When examined in successive phase populations in fig. 9 these decorative themes show a clear lenticular distribution pattern. In the diagram the quantitative increase and decrease in the seven dominant specific decorative themes of the Primary Series has been plotted in successive phases based on 6 - 4 trait, 3 trait and 2 trait collared urns. Presented in smoothed form the themes reveal a pattern of double lenticular ontogeny, in which the progressive increase of certain decorative types corresponds to the successive decrease in others (i.e. in inverse relationship with each other).

It should be noted that when dealing with percentages of a given sum/

total of individuals, any increase in one or more of the groups will cause the statistical decrease in the value of the other categories. This may not necessarily relate to a real decrease in that number of individuals if new members of the population have been added to the initial sample. The diagram does however show the change in the relative dominance of each motif type when arranged in a hypothesised temporal sequence. The propensity of each pot to display several different motifs means that the increased use of any one motif need not preclude the simultaneous use of another.

In fig. 9 motif J can be seen to be a predominant characteristic of many of the earliest urns in the 6 - 4 trait group but it starts a progressive decline throughout the remainder of the Primary Series. Motif A appears as a developing theme amongst the earliest collared urns and continues to expand to its maximum frequency or 'modal state' amongst the 3 trait urns before entering a decline at the tail end of the Primary Series. Herringbone motif J also exhibits a decline as the series progresses but in this case the tail off is almost immediate and it is clear that the motif belongs to a tradition that is already very well established at the 'progenitor' stage.

In contrast to the main declining trends, motifs O, H and L show a minor presence or an archaic mode at the beginning of the series and progressively expand towards the end. These motifs represent the emergent trends which are to comprise major decorative themes in the Secondary Series of urns. It has not proved practical to quantify their development in the Secondary Series but their general development (shown in the right hand column of fig.9) has been summarised from details given by Longworth. (Longworth 1961; 1970).

When examining the ontogenic development of the dominant specific decorative motifs presented in fig. 9 it becomes immediately apparent that the Primary Series of collared urns presents only a limited vista of a continuous developmental process in which successive decorative modes have been adopted over an extended time span. Clarke (1978) has advocated the use of the double lenticular distribution model in relation to multi-state artifact types such as this, and has pointed out that it is important to distinguish between actual stratified examples and those examples which have been ordered using the model and its assumptions. In the case under discussion we should recall that our data is ordered according to the time progression proposed in Longworth's Primary Series model and that this in turn is reasonably corroborated on the thirty three sites where Longworth was able to demonstrate associations. The current evidence suggests that

the ordering and time trajectory presented in the vista is justified.

To complete the ontogenic processes revealed within the Primary Series it is necessary to extend the time span beyond the vista frame presented in fig. 9. It is the preceding period that is most important to us here for we must identify a decorative tradition which will pick up each of the dominant specific themes of the Primary Series at its appropriate stage of development. The concordance of decorative motifs presented in fig. 8 has indicated that the food vessel/urn series provides precisely the range and preference for the motifs required.

B3 THE RELATIVE CHRONOLOGY OF THE FOOD VESSEL/URN SERIES

In order to detect the development of decorative themes within the food vessel/urn tradition it is necessary to establish some form of relative chronology. The contemporaneity of diverse types of food vessel found in closed contexts in graves has long discouraged such a scheme. Abercromby observed that his types 1a, 2, 3, 4, 5 and 5a were contemporary but not all of his associations were reliably excavated. A more rigorous analysis of his associations shows that type 1a has been found in contemporary contexts with types 2 and 5a and that types 2 and 3 have been found together. Since 1912 further associations have also been established (e.g. Manby (1957); Riley (1966)) but the evidence still only demonstrates that the floruit of one particular type has at some point overlapped with another.

It is beyond the scope of this study to re-examine in depth the detailed typological development of all types of food vessel but a provisional framework may be introduced to identify formal elements which are likely to denote a relative chronological position in the progression of the series.

In this discussion the old Abercromby/Manby classification has been simplified into classes based on form. To avoid confusion the term form is used as a prefix for the new rationalised classes and the term type denotes the original series described by these previous writers. Details of this rationalised scheme are as set out in section B4.3.

B3.1 Form 1

Types 1, 1a/b food vessels (here termed Form 1) are an accomplished product with a characteristic shoulder groove which in its initial stages must have accommodated a suspension cord retained by the perforated lugs. Some examples like that from Garrowby Wold 197 (BAP., 1, 134) carry false relief decorations which are a firm reminder of a shared ancestry with certain 'Irish bowls'. The shoulder ridge and perforated lug are original functional features and it is not unreasonable to suppose that vessels equipped with imperforate lugs or stops represent divergence from an original functional design.

For the purpose of a provisional relative chronology, food vessels of type 1a/1b may be set at the head of the English series and type 2 may be viewed as a related form which is known by associations at Longstone Edge, Cawthorn and Harland Edge to be contemporary with at least part of the form 1 series.

B3.2 Form 4

The emergence of a derivative type may be detected during the temporal span of type 1a. The abandonment of the shoulder grooves in some instances seems to have been accompanied by the immediate abandonment also of the shoulder. The result of this change is the globular or cylindrical vessel which Manby has classed in his modified scheme as type 4. (Manby, 1957, 2-3) In this discussion the type has been redesignated form 4. The emergence of the new form 4 from preceding types is attested by such vessels as Lords Down, Dewlish (D.3) which, although globular in shape still carries three type 1a perforated lugs and a pair of punched lines representing a pseudo-shoulder groove.

Although Manby's type 4 might appear to be a natural development from type 2, the Lords Down example and associations at Towthorpe (Yor. 15 & 16), Little Gonerby (Ln. 4 & 5) (Manby, 1957) and Aldro barrow 87 (Yor. 28 & 29) (BAP., 1, 98, 103) strongly suggest that this form is a direct derivative of type 1a. No associations are known between forms 2A, 2B and 4 but associations at Arbor Low and Cross Low attest contemporaneity at some stage with form 3. These associations accord very well with a case for the late development of form 4 under form 3 influence. The parent form 1 is known to have maintained a particularly long time trajectory.

B3.3 Form 2A

During the temporal span of type 2 two significant developments may be detected. On some food vessels and urns (termed here form 2A) the narrow shoulder groove was retained until it was finally replaced by symbolic substitution representing the upper and lower edges of the groove. Substituted grooves or pseudo-grooves are represented by a number of decorative techniques including whipped cord maggots at Colroger, (C.9); finger tip lines on the Wiltshire food vessel urn (W.17); and punched lines on Birling Gap (Sx.1) and Bournemouth, Southbourne (H.19). The omission of vestigial grooves or pseudo-grooves provides the mechanism for introducing vessels and urns of form 3. The food vessel urns of form 2A and 3 found together at Carnkief II Cornwall appear to span the precise point of this transition.

B3.4 Form 2B

The second development in the form 2 series presents an alternative to the devolution of the shoulder groove. In a very substantial number of food

vessels and urns which we may describe as form 2B there appears a progressive broadening of the groove until the upper and lower margins are transformed into ridges. The lower ridge normally occupies the shoulder of the pot while the upper ridge may become progressively divorced from its partner until in some cases it reaches the top of the neck. This process of groove expansion and ridge divorce is already present during part of the type 1a production and there are a number of food vessels and urns in northern Britain (e.g. Goatscrag Nor 8a & 8b; Gibson, 1978, no. 103 and 110) which display lugs or stops which have been vertically stretched to span the increased gap.

There is evidence to suggest that at least some examples of form 2B had emerged at a very early stage of food vessel production when common features of design were shared by both Irish and Scottish potters. Both Abercromby (1912) and Childe (1946) noted common forms each side of the North Channel and these include the tripartite forms of the Irish bowl.

A particular decorative feature found on a number of tripartite examples of the Irish bowl food vessel requires special note. This feature, which we may term the Four Knocks motif, presents important chronological implications for the genesis of forms 1 and 2B. At Annaghmore, Co. Wexford; Four Knocks, Co. West Meath and Kelshamore, Co. Wicklow the decorated girth zone between the ridges is intercepted by a cruciform motif executed in false relief (Young, 1951, nos. 15, 16, 17). At Four Knocks the motif is repeated on the neck, girth zone and lower body of the vessel where it in each case intercepts horizontal line cord impressions.

Motifs of the Four Knocks type can be compared with the applied cord impressions found on the necks of such biconical urns as Thickthorn Down (D.B.39) and Nether Swell (G.B.2). Both Calkin (1964) and ApSimon (1972) have argued a convincing case for skeuomorphy in these urns where rope handles or a carrying net are represented by cord impressions.

When considering the evidence for carrying or transporting vessels of the Irish bowl series, the Four Knocks motif presents an attractive case for skeuomorphy. The 'constricted' examples of the Irish bowl appear to show a simple adaptation designed to accommodate a girth cord to assist suspension. The constricted zone is very often significantly left blank where it would have been covered by the cord. The deep blank girth groove on the bowl from Clogherbog, Fermanagh (BAP., 1, 307) is clearly a functional channel.

At some point on the girth circumference of the constricted bowls the suspension cord was probably knotted into a carrying loop. The single projecting girth lug on the constricted bowl (Nor. 82) from Colwell, Northumberland (BAP., 2, 125; Gibson, 1978, no. 66) appears to be a skeuomorph of such a loop. Examples of single-loop skeuomorphs may also be found on other types of Early Bronze Age pottery such as the type 3 food vessel (W. 24) from Bratton, Wilts. (Dev. cat., no. 497) and the beaker bowl of Dorset type from Nunwell Down, Brading, I.W. (Clarke, 1970, 11, fig. 1031). These examples carry vertically placed apertures and the latter bowl carries two close-spaced loop-lugs which have been modelled in very close resemblance to their cord counterparts.

The next step in the development of cord suspension methods for bowl food vessels is marked by the provision of two or more girth cords linked or knotted together at intervals to provide a simple sling. To accommodate the sling the constriction of the bowl is now widened to form the form 2B vessel, which in the region under discussion is generally termed the tripartite Irish bowl. It is most fortunate for us that at this point in the development of the series, the Irish bowl potters indulged in occasional experiments in decorative skeuomorphy. The Four Knocks bowl suggests quite clearly that three slings for the bowl were envisaged at neck, shoulder and lower body level and that each sling comprised two cords linked together at intervals at the points marked on the bowl by the Four Knocks motif. At Kelshamore two slings were envisaged at and below the shoulder and at Annaghmore a single sling at shoulder level seems to have been intended.

The cross-linkage of the sling cords indicated by the Four Knocks motif probably denotes the points at which some form of cord loops or lugs were applied to the pots. Whether cord lugs of the Four Knocks type preceded functional perforated clay lugs of Abercromby's 'Yorkshire' 1a type, it is not possible to say but it is probably safe to conclude from their close similarity that the development of the two types was very closely related.

The recognition of ^afunction ^{for} grooves ^{is attested} in the Irish bowl from Kilmartin, Argyll (Arg. 6; BAP., 1, 239) ^{which} carries a functional groove on which a cord appears to have been secured by a number of perforated stops. Further

examples from Garrowby Wold, barrow C.97, Yorkshire (Yor.69; BAP., 1, 134); Wetton Hill, Staffordshire (St.10; BAP., 1, 225); Sheil Loch, Midlothian (Mlt.7; BAP., 1, 371); and Heiton Mill, Roxburghshire (Rox.6; Edwards, 1933) demonstrate the establishment of functional grooves and lugs in a series of Irish bowls which may mark the transition to the classic 'Yorkshire vase'.

The finely detailed decorative motifs employed in the manufacture of Irish bowl food vessels indicates that, like beakers, these receptacles were used as a prestigious fine ware. Their persistent occurrence as the single accompanying object in graves also indicates that they were highly valued personal possessions.

In view of the consistent absence of old abrasions and repairs on Irish bowls, and indeed on food vessels in general, it is hardly surprising to find that there is evidence to suggest that these receptacles were carefully bound and securely suspended when not in use.

B3.5 Form 3

There is some reason to believe that the development of type 3 food vessels and urns (here termed form 3 food vessel/urns) took place somewhat later than forms 1 and 2A/B. At Frampton B.1 a form 3 food vessel was associated with a 2 trait collared urn and at Penmaenmawr the plain biconical food vessel urn Cn.11 was associated with a mid-rib knife-dagger (Savory, 1980, no. 491.2 and 491.3) which may probably be equated with Camerton-Snowhill phase of the Wessex grave series (Gerloff, 1975, 170). The highly decorated biconical food vessel from Bishops Waltham (H.1) and the incipient biconical food vessel urns from Llanddyfnan, Anglesey (A.1) and Whitford, Flintshire (Fl.3) may be similarly dated on the evidence of their dagger association. At Llangwm, Denbighshire the food vessel urn Db.10 was associated with two segmented faience beads which are unlikely to predate the Aldbourne grave series of Wessex II. At Wetwang barrow 294 the flat rivetted knife dagger (Gerloff, 1975, no. 300) associated with the form 3 food vessel Yor.139 may be equated with either phase of the Wessex Culture. At Sutton Veny, Wilts. and Bishops Waltham, Hants. the similar form 3 urns (W.6 and H.1) are associated with daggers which may be assigned to the final stage of Wessex I when some Camerton/Snowhill weapons are also known (see section B6.3).

It seems probable that the biconical shaped form 3 food vessel/urn in Southern Britain is derived from the transformation of form 2A. At Llanddyfnan, the associated vessel in the grave was a form 2A food vessel urn (A.2) which, although displaying a different motif, showed an arrangement of internal and external cord decoration generally comparable with its

form 3 companion. At Carnkief II, Cornwall an upright form 2A food vessel urn (C.2) held a cremation and was protected by a larger inverted food vessel urn of form 3. Both vessels were of identical fabric and apart from the shoulder groove differed little with the exception of a modification in the rim. (Patchett, 1950, 55-7 fig. 3). At Gallibury Down, Isle of Wight a form 2A food vessel urn with weak shoulder groove (IW.5) was similarly associated with a form 3 food vessel urn (IW.6; Tomalin, 1979).

On the evidence currently available to us we may propose that the floruit of the biconical shaped food vessel/urn of form 3 is generally contemporary with phase II of the Wessex Culture (and its overlap with Wessex I) and that the form itself probably derives from the devolutionary stages of form 2A and possibly 2B. To present a provisional chronological framework for the food vessel/urn series outside Ireland we may propose that the temporal spans of forms 1, 2A/B and 3 may be arranged en echelon and that the full expansion of form 3 may coincide with the occurrence of the earliest collared urns (fig. 11).

To detect the development of decorative themes ranging from the progenitor stage to the emergence of the secondary series of collared urns we may propose that the urn types shown in fig. 12 reached their maximum frequencies in the following order:-

form	form	5-4 trait	3 trait	2 trait	secondary
1	2A/B	collared urns	collared	collared	series
		form 3	urns	urns	collared urns

The order does not suppose a unilinear development but reflects the median point in the supposed temporal span for each type.

B4 QUESTIONS OF FOOD VESSEL URN DEVELOPMENT AND ENLARGEMENT

In 1912 Abercromby was employing the term 'food vessel' to describe the class of vessels 'which served the same purpose as beakers and [which] were evidently placed in the grave for the use of the deceased: in some of them bones of small animals or the remains of decayed animal and vegetable matter have been observed.'

Abercromby also recognised enlarged food vessels and encrusted urns which he differentiated in his classes 7 and 8. The lacuna in Abercromby's work was his lack of settlement site material: a problem that was persistently to distort the study of these vessels, almost until the present day. Although at Plessay Hill, Northumberland (Nor.39; BAP., 2, 493) and Hutton Buscel (Yor. 141; BAP., 2, 496) Abercromby was aware of the use of food vessels for cremation purposes, he was unable to grasp the contemporaneity of food vessels and food vessel urns. Encrusted decoration, a specialised adjunct to food vessel urns, believed by Abercromby to have late Bronze Age associations at Law Park, St. Andrews (BAP., 1906, 204) was to lead to a chronological scheme involving a progression from inhuming communities using food vessels to cremating societies using food vessel urns. In the scheme enumerated here current terms have been juxtaposed for some of Abercromby's original classes.

Abercromby's Chronological Scheme for British Bronze Age Pottery

- Period 1 Beakers and most food vessels
- Period 2 Some food vessels and the beginning of collared urns. Beginning of pygmy cups, biconical urns and food vessel urns.
- Period 3 Same types continued.
- Period 4 Collared urns, pygmy cups, biconical urns, Deverel-Rimbury urns and cordoned urns.
- Period 5 Pygmy cups, cordoned urns and encrusted urns.

Subsequent studies of food vessel pottery by Fox (1927), Elgee (1930) Kilbride-Jones (1936), Childe (1935, 1940, 1946), Barber (1958) and Burgess (1970) were to discuss at length questions of dating and relationships but were to leave unchallenged the assumed progression from food vessel to urn.

In 1969 the vessel to urn progression was effectively attacked by ApSimon in a reappraisal of distinctions between single grave pottery and urns in the north of Ireland (ApSimon, 1969). It is no doubt an indictment of our excavation policies that a century after Thurnam had proffered his food vessels or 'relief decorated vessels' as a cultural entity, no domestic food vessel assemblage had been located to verify the relationship between food vessel and food vessel urns. In 1972 ApSimon could outline only 'a hypothetical domestic food vessel assemblage' which would include both small and large pots. Confirmation of such an assemblage was at last found in 1973 in a dune covered midden near Kilellan Farm on the north coast of Islay, Argyll (Arg. 1; Burgess, 1976). Here food vessels, food vessel urns and encrusted urns were well represented along with a dominant number of plain and decorated shouldered jars which appeared to be a specialized regional type. Minor elements in the assemblage were beaker fragments of A.O.C. and cord decorated type and a single vessel identified as a pygmy cup.

The discovery at Kilellan was opportune for a corpus of food vessel urns in northern Britain and a general review of food vessel studies published by Cowie in 1978. Cowie's work was largely carried out in 1974 and its title and tenet provide a significant measure of the impact of Kilellan on current food vessel thought. At the outset of his survey, food vessel urns are considered to be a clear entity distinguished from food vessels by their preferred height: frequency set around 30cm in a sample examined by ApSimon (1972). A size range plot of a further sample by Cowie shows similar evidence with a boundary between the two groups set around 18 to 20cm.

In 1972 ApSimon raised the question of the bias of size in the selection of funerary vessels utilized from a hypothetical domestic range. With the domestic assemblage finally confirmed in 1976 Cowie concluded, still with some caution, that 'whether or not the food vessel urns are just large vessels picked out from functional assemblages, and whatever significance the food vessel group has in human terms, ceramically at least food vessel urns are clearly related to food vessels'.

B4.1 Evidence for a domestic food vessel/urn array

Despite evidence from Kilellan a number of objections may be raised against the general acceptance of an autonomous food vessel culture.

1. Although well represented at Kilellan the food vessel range was dominated by shouldered jars which could represent a major difference in the identity of the community.

2. The remote and insular position of Kilellan and its coastline location provides a specialized environment in which an atypical community might retain an archaic ceramic style far removed from mainland norms. The tendency for the material culture of island communities to be distorted in this manner has recently been discussed by Evans (1973).

3. Although containing both large and small pots the excavator notes that the food vessel assemblage at Kilellan is not entirely typical of mainland food vessels or urns (Burgess, 1976: Cowie, 1978).

4. The vessel to urn progression may still be advocated, particularly in the manner expressed by Longworth (1961, 283-4) in which 'the enlargement' of food vessels may be envisaged as a response to influence from the ceramic and funerary traditions of collared urn potters. Cowie lucidly summarizes this argument noting that in this case there should be a time before collared urn contact in which enlargement is absent (Cowie, 1978, 53).

Although a solitary test case the Kilellan assemblage provides no support for the theory of collared urn influence even though external contact in the form of the pygmy vessel is evident on the site. No collared urns are present here and the food vessel urns are clearly domestic. Unless it is argued that collared urn culture also inspired a new cooking or storage system employing large urns we must accept food vessel urns as an inherent domestic feature of distinct food vessel communities as predicted by ApSimon in 1969.

5. The unstable and inadequate bases of food vessel urns and the predominant inversion of these vessels in cremation burials has led Kavanagh to advocate for them an exclusive funerary status (Kavanagh, 1973, 509). This proposition brings these urns into line with Kavanagh's (1976, 293) view of a 'great Cinerary Urn tradition which was established throughout these islands' and in which 'domestic variance' ^(sic) 'as in the case of cordoned urns might "possibly" be "in use on habitation sites" (Kavanagh, 1976, 330). ApSimon's (1972, 148-149) comparison of biconical, cordoned and food vessel urn proportions attests the relative and absolute smallness of food vessel urn bases but their claimed instability may well be redressed by their notable thickness. Exclusive funerary use is refuted at Kilellan and also at the new sites in the Norfolk fens which are examined in section B4.2

B4.2 Preferential sizes in the domestic range

Examining the height frequencies of food vessels and food vessel urns obtained from burials ApSimon (1972, 148) and Cowie (1978, 20-24) have both identified preferred heights grouped around 15 and 30cm. ApSimon notes that these provide a simple 1:2 relationship between food vessels and food vessel urns. Unfortunately height preferences cannot be tested at Hockwold where the random nature of the sherds precludes sufficient reconstruction. Mouth diameters may provide a similar index of traditional preferences but the 1:2 ratio is inapplicable due to the elongation of the food vessel urn. Cowie's sample of 101 food vessel urns shows a well defined 'borderline' with the food vessels set at an 18cm mouth diameter. The apparent preference peaks in Cowie's sample, expressed in fig. 13 may well be misleading due to the very large territory represented by the sample. Nevertheless it is clear that a substantial number of food vessel urns were constructed with mouth diameters of 19-21cm and that these lie very close to the borderline with food vessels. This 'borderline' phenomenon is clearly a reflection of domestic requirement for fig. 13 shows the peaks to be present both at Hockwold and Kilellan Farm. A second peak set around 24cm in the northern British sample is confirmed at Hockwold and may be represented by an aberration to 26cm on Islay. Mouth diameters above this limit are infrequent at Hockwold and Kilellan although at both sites a minor 7% peak occurs at 30-31cm. The largest mouth diameter at Hockwold provides a 7% peak at 40cm but is completely unparalleled at Kilellan. It is so far removed from the modal size of the food vessel urns that a specialized function may be suspected. At Kilellan this very large type of urn appears to be supplanted by the local plain shouldered jars which appear to be an atypical regional variant of the food vessel/urn series.

Since Longworth's (1961, 284) comments on the enlargement of food vessels to fulfil the cremation requirements of collared urn users, little progress has been made with the hypothesis of progression from vessel to urn. ApSimon (1972, 149) has demonstrated that the form of the food vessel urn owes nothing to collared urn influence although rim forms and decorative motifs have certainly been often shared by the two groups. ApSimon's views on the 'bias of selection' to account for change from food vessel to food vessel urn in the burial record has been generally accepted by Cowie.

Cowie comments however that "this in itself would not be sufficient to rule out the basic idea that collared urns triggered off the development, since food vessel potters would not necessarily incorporate collared urn features in the process of enlarging their traditional products." (Cowie, 1978, 53).

The evidence first from Kilellan and now from Hockwold provides new information concerning the domestic role of the food vessel and the food vessel urn. In fig. 13 the rim size frequencies have been plotted as a percentage of the whole assemblage and these reveal a contingent of 15% and 2% food vessels amongst the urns at Hockwold and Kilellan. These percentages cannot be accepted at their face value until we have tested the tendency of the larger urns to provide more rim fragments. At Hockwold this test has been applied by ascertaining the average number of degrees of rim surviving in three categories.

<u>Rim fragmentation at Hockwold</u>			
	<u>sample</u>	<u>average</u> °	<u>estimate of</u>
	<u>number</u>		<u>fragments</u>
Food vessels	5	13°	27
Food vessel urns (24cm mouths)	7	16°	22
Food vessel urns (30-34cm mouths)	4	22°	16

Although the sample size is small the three size categories show surprising but consistent evidence that the rims of the smaller vessels tend to fragment into smaller portions, perhaps due to the thinness of the sherds. As a consequence the proportion of food vessels employed in the domestic range is likely to be over represented and adjustment becomes necessary.

The rim sherd total in fig. 13 shows 4 food vessels in the assemblage to 23 food vessel urns which provides an approximate ratio of 1:6. The rim sherd fragmentation measurements however indicate some 27 food vessel fragments surviving for an average of 19 fragments of food vessel urns. The true number of urns to food vessels is therefore $4 \times 19 : 23 \times 27$ which provides a corrected ratio of 1 food vessel to 8 urns.

It would appear from the above that food vessels at Hockwold and Kilellan comprise a very small part of the domestic pottery range and that the major requirement of the potter was to produce an adequate supply of food vessel urns. The question of enlargement of food vessels to fulfil cremation burial requirements may be safely discarded for the domestic evidence now demonstrates that if a label is required for this ceramic tradition it must surely be that of food vessel urn.

B4.3 Size range and development in the form 1 (Yorkshire) Series

It is particularly unfortunate that Abercromby made no attempt to rationalize his approach to food vessels and food vessel urns. In examining the inconsistencies in his scheme set out in fig. 16 it becomes immediately apparent that the type 1 food vessel urn when produced at a smaller scale may become either a type 1 or type 1a food vessel. The type 1a food vessel urn when similarly reduced becomes a type 1b food vessel. The classification is impracticable and a rationalized scheme is now imperative. In this discussion the term British form 1 will be retained and applied to the entire range of British vessels which exhibit a combination of grooves and stops. The exceptional Irish bowls with stopped grooves such as Kilmartin (Arg.6; BAP., 1, 239) and Shiel Loch (Mlt.7; BAP., 1, 371) will be termed Irish stopped bowls. Food vessels or urns of British form 1 found in Ireland (such as those cited by ApSimon (1969, 37-40) will be termed Irish form 1 food vessel urns. To rationalize the subdivisions of the form 1 series unambiguous terms are required to cover both the food vessel and food vessel urn ends of the size range. I propose that the term form 1 may be used in a general sense to embrace the whole series and that the Abercromby types 1, 1a and 1b food vessel and their larger equivalent which may collectively be termed food vessel/urns.

This scheme is a compromise but carries the advantage of retaining the traditional concept of type 1 to cover the entire range of vessels and urns of the Yorkshire type.

Large and small editions of form 1 have long been known. Thurnam (1871) had assembled sufficient examples to demonstrate the general variation in

size from vessel to urn but he unfortunately disregarded their relationship. The smallest example of the form appears to be the finely made vessel from Hepple, Rothbury or Donnington (Nor.93; BM.79, 12-9.1509). This old unpublished find, which bears a BM double registration, is only 4.1cm high.

The high incidence of inhumations with form 1 food vessels in Yorkshire has perhaps distracted general attention from the larger versions of urn proportions. The term 'Yorkshire type' is moreover unsatisfactory for it carries specific regional connotations which have undoubtedly been brought about by the concentrated efforts of John Mortimer. 'Yorkshire' or form 1 pots are well represented outside that county, particularly in Scotland where examples of both vessel and urn proportions are to be found (fig. 17).

If a process of enlargement is to be pursued in the food vessel/urn tradition it is appropriate that the process should be sought in examples of form 1. The distribution of this form includes the grooved and stopped vessels of similar profile which are to be found in Ireland. ApSimon (1969) has cited eight food vessels of Yorkshire character in the north of Ireland of which one has perforated stops and seven are imperforate.

Evidence of enlarged versions amongst the numerous finds of Irish bowls is rare but ApSimon has observed the use of both large and small varieties at the occupation site at Magheragallan in Co. Donegal (ApSimon, 1969, 35). In the form 1 series evidence for direct enlargement is more forthcoming. In a small number of urns such as Todwell House, Berwickshire (Ber.8), Newton of Montblairry, Banff (Ban.4) and Washing Well Farm, Durham (Dur.6) the precise proportions of the food vessel has been retained in the larger urn. These examples could lie close to the point at which the food vessel shape was first translated into the design of larger domestic containers of form 1. The girth groove of the Washing Well Farm urn carries a single line cord impression which suggests a skeuomorphic representation of the functional girth cord which seems evident in the smaller vessels. Unless cords of rope-like proportions were employed in the girth grooves of form 1 food vessel urns it seems unlikely that cord suspensions could be practically applied to these larger receptacles. It therefore seems very likely that the appearance of decorated non-functional grooves and imperforate stops was coeval with the enlargement of type 1 food vessels.

B4.4 Size range and development in the form 2A series

Most of the pots in the 2A series have single shallow girth grooves which are frequently covered with decoration continued from the neck. Such grooves seem unlikely to have been functional but a few urns and vessels

from the highland zone carry narrow deep girth grooves which appear to have accommodated a suspension cord.

The vessel with two deep close-set girth grooves from Pentraeth, Anglesey (A.4) is an indisputable example of the Irish bowl and its presence in Wales is a reminder to us that the inspiration for deep plain functional grooves in type 2A food vessels was probably first introduced from across the Irish Sea. The plain Pentraeth grooves appear to be functional as were also, no doubt, the deep twin plain grooves on the vase shaped urn (A.2) from Llanddyfnan, Anglesey. These two vessels indicate that small Irish bowls and large examples of the Irish vase/urn were employed in Wales. Some influence of the Irish vase may also be detected in the Derbyshire Peak where the food vessel from Harthill Moor (Der.16; Manby, 1957, no A16) displays a plain functional groove and a distinctive Irish profile.

In Scotland we have already observed that tripartite Irish bowls and lugged constricted Irish bowls occur at a time when functional slings and girth cords were apparently in use. Most constricted Irish bowls do not however carry lugs of any sort and it is therefore not surprising to find that constricted bowls of conventional Irish form are also to be found in Scotland. In Argyll bowls like those from Duncragaig (BAP., 1, 236, 237) and Barsleisnach (BAP., 1, 306) demonstrate that plain girth grooves of functional appearance were also present in Scotland.

Constricted Irish bowls do not seem to have been translated into larger receptacles in Ireland but there is some suggestion of their eventual enlargement in Scotland.

In the short cist inhumation burial at Doune, Perthshire an urn of form 2A found in a disturbed context was apparently accompanied by a form 3 food vessel and a miniature perforated stone axe. (Per.3; Hamilton, 1957, fig. 8 & 9). This urn bears triangular impressions arranged above and below the ridges of the girth groove in a manner which strongly suggests a debased version of the false relief decoration which is similarly arranged on Irish bowls (cf. Ulster, BAP., 1, 288; Meath, BAP., 1, 378). (The tripartite bowl (Ags.9) from Knockhill, Angus compared with the similar bowls from County Antrim and Oxcgangs Road, Edinburgh (Mlt.4; Stevenson, 1948, pl. LXXXII 4; Young, 1951, nos. 9 and 21) provides clear evidence of the debasement process). The rim diameter of 17.8cm and the estimated height of 20 cm places the Doune pot clearly in the urn class but in isolation it remains uncertain whether this pot is an enlarged form of a late constricted

bowl or simply a form 2A urn bearing an anachronistic Irish motif. The incipient collared features displayed in its rim suggests that it is a relatively late example. A further intimation of Irish bowl enlargement is provided by the incomplete pot found with a cremation and Class II bifid razor in short cist no.2 at Embo, Sutherland (Suth.3; Henshall and Wallace, 1963, fig.6 no.5). With a rim diameter of 20.4cm the Embo pot clearly belongs to the urn end of the size range. The domination of comb point and false relief decoration on the neck is characteristic of the Irish bowl but due to the absence of body sherds it is impossible to ascertain whether this pot presented a constricted or tripartite profile.

Although the occurrence of constricted bowls in the highland zone of Britain is notably restricted it seems most likely that along with the tripartite Irish bowl the form probably provided the initial stimulus for British food vessel production. The main contribution of the constricted Irish bowl was to provide the perforated stop and functional girth groove for the British form 1 and form 2A series. It is in these British derivatives of the Irish bowl that size increase can most clearly be observed.

B4.5 Size range and development in the form 2B series

Pots of both food vessel and urn proportions are common in the British 2B series. Evidence for their origin is however less readily recognised. On the north west coast of Scotland, particularly in Argyllshire, the tripartite Irish bowls provide a natural prototype for the form. Tripartite bowls are all-over decorated and show a marked preference for false relief and comb point impressions which commonly conform to beaker motifs.

Like the constricted Irish bowls the tripartite bowls do not however readily demonstrate any firm evidence for enlargement. The tripartite bowls found with inhumations in cists at Tormore, Arran and Mount Stuart, Bute (But.3, But.8; Young, 1951, nos.25 & 28) are notably taller than the average bowl and they most certainly present an urn-like or vase-like profile. A further urn-shaped pot of form 2B found with an intrusive cremation burial in the Clyde-Carlingford tomb at Brackley, Kintyre, Argyll must also be considered (Arg.15; Scott, 1956) This urn bears false relief triangular impressions employed in a debased manner and Clarke's beaker motif type 27. The form and decoration of this pot firmly ally it to the tripartite bowls. The respective heights of these three examples (19.6, 17.6 and 18.6cm) signify a transitional position in the general size parameters which have been established by ApSimon and Cowie for differentiating between food vessels and food vessel urns.

When the size range of vessels from burial contexts is used to postulate the characteristics of a domestic food vessel array, ApSimon (1972) has warned that funerary customs may introduce a 'bias of selection' which may have altered through time. This warning is particularly apposite for the tripartite bowls which have all been found with inhumations in a notably uniform series of cists. The choice of funerary vessel here seems to have been as conservative as the burial mode and we are provided with very little opportunity to observe significant variations in size. If larger versions of the tripartite bowl were generally employed for domestic purposes the atypical pots from Brackley, Arran and Bute are at present our only intimations.

In northern Britain food vessels/urns of type 2B occur in dominant numbers (figs. 19 & 54) and here we may best examine evidence for alternative choices of size. The corpus of northern examples by Cowie (1978) provides a valuable survey of the urn-size end of the range and it immediately demonstrates that these large northern pots of form 2B show no decorative affinity with the tripartite bowls.

In section B4.3 we have already observed that the enlargement of the form 1 food vessel to urn proportions could warrant both the abandonment of perforated stops and the proportional increase in the width of the girth groove. Such a process could readily explain the emergence of the 2B form in northern Britain and could obviate, if necessary, the need for any inspiration from the tripartite bowls.

The bias of selection has deprived us of opportunities to examine associated pots of vessel and urn proportions in northern barrows. In the domestic assemblage at Kilellan, Islay, however, 2B sherds representing both vessel and urn sizes have been found together along with at least one food vessel of form 2A (Burgess, 1976, fig. 10.9 nos. 17 & 20). At Hockwold the disturbed domestic assemblage from location F50 produced a motif J incised sherd of form 2B while sherds of form 1 showing 'stretched' imperforate stops and wide girth grooves were recovered from the neighbouring location F61. The Hockwold locations are assumed to be broadly contemporary and are known to comprise a well integrated mixture of vessels and urns.

The notable sample of Early Bronze Age ceramics assembled by John Mortimer has done a little to redress the effects of biased selection in the barrows of the Yorkshire Wolds. The predominance of food vessels here is paramount but Mortimer also succeeded in recovering a small number of food vessel urns some of which display notable affinity with their

smaller counterparts. The form 2B urn from Huggate Wold barrow 225 (Yor.8) is decorated with tubular impressions and exhibits very close affinity with the similarly decorated 2B food vessel found only 3.8km to the west in barrow 118 in the Painsthorpe group. From the north east margin of the Wolds at Hedon Howe, Langton comes a large 2B food vessel urn (Yor.138) decorated all over with line cord impressions in motif J (Mortimer, 1905, fig.1012). This large urn was selected to accommodate a cremation and it provides a valuable indication of the upper limits of a range of vessels which appears to be represented at the lower end of the scale by the form 2B food vessel from Riggs barrow 36 (Yor.79; Mortimer, *ibid.* fig.437). The find spots of these two urns lie 9.8km apart and like the previous example probably represent the dispersal of ceramics from a localized centre of production.

B4.6 Size range and the development of form 3 in Southern Britain

The development of form 3 food vessel/urns is best considered in two regions.

In southern Britain there is good evidence to show that a number of form 3 food vessels and urns represent a devolutionary stage of form 2A. At Carnkief, Cornwall urns demonstrating the transition have been found together and in a number of cases (cited in section B4.9) the abandonment of the characteristic 2A girth groove is marked by skeuomorphic decoration on form 3 vessels and urns.

Associated with the abandonment of the 2A girth groove in southern Britain is a marked reduction of decoration. Fig. 20 shows that the choice of motifs for form 3 is very closely associated with the decorative tradition of form 2A. The deployment of decoration on form 3 however is often restricted to the rim and shoulder only. Only in very exceptional cases is decoration found below the shoulder of southern examples.

The formal and decorative change in form 3 food vessel/urn ceramics may lead us to suspect that the tradition in general may be responding to new external influences or requirements. An important feature of the form 3 stage of food vessel/urn production is the occurrence of the notable number of totally plain vessels and urns. Fig.21 shows that the incidence of 18% plain pots in the form 3 series far exceeds the minor values of 6% and 5% for forms 2A and 2B. Particularly revealing is the spatial distribution of the plain forms which is markedly concentrated in southern Britain. This concentration must be attributed to a change which is more fundamental than bias in the selection of funerary pots for the domestic assemblages at Killellan and Hockwold clearly confirm that in the 2A and 2B series the

range of plain wares from which funerary selection might be made was generally minimal. This lack of decoration is not, moreover, confined to the larger domestic receptacles for a sample of seventeen form 3 food vessels from Wessex shows that the preference for a plain format was also imposed on the smaller examples of the series (fig.21).

Evidence for a form 2A ancestry observed in some of the form 3 urns seems to be similarly attested in the food vessel size range of the series. At the Badbury barrow (Shapwick G6b) the narrow proportioned food vessel (D.32) conforms very closely to its grooved type 2A counterpart (D.43) from Milborne St. Andrew. The carinated shoulder and girth decoration on food vessels D.36 and W.22 from Badbury and Shrewton 23 are probably further examples of the process. In general the form 3 food vessels appear to demonstrate first a retreat of decoration to the external rim bevel (e.g. Figheldean G25 (W.26) and Charmy Down (Sm.6)) and then final abandonment of all motifs. Plain examples at Winterbourne Came (D52), Sheep Down (D.16), Bishops Cannings Down G81 (W.35) and Hengistbury (H.18) suggest a progressive devolution of the carinated shoulder. This progression is apparently accompanied by a change towards a narrower and more 'urn-like' profile.

The clearest evidence for a graduated size range in the form 3 series is to be found in Dorset. At the Badbury barrow the decorated food vessel D.32 may be matched in form by the plain food vessel urn (D.31) which was recovered from the same site. The food vessel D.43 from Milborne St. Andrew is an intermediate sized example in the same series.

In southern Britain the emergence of form 3 with its associated changes in traditional shape and decoration signifies a major change in the established ceramic tradition.

In its advanced stages this change reaches a point where all earlier diagnostic features of the food vessel/urn tradition are terminated.

The change in form 3 is also accompanied by a number of novel features. These features may be traced to sources of external influence which may now be seen to be affecting the tradition.

B4.7 Intrusive features in the southern form 3 series

Gloss burnishing.

An examination of thirty food vessel urns and fifty-two collared urns in Wessex has revealed that the textural characteristics of individual examples of these two types of urn are usually inseparable although collectively the collared urns seem to show a slightly more refined version of the general technique.

The surface texture of food vessel urns and collared urns is generally well smoothed and free of wipe marks. Cross sections through the walls of such vessels almost invariably reveal a superficially oxidised exterior which seldom exceeds 30% of the thickness of the pot.

Although the exterior of both collared urns and food vessel urns is often well smoothed it is not usually burnished. Amongst the form 3 food vessel urns there are however a small number of exceptional examples which display a notable red gloss burnish.

The most notable example of red gloss burnishing is to be seen on the food vessel urn (W.25) found inverted over a secondary cremation in bowl barrow G19 or 20 at Figheldean, Wilts. This urn, which is quite plain, displays a hard iron-rich oxidised exterior which has been carefully burnished all over in small integrated patches to produce a red gloss finish. A macroscopic examination of the Figheldean urn reveals grog tempering supplemented by sand.

The surface texture of the Figheldean urn is quite exceptional and it undoubtedly represents an accomplished potting technique acquired from some outside source. Although the burnishing technique is clearly superior, its impact on Wessex food vessel urn potters seems to have been strictly minimal and we may consequently suspect that the source of inspiration was perhaps short-lived or far removed from Wessex.

Evidence for the source of the red gloss burnishing technique is to be found only 7.5km S.W. of the Figheldean burial at Winterbourne Stoke bell barrow G5. In this barrow, Hoare (1812) uncovered a primary extended inhumation of Wessex I type contained within an elm monoxylous coffin. By the head of the inhumation was found a four or five handled Armorican vase à anse which was most notable for its haematite enriched high gloss burnish.

A detailed review of Armorican handled vases in Wessex is given in section E7. Here it is important to observe that the close proximity of two Wiltshire finds seems more than fortuitous. At Gallibury Down, Isle of Wight a further vase à anse has been found (fig.48); in this case in association with form 2A and form 3 food vessel urns (IW.5 & 6; Tomalin, 1979 and forthcoming). The Gallibury vase is notable for its red haematite-rich burnish and there can be little doubt that its presence within a form 3 pottery assemblage was responsible for imitative attempts similar to those evident at Figheldean. In the neighbouring chalk combe at Apesdown, 2.2km N.E. of the Gallibury site a primary inhumation in a bell barrow was accompanied by a plain form 3 food vessel (IW.11) bearing four perforate lugs and

covered with an iron-rich reddish brown burnish. At Pendennis I, Falmouth, Cornwall a further example of red high gloss burnishing occurs on a collared urn found containing charred wood and red ware handle with grooved decoration (Patchett, 1946, D12). This find has been examined by ApSimon (pers. comm.) who has observed the sherds to be very well fired but not apparently enriched with haematite. These form 3 pots are the only known examples of indigenous response to the Armorican vase burnishing technique.

B4.8 Fingertipped shoulders and shoulder cordons

Throughout the entire range of food vessel/urn ceramics in the British Isles the use of FN and FT decoration is exceedingly rare. In the few instances where it is found it is undoubtedly a novel feature which has been acquired from another ceramic tradition. As an intrusive trait FT shoulders and FT shoulder cordons arrived late in food vessel urn development for they are almost entirely confined to form 3.

The distribution of FT food vessel urns shown in fig. 22 is discrete and there can be no doubt as to origins. At Tynings Farm, South Barrow (T11) the primary cremation was covered by an inverted form 3 urn (Sm.3) bearing FN decoration on the shoulder. It was followed during phase 2 of the barrow by a secondary inverted biconical urn (Sm.B2) bearing an FT shoulder cordon. Food vessel urn sherds and fragments of an FT and incised motif H decorated form 3 biconical urn (Sm.B3) were also recovered from phase 2 contexts. Further biconical urns with FT shoulders (Sm.B4, 5, 6) were inserted into the adjoining barrows Tynings North T10 and Tynings Central T14 (Taylor, 1951).

At Knowle, Little Bedwyn, Wilts. a form 3 food vessel urn (W.33) bearing similar decoration was recovered from gravel workings along with several biconical urns (W.B45-48) and a collared urn. On the seaboard of Wessex three food vessel urns from the Isle of Wight denote indigenous response to biconical urn influence. From a cremation burial in a barrow on Wroxall Down (IW.10; Dunning, 1931, fig. 19 no. 21) comes a virtually plain form 3 food vessel urn bearing desultory FN decoration partially applied to the pinched out shoulder. A confused combination of tool and FT impressions occur on the external rim bevel. At Gallibury Down a secondary cremation burial contained two form 3 food vessel urns (IW.3; IW.4). The larger urn (IW.3) which was inverted over the smaller was decorated on the rim tip and pinched out shoulder with FT impressions. At Niton Down barrow 3 a food vessel urn with concave base bears FT decoration on a slightly recessed shoulder. This urn also carries impressed decoration and a

mature collar (Dunning, 1932, fig. 2).

The textural characteristics of the Isle of Wight urns are particularly significant for these confirm the fusion of the two ceramic traditions attested by the formal and decorative attributes. At Wroxall Down the exclusive grog tempering recipe of the food vessel urn tradition is amended by the addition of 3% angular flint fragments up to 10mm in size. At Gallibury Down food vessel IW.3 shows total conversion to the stone tempering methods of the biconical urn tradition and comprises a novel hard fired fabric containing 15% angular calcined flint crushed to a particle size mode of 2mm. (fig.47).

The relationship between form 3 and innovations in tempering methods is confirmed by several food vessels in Wessex. At Kingston Russell G6n a contracted inhumation was accompanied by a plain form 3 food vessel/urn (D.20) placed in the favoured position by the head (Bailey, Smith & Tomalin, 1980). This food vessel resembles a small biconical urn and its textural characteristics which show both grog and flint attest a mixture of the two ceramic traditions (a similar vessel was also recovered from an adjoining pit). At Ogbourne St. Andrew G8a; Collingbourne Kingston G6; Lake ? (W.B17) and the Stonehenge region (W.15) further form 3 grog-tempered vessels have been recovered and all show some addition of crushed flint in their fabric.

In the Amesbury region of north Wessex some further urns carry FT and FN decoration as well as traditional food vessel/urn characteristics. At West Overton G4 a secondary cremation urn (W.B38) which was surrounded by sarsens, bore an FT shoulder cordon and incised neck decoration in motif H. (Hoare, 1812, 11, 90; Skinner, 1814, B.M. Add. Ms. 33648, 3, 65).^I In the nearby barrow at Beckhampton G64 a further urn with shoulder cordon (W.B32) was decorated with line cord impressions in motif E. A row of jabbed impressions demarcating the upper edge of the cordon provides an important reminder that despite its affinities with the biconical urn series the Beckhampton pot clearly owes its origins to the food vessel urn tradition.

At Wilsford G5 an urn (W.B15) closely resembling the West Overton example has been cited as a biconical urn (Smith, 1961, 103, fig.2.6; Dev. Cat. 558). This pot carries FT cordons (at the shoulder and rim) and an atypical applied shoulder lug which are both undeniably biconical urn attributes. Like West Overton (W.B38), however, significant food vessel/urn characteristics are also present including motif H cord decoration on

neck, internal bevel decoration and tell-tale border incisions on the shoulder cordon.

The copious grog temper and soft light textural characteristics of all of these Wiltshire urns is compatible with the food vessel/urn ceramic tradition but in most instances the formal attributes, particularly the presence of a shoulder cordon now make distinction between form 3 urns and biconical urns a matter for careful deliberation. In general the traditional textural characteristics of the food vessel/urn tradition may distinguish form 3 urns which have assumed the formal and decorative attributes of the biconical urn series but the rule is not infallible. The presence at Gallibury Down of a food vessel urn employing both decorative and textural characteristics of a biconical urn demonstrates that transition and contact between these two major ceramic traditions requires critical analysis.

In a number of urns of biconical form, FT and FN decoration, particularly on the shoulder cordon, is replicated by the use of the food vessel/urn jabbing or stabbing technique. In most cases (e.g. Cherhill G1 (W.B33; Smith, 1961, fig. 2.3) these urns carry all the formal characteristics of biconical urns but their origins are betrayed by the presence of pseudo-FN decoration and traditional food vessel/urn tempering. Such urns comprise a notable proportion of those vessels which have been conventionally termed 'Wessex biconical urns'. Their redesignation as a particular variant of form 3 food vessel urns carrying special imitative biconical urn attributes is discussed in section D.

From our survey of FT and FN decoration on food vessel urns we may conclude that form 3 urns notably responded to the decorative characteristics of biconical urns and that the acquisition of the decorative features clearly took place in the core area of biconical urn production which is the Wessex region. The distribution of FT and FN decorated food vessel/urns (fig. 22) shows a clear Wessex bias with some significant outlying examples occurring in the Mendip Hills and South Wales in specific areas where biconical urn occupation sites are known on the Carboniferous Limestone.

B4.9 Horseshoe handles in the food vessel/urn series

Like FT and FN shoulders and shoulder cordons, horseshoe handles on food vessel/urns are undeniably an intrusive feature acquired from biconical urns.

The occurrence of horseshoe handles on pots of the food vessel/urn tradition is rare and only seven reliable examples can be cited. At Nymet Tracy, Devon (Dv.1), Wareham (D.44) and South Afflington, Dorset (D.45)

carefully formed horseshoe handles were attached to the necks of form 2A urns. The temper and decorative techniques used for the manufacture of these urns assure us of their food vessel/urn pedigree and there can be no question of a converse process whereby food vessel/urn features may have been employed on biconical urns. At Morvah Hill (C.13) Cornwall the tradition of the 2A style was preserved by two skeuomorphic lines of punched detail added in lieu of a groove on the form 3 primary cremation urn excavated by Borlase. This urn seems to have possessed two horseshoe handles of which only one now remains (Borlase, 1872, 248, fig; BAP., 2, 467). The cord and tubular impressed motifs on the remaining fragments of this urn show close affinity with the pot from South Afflington. A further Cornish find from a poorly recorded context at the Duloe Circle (C.12) (Borlase, 1872) now appears to be lost (Patchett, 1946, G15, no location given).

An important attribute of the arc lugged food vessel urns is the presence of a collared or incipient collared rim. At Wareham and South Afflington short collars are present and according to Borlase's woodcut a further example seems to have been found at Duloe. (Borlase, *ibid*). In the South East, the Kent finds from Ringwoud (K.B8, K.B9) seem to confirm this trend. At Ringwoud the fragmentary urn (K.B8) recovered from Woodruff's 'first cist' in the same barrow has been illustrated on several occasions (e.g. Woodruff, 1872 & 1874; Ashbee & Dunning, 1960; Jessup, 1970, etc.) and presents a similar appearance. The textural characteristics of both urns seem firmly based in the grog tempering tradition of the food vessel/urn series as do also their accessory vessels.

According to the published record (Ashbee & Dunning, 1960) urn K.B2 from Capel le Ferne would seem to present a further example but due to the flint tempering of this pot and Calkin's amended reconstruction (ApSimon, 1972, 153n) such a claim cannot be pursued. Certainly the atypical FN decoration on the rim of this urn seems to corroborate Calkin's suspicions.

A notable ^{on}embellishment / arc lugs on food vessel urns is cord decoration. Such decoration occurs at Morvah, South Afflington and on both of the Ringwoud urns but it is significantly absent from the lugs of biconical urns themselves. A simple explanation could attribute the decoration on these horseshoe handles to an acquired embellishment derived from the cord motifs on the necks or collars of the respective urns. When the details of the handle decoration is examined however an alternative possibility emerges. At Morvah and South Afflington the cord is applied

to the upper surface of the lugs to present a series of concentric semi-circular arcs. At Ringwold K.B9 a similar arrangement is repeated but on the K.B8 from the same barrow the cord is applied diagonally across the outer edge of the handle and converges towards the upper inner edge in exactly the manner in which a multi-strand or hooped cord handle would compress when lifted. A similar response to multi-strand cord handles seems evident in the cord impressed arcs, imperfectly executed on the concave neck of the form 3 food vessel/urn from Trelystan, Mont. (Mt.7; Britnell, 1982, P.21). The absolute date, CAR 283, discussed in section C5.10, confirms its contemporaneity with the inception phase of the British biconical urn series.

The question of the skeuomorphy of arc lugs is discussed in detail in section B.5 but here it is necessary to note that the most intricate evidence of handle skeuomorphy is to be found not on the biconical urns themselves but on the works of indigenous food vessel urn potters. Within the chronological development of the food vessel/urn series these decorated arc lugs must represent an impact horizon when the novel appearance of arc handles was first encountered in southern Britain. The effect of such an impact was undoubtedly profound and we shall observe a complementary and more radical response when considering the development of encrusted decoration. It is important however to recognise at this stage that the horseshoe handles so carefully fashioned by the food vessel/urn potters were modelled not on the moulded clay lugs found on certain biconical urns but on the woven cord handles which actually surmounted the carrying nets in which the users of biconical urns carried their pots (see section B5). As a corollary to this explanation we should regard the erratic incidence of arc lugs on the biconical urns in southern Britain, in part at least, as a reciprocal response in decorative skeuomorphy carried out by biconical urn potters.

The recognition of an impact horizon marking the arrival of functional arc handles in southern Britain raises the thorny question of subsequent ceramic development. If such handles generated skeuomorphic modelling amongst indigenous potters we might expect rather more extensive evidence of the handle response than that provided by just seven food vessel urns. The key to this problem is undoubtedly the ambiguous character of the form 3 urns. Of the seven arc-handled food vessel urns so far discussed, four clearly belong to form 2A; two carry distinctive rims characteristic of the collared urn variant of the food vessel/urn tradition; and a lost example appears to have carried typical decorative features of the same tradition.

A significant member of this group of seven is the Nymet Tracy pot Dv.1 which provides the only evidence to show that applied arc lugs were also employed on form 2A urns devoid of any suggestion of a collar. These seven urns undoubtedly include our earliest evidence of the arc handle response and in the subsequent development of the food vessel/urn series these are undoubtedly superseded by mature collars and form 3 food vessel urns.

Form 3 food vessel urns may often carry devolved reminders of their form 2A ancestry but they may equally well assume a biconical or sub-biconical form in which all trace of earlier convention is lost. When arc handle skeuomorphy is employed during the manufacture of form 3 food vessel urns then the problem of the differentiation between later food vessel urns and British biconical urns is exemplified. Form 3 food vessel urns present, it seems, a fusion of indigenous and intrusive styles which may ultimately sublimate any direct link with an earlier tradition. Within this fusion perhaps the most significant trace of food vessel/urn ancestry is the survival of the grog temper recipe. This may be equated with a soft lightly fired fabric which generally lacks the hard and robust quality produced by biconical urn technology. Used as a test for cultural origins, grog temper indicates that three further arc-lugged urns may be assigned to the food vessel urn tradition. The large shallow open form urn with neck cordon and four arc lugs, from Shepherds Shore, Bishops Cannings, Wilts. (W.B39) should on this criterion be classed as a form 3 food vessel urn with biconical urn traits. At Long Crichel G20 an arc-lugged urn (D.B10) displays similar textural qualities and these seem to confirm a food vessel/urn origin already intimated by the presence on the shoulder cordon of pseudo-FN decoration executed with a sharp incising tool. Significantly the unusual double cordoned biconical shaped urn (Sf.B1) from Hollesley, Suffolk also belongs to the food vessel/urn tempering tradition. In this case the textural characteristics confirm a form 2A ancestry which is also represented on the pot by the twin FT shoulder cordons which provide a skeuomorph of the boundary ridges of a shoulder groove.

During the fusion of biconical urn and food vessel/urn ideas during the floruit of form 3 some experimentation in tempering recipes is evident. At the settlement site at Shearplace Hill there is stratified evidence to show that flint tempering was introduced by progressively increased quantities and that during this progression mixtures of both flint and grog were employed (see section C2.3). When such mixtures are noted in the arc lugged urns some further Wessex examples betray a possible food vessel/urn ancestry

(Section C 2.4) At Bloxworth D.B5 and at Bere Regis G.46a & b (D.B27, D.B30) the proportions of grog are dominant while at Milborne St. Andrew D.B15 and Bere Regis G.46b (D.B29) only residual quantities are present. At Dewlish D.B2 the flint proportion slightly exceeds that of grog. In none of these urns however can any formal or decorative attribute of the food vessel urn tradition be seen.

From this survey of arc lugs in the food vessel urn series we may conclude that the arc handle response was a skeuomorphic phenomenon which first occurred amongst the form 2A food vessel/urn users of Devon and Dorset. The development of form 3 urns rapidly ensued and the use of applied arc lugs as a skeuomorphic embellishment was continued on some of these urns. In Kent some arc lugs are known on secondary series collared urns and these no doubt post date the earliest developments in Dorset and Devon. The development of form 3 urns in the Wessex region represents a fusion of food vessel urn and biconical ideas. Arc lugs continue to be found on some of these pots when, with the exception of the grog temper recipe, all other traces of the food vessel/urn tradition have disappeared.

B4. 10 Size range and the development of form 3 in Northern Britain

A random sample of 210 food vessel/urns presented in fig. 23 reveals some notable regional biases in the distribution of forms 2A, 2B and 3. In northern Britain a population of 30% form 3 food vessel/urns may be compared with 55% in the southern lowland counties. In Wales the presence of 15% brings the total highland population to 45% (fig. 23). Although approximately equal proportions of form 2A occur in both highland and lowland Britain there is in the highland zone very little evidence to demonstrate that form 3 pots developed from 2A urns in the manner evident in the south.

The proportion of the total British population of form 2B pots in northern Britain is exceedingly high (84%) and it is not surprising to find that it is these urns that provide the major contribution to the northern form 3 series. In north east Scotland a change to a form 3 profile is evident in the later development of the tripartite bowls. In short cists at Burntisland (Fif.20) and Keevil, Fife (Fif.11) and at two sites at Bridgeness, West Lothian (Wlt.1, Wlt.2; Piggott, 1948; Close-Brooks *et al*, 1972; Callander, 1924) some biconical and sub biconical food vessels have been recovered bearing traditional false relief triangular impressions. At Burntisland (Fif.20) and Bridgeness (Cowdenhill; Wlt.2) the impressions remain well ordered but at Bridgeness (Vitriol Park; Wlt.1) the impressions no longer interlock and at Keevil the decoration is totally degenerate. At

Burntisland and Cowdenhill a band of false relief situated at middle body level is a reminder to us that the form 3 biconical profile has been achieved by discarding the lower ridge of the old tripartite 2B form.

In northern England further evidence for a form 2B-3 transition can be readily observed on a number of food vessels. At Wetwang, M294 (Yor.139; Mortimer, 1905, fig.50g) the applied cord chevron still respects the position of the mid-body ridge which has devolved to a vague irregular bump. At Garton Slack, (Yor.100; Mortimer, 1905, fig.570) the lost body ridge is marked by a line of comb point impressions in the same position. At Sawdon, Yorks. (Yor.11d; Cowie, 1978, fig.11) a double line of cord impressions specifically sited in mid position on a plain body clearly denotes an abandoned ridge. In Northumberland, at Amble (Nor.32) and West Lilburn (Nor.28) horizontal line cord bands signify a similar arrangement (Gibson, 1978, fig.17, 24) and at Hirst (Nor.27) in the same county alternating bands of carelessly applied pits and stabs reflect a similar scheme (Gibson, *ibid.* fig.31). Like the Fife examples previously cited a notable number of form 3 food vessels in the region show devolved and carelessly applied decorative schemes and these seem to confirm the suggestion that the form 3 transition marks the break-up of a formerly well-ordered tradition. Like form 3 food vessels in southern England the decoration appears to show a retreat from the body to the neck and ultimately to the rim. Examples of devolved and carelessly applied decoration include Plessay Mill, Nor.39; Lesbury, Nor.40; Birtley, Nor.43; Bewes Hill, Dur.6; Seahouses, Nor.49; Hirst, Nor.27; (Gibson, 1978, Nos. 3,4,5,9,26,31); High Banks, Kir.7; Mount Vernon, Lnk.9 and Cross Low, Der.30 (Manby, 1957, fig.6, A30).

The disregard for body decoration evident on form 3 food vessels deserves some attention. On some food vessels there is clear evidence to show that the potter's approach to the decoration of the body was conditioned by ideas which apparently differed markedly from the approach to the neck. At Hasting Hill, Durham (Dur.14; Gibson, 1978, fig.21) a form 3 food vessel is most carefully decorated above the shoulder with cord motif G but on the body cord decoration is abandoned in favour of a poorly scored lattice. At Foulden, Berwickshire (Ber.10; Craw, 1914), the potter switches both technique and detail by first carefully incising motif J on the neck and then introducing an unusual arrangement of wide diagonal line cord impressions on the body.

The changes in approach to body decoration on form 3 food vessels seem to be a minor yet significant feature of a much more widespread change in the potter's approach to body finish on the form 3 urns. On most northern form 3 urns decoration below shoulder level is generally absent. Occasionally, as

at Danby Rigg (Yor.5) the motif may be degenerate and carelessly applied in a manner similar to the previously cited food vessels. Where decoration is applied on the body the potter again often accentuates the contrast by employing another technique. At Springfield, Cumberland (Cu.4; Cowie, 1978) line cord decoration on internal rim bevel and punched impressions on the neck switch to an irregular incised lattice on the body. This lattice device is taken up on a number of form 3 urns bearing relief encrustation on the neck. In some cases the crude lattice offers a marked contrast with decorative detail carefully executed above the shoulder. At Goatscrag (Nor.8a; Cowie, 1978) the scored lines contrast with a neck decoration of cord impressions. A similar contrast is repeated at Drumfane, Co. Antrim (Kavanagh, 1973, no.6).

In Ireland the scored body lattice also appears on a number of collared urns including those from Gortcorbies, Co. Derry; County Down and Scarawalsh, Co. Wexford (Kavanagh, 1973, nos. 24, 32, 43). At Ballycastle and Edmondstown, Co. Dublin (Kavanagh, *ibid*, nos. 1, 34) the cord contrast effect is again employed. A particularly significant example of the incised body lattice is to be found on the collared urn from Legagrane, Co. Antrim (Kavanagh, *ibid*.no.18). On this urn the lattice is the only decoration present and the plain neck and collar above are a firm indicator that the body lattice signified to the potter a concept quite separate from conventional ornament.

In section B5.5 the significance of the body lattice is further discussed. At this stage we should note however that unlike conventional decoration this feature carries a special skeuomorphic significance which is associated with the use of a carrying net. When the body lattice is found on form 3 vessels it is often associated with relief encrustation in which swag or arc-shaped loops are applied to the neck. Like the arc lugs on the southern form 3 urns these swags appear to present a further example of skeuomorphy associated with knowledge of functional carrying handles. At Cairn Curr, (Abn.5) cord impressed versions of the relief neck swags are added on the body in a manner which suggests that the carrying net could on occasion be fitted with more than one tier of handles. More tangible evidence of this is provided by the hybrid relief decorated urn from Nether Swell (G.B1). All these features lead us towards the conclusion that in highland Britain the biconical profile of form 3 urns; the devolution of body decoration; the occurrence of the body lattice and the presence of relief or 'encrusted' swags are all indicative of an indigenous ceramic change which was instilled by knowledge of the same biconical urns and associated carrying nets which were responsible for form 3 changes in the south.

B5 THE DEVELOPMENT OF THE LATER FOOD VESSEL/URN SERIES

Encrusted urns are a skeuomorphic phenomenon found in Ireland and highland Britain. In Ireland Kavanagh (1973), in a corpus study, has surveyed 98 examples out of which 86 can be reliably provenanced. In Britain and the Isle of Man, Fox enumerated 27 urns in 1927, since when subsequent British discoveries have increased the number to about 36.

Thurnam (1871) was the first to note the particular character of relief decoration on these pots and Abercromby in 1906 was the first to apply the term 'Encrusted Urn' and to distinguish them as a specific class. With hindsight Abercromby's separate classification can be seen as a mistake, an error which Fox was quick to observe when citing Thurnam's Mountblairy urn (Ban.4) in 1927. 'If the encrustation were removed,' Fox commented, 'the urn would be a good example of an enlarged food vessel . . .'. Fox placed heavy emphasis for origins on Yorkshire food vessels and food vessel urns of our form 1. These he envisaged as the basis for a north country genesis for encrusted versions. In Fox's view this decorative technique was then perpetrated through Scotland to Ireland and the Isle of Man. The Irish and Manx varieties often displayed a greater intensity of applied ornament and these suggested to Fox that the elaboration of the series had taken place in Ireland. In Wales a meagre coastal distribution of elaborate encrusted urns confirmed Fox's view that dissemination, either of pots, people or ideas had been effected via the Irish Sea.

In a review of encrusted urn characteristics in 1972 ApSimon examined more rigorously the food vessel/urn origins advocated by Fox. ApSimon noted that although Fox's food vessel form could frequently be observed in very evolved encrusted urns other forms too had received similar encrusted treatment. Notable examples were certain members of that unusual food vessel urn variant the Irish vase or food vessel of Abercromby's type E. ApSimon employed the terms Drumnakilly Series (and also Irish-Scottish vases and urns) to describe both vase and urn sized examples of these pots. The series is principally distinguished by its beaker motifs, angular shoulders and upright or everted necks. Of the 45 Irish examples cited by ApSimon 16% bear encrusted decoration. (To this example may be added an unprovenanced urn in the National Museum of Ireland. (Kavanagh, 1973, no.96).)

On the strength of these disparate forms ApSimon (1969, 66 n7) rejected encrusted urns as a culturally significant class and instead drew attention to encrustation or relief decoration as a technique which might on occasion

be invoked to convey the same basic motifs as those presented by other modes of decoration. In his 1972 discussion ApSimon enlarged this view by citing select examples from the food vessel urn, cordoned urn and biconical urn classes which presented motifs which might be translated into encrusted style. The principal motifs involved were Longworth Types F and G. ApSimon reiterated Fox's observation that the translation of motif G was readily attested by the two Uddingston urns; one of which presented an encrusted version of the chain plait motif on the other. Motif F which is found on a number of cordoned urns such as that from Ballingry, Fife, ApSimon observed, was also to be found on the Hilversum-Tynnings biconical urns cited by Smith (1956).

In his 1972 paper ApSimon introduced a number of important possibilities concerning the later development of the food vessel/urn series. These possibilities arose from his discussion on the origins of biconical urns and were mostly centred on the premise that biconical urns in southern Britain comprise a distinct ceramic entity.

The 1972 paper dealt specifically with the 39 biconical urns outside Wessex to which Bernard Calkin had alluded in his 1964 paper. Calkin had observed that most of these urns were provenanced in the highland zone; a region where distinctive southern features such as fingerprinting, lugs and horseshoe handles were excluded in favour of impressed cord decoration. Discussing select examples of these highland zone urns ApSimon drew attention to their atypical membership of the food vessel urn and cordoned urn series. From the food vessel/urn series ApSimon cited the Alstonefield and Stanton Park examples and from amongst the cordoned urns he selected a number of single-cordoned biconical forms such as those from Drumelzier, Peebleshire and Pickering Moor. ApSimon used his examples to demonstrate "that disparate sources may well produce superficially similar biconical urns". The strength of such similarity was then tested by series dimensional variates in which mean profiles for collared urns, food vessels, food vessel urns and 'convex' cordoned urns could be compared.

ApSimon revealed a close similarity between his convex cordoned urns and certain biconvex members of the southern biconical urns. He also concluded "that it would be very unwise to dismiss the idea of a strong food vessel component in biconical urn development". The data compiled in 1972 was presented by ApSimon with a provocative suggestion that food vessel and cordoned urn development in the highland zone may have promoted a disparate or mosaic development of biconical forms which might also include the biconical urns of the lowland zone: plain biconical food vessel urns such as that from

the Tregulland barrow at Treneglos, Cornwall (C.24) would provide suitable prototypes.

In the current discussion it is now appropriate that we should examine the nature of the close relationship between the food vessel/urns; cordoned urns and biconical urns intimated by ApSimon. In doing so we must also cover new ground for it is no longer possible for us to ignore the increasing evidence for a substantial Continental contribution to the southern British biconical urns. With this view in mind we should return to Calkin's observations on the lowland limits of such southern relief features at FT cordons, lugs and horseshoe handles. These features we may confidently accept as skeuomorphic phenomena; a view readily endorsed by Calkin and ApSimon in their comments on nets and baskets and attested by the frequent instances of detached non functional horseshoe handles such as those at Bere Regis G46a & b (D.B27, D.B29), Bulford 45-48 (W.B11), Ogof yr Esgyrn (Br.B1) and Garboldisham (Sf.B5).

In the highland zone ApSimon has demonstrated that a population mosaic of biconical pots may be found amongst the food vessel urns and cordoned urns but we should be wrong to accept Calkin's view of a hiatus in horseshoe handles in this region. As a skeuomorphic phenomenon these handles appear intermittently on southern biconical urns but they are by no means a definitive feature of that series. In the highland zone the handles re-appear again but this time the relief decoration is far more generously applied in the manner described by Abercromby as encrustation. Relief decoration and skeuomorphy are, it seems, random phenomena and as such they undoubtedly display a difference in detail between highland and lowland populations. In both populations however the evidence for horseshoe or skeuomorphic arc handles is very clear. At no other time during the British Bronze Age can such a positive display of skeuomorphy be demonstrated. These are compelling reasons for us to examine the nature of relief decoration in both highland and lowland Britain and to ascertain whether the inspiration for such skeuomorphic modelling in these two regions was based initially on a single source.

B5.1 Encrusted or Relief Decorated Urns

In the highland zone of Britain and Ireland encrustation appears mainly on form 3 food vessel urns but the technique is also found on some other forms which denote differences in the ceramic traditions of the two provinces.

In highland Britain six urns representing 2% of the British population are of form 2A. On the urn (Ags.1) from Aberlemno, Angus (Cowie, 1978, no.51) a running relief chevron on the neck appears to represent multiple loop handles while below a vertical arrangement of tubular impressions seems to signify the ribs of a body cage. This urn is the only member of the British and Irish form 2A series in which any convincing suggestion of skeuomorphy may be seen. At Ryton and Humbleton Hill, Durham; Hill of Doune, Banff; Glenballoch, Perth; and Pendine, Carm. (Dur.4; Dur.3B; Ban.3; Per.4; Cm.2) form 3 urns also carry a running relief chevron but any suggestion of a girth hoop or sheathing is entirely lacking. In Ireland two atypical urns (Kavanagh, 1973, nos. 3,4) from Craigarogan and Crumlin in Co. Antrim respectively carry shoulder grooves and twin ridges which show some technical resemblance to the British form 2A series. The wide mouthed profiles of these urns are however typically Irish and any similarity with the narrow shoulder grooves of the British series seems more likely to be fortuitous.

Form 2B urns with encrustation are well represented in the British series but in Ireland they are entirely absent. Figs. 23 and 24 show that form 2B is the predominant type of food vessel/urn in northern Britain and of a total British encrusted urn population it comprises 26%. The widespread distribution of this form and its general contemporaneity with form 2A should theoretically afford ample opportunity for 2B potters to acquire novel encrusted traits such as multiple neck loops, girth hoops and body basketwork or sheathing.

Like the encrusted urns of the 2A series, form 2B pots do not however offer any detailed evidence of skeuomorphy. At Ford Nor.7; Udney Abn.10; Kilmagad Farm Kin.1; Luce Sands Wig.1; Hill of Foulzie Abn.6C and Berwickshire (Ber.2) applied decoration is again confined to the neck and shoulder and comprises a running applied chevron optionally accompanied by bosses. At Clacharie, Spottiswood (Ber.3) two rows of relief chevrons applied to the upper and lower neck ridges may represent a skeuomorphic interpretation of girth hoops linked by functional cord handles but there is no suggestion of body bindings and the general arrangement is not entirely convincing.

It is unfortunate that the general relationship between forms 2A and 2B in Britain cannot at present be satisfactorily determined. At the sand machair site at Kilellan, Islay (Burgess, 1976) both forms were recovered from the occupation debris along with encrusted sherds which apparently belong to a form 3 urn. Unfortunately no firm calculation is currently available of the timespan represented by this domestic assemblage although in the excavator's opinion it seems likely to have been a short one (Burgess, 1976.196).

A comparison of motif frequencies for forms 2A and 2B (fig.20) demonstrates that motif selection in the two series is virtually identical and consequently it is impossible to place one form before the other in the lenticular ontogeny curve. (fig.12). At Hockwold both types were recovered from the disturbed domestic assemblage and analyses show a minor but consistent difference in their grog tempering recipes.

From the evidence available it seems that the differences between forms 2A and 2B are perhaps spatial or minor cultural ones and that during their co-existence both forms responded to the same decorative themes. Part of this decorative response in each case included the sometime acquisition of encrusted features and in these cases similar preferences are expressed for the same applied running chevron motif. Such decoration seems to signify a vague response to multiple arc or loop handles but there appears to be almost total ignorance of functional details such as attachment points, girth hoops or body binding such as ribs or basketwork. In Ireland where relief encrustation is abundantly and very realistically represented there is good evidence for the skeuomorphic modelling of many of these features. There is also in Ireland a virtual absence of form 2A and total absence of form 2B. This exclusion is particularly important for it confirms a negative role for the 2A or 2B food vessel urn as a harbinger of the carrying net and arc lug devices.

As an optional decorative mode, relief decoration on food vessel urns is free of the traditional constraints of a specific group tradition and theoretically it should occur whenever sufficient inspiration may evoke skeuomorphic modelling. ApSimon expressed a similar view in 1972 when he declared 'encrusted urns are not an entity'. (ApSimon, 1972, 145).

When the distribution of form 2A and 2B encrusted urns is examined the reason for the poor standard of skeuomorphic modelling becomes clear. Figs. 25 and 26 show that the distribution of both forms is very similar and is principally confined to the eastern coast of northern Britain with some minor coastal outliers around the Welsh and English coasts of the Irish sea. This distribution is clearly marginal to the core area of skeuomorphic inspiration represented by form 3 encrusted urns, figs. 27 & 28. These latter urns attest a detailed or first hand knowledge of pot carrying devices in eastern Ireland and their overall distribution suggests the dissemination of such knowledge through the central Scottish Lowlands to the North Sea coast.

This model for the spread of skeuomorphic relief is the antithesis of Fox's proposals for a northern British origin for the technique (Fox, 1927). Fox saw the lengthening or stretching of imperforate stops as the genesis of

encrustation and he assumed that simple development had occurred in northern Britain and that elaboration and embellishment had taken place after the technique had been introduced into Ireland. In Fox's scheme the development of encrustation was simply a cumulative matter and no explanations concerning skeuomorphy were required. Fox also made an important comparison with the relief decoration on South Lodge barrel urns (Fox, 1927, 125-7) but he was at a loss to explain the similarity other than to suppose that an intrusive influence might have been responsible for a contemporary highland and lowland response.

Fox was undoubtedly right in proposing some form of intrusive influence or triggering mechanism in highland and lowland Britain but he did not pursue the matter. One casualty in such a line of enquiry would certainly have been his northern genesis. Fox supposed that the intrusive influence had first arrived in the south but the gap between the Wessex barrel urns and the encrusted urns of Cumberland and Northumberland was exceedingly wide. To compound the problem the few intervening urns on the Welsh coast, in Fox's view, owed their origins not to the south but to stimuli introduced from Ireland and derived in the first instance from Scotland.

The answer to Fox's dilemma lies undoubtedly in the random nature of skeuomorphic relief decoration and the role played by the form 3 urns. Here we must again recall ApSimon's comment 'encrusted urns are not an entity' for it would be wrong both to seek a full explanation in their geographic distribution or to assume their comprehensive use in a hypothetical encrusted urn domestic array. Some further criteria must also be considered.

As a decorative option encrustation may have been employed in further areas of the British Isles but other critical factors may have impaired the archaeological record. The known urns are derived, with very little exception, from funerary contexts and in these circumstances ApSimon's general warning concerning bias of selection is particularly apposite (ApSimon, 1972). The opportunity for the appropriate bronze age community to select an encrusted urn for burial purposes may have been further reduced by the following:

1. The proportion of encrusted urns in a domestic assemblage may have been particularly small. Indeed Kavanagh has proposed that they were intended exclusively for funerary use (Kavanagh, 1973, 516). At Kilellan a very rough estimate might be 1 in 18.

2. An examination of the optimum rim diameters of encrusted urns set out in fig. 13 reveals marked preference peaks around 31 and 35cm diameter. This denotes a size considerably in excess of 24-26cm favoured for conventional

B5.2 The skeuomorphic model

The skeuomorphic model is non ceramic in nature and can be detected in the archaeological record largely through pottery representations. Detailed skeuomorphs are mostly to be found on form 3 encrusted urns and there seems little doubt that these must have been made by potters with close hand experience of the receptacle itself. A minor series of encrusted urns in northern Britain of forms 1, 2A and 2B apparently represent the work of archaic or isolated potting communities whose knowledge was largely derived from encrusted urns of form 3 and not the original model. In addition some third hand versions seem also to have been evoked in which simple relief strips were applied without any knowledge of the handles and ribs which they were supposed to represent. To this latter category we may assign the urns appropriate to Fox's genesis stage such as those from Mill of Marcus, Arg. 16 and Denbeath Fig. 5A.

An examination of form 3 encrusted urns suggests that skeuomorphic modelling was inspired by three basic non-ceramic forms.

food vessel urns.

There seems good reason to suspect that when encrustation was on occasion employed it was mostly reserved for certain very large urns which were probably produced in very small numbers. Unless a very specific funerary preference was exercised (and that preference need not have been geographically constant) the conditions necessary to promote the survival of encrusted urns in other parts of Britain need never have been fulfilled.

Notwithstanding the possibility that our interpretation of the encrusted urn distribution may have been distorted there remains the overriding problem that the skeuomorphic model must be explained. Fox must clearly have had some notion of this in 1927 when he chose to juxtapose the South Lodge barrel urn and the Newlands encrusted urn (Lnk.6) on the same page. Once the principal of the skeuomorphic model is accepted much of the problem concerning the north-south dichotomy is resolved for we may now recognise that a third contemporary form of receptacle provides the essential link between the encrusted urns and the southern relief urns.

B5.3 The Ribbed Cage (fig. 29A)

The main structural element in this type of container is an arrangement of rigid vertical ribs, set around the body of the vessel. In Ireland the skeuomorphs at Bealick and Moneen, Co. Cork (Kavanagh, 1973, nos. 18 & 22) fig. 29A^{no.4} seem to provide reliable representations. The Moneen example (fig 29A no.3) is devoid of loop handles and this may possibly denote a distinction in the potter's mind between a loose hanging appendage and a rigid framework tightly bound to the pot. At Brownstown, Co. Kildare, vertical ribs are accompanied by an upper tier of chevron bars which are apparently also associated with a representation of a hanging arc handle. (Fig. 29A) (Limp arc handles are also represented in isolated fashion on certain other urns including those from Crumlin, Co. Antrim and the form 2A example (Db.11) from Clocaenog, Denbs.).

In northern Britain little clear evidence for the ribbed cage can be found on Bronze Age pottery and this may confirm the disinterest in archetypal models generally proposed for the Scottish series (see section B5.1).

Exceptions are the urns from Aberlemno (Ags.1) and Newlands (Lnk.6) (fig 29A nos. 5,6)

In Wales the lost urn from Prescelly Mountain (Thurnam, 1871, fig.32) attests knowledge of the cage and it also displays a quite separate band of relief lattice applied to the neck of the pot. The ribbed cage seems to have been intended to support the base and full weight of the pot when suspended but the neck lattice was apparently devised to provide appropriate loop handles to steady the balance of the vessel during tilting and pouring. Similar

combinations of cages and neck loops are intimated on the urns from Ransford, Co. Wexford and Kilwatermoy, Co. Waterford (Kavanagh, 1973, nos. 81 & 78).

In Wessex ribbed cages identical to the Prescally and Moneen examples can be readily found on grooved ware vessels of the Durrington Walls style and on the South Lodge barrel urns. The question of chronological compatibility between these two series is at this stage immaterial for we must remember that we are concerned with the floruit of the non-ceramic model observed by the potter and not of the localised incidence of its skeuomorphic translation.

With the exception of the South Lodge urns evidence for use of the cage in Bronze Age Wessex is not readily forthcoming. One reason for this could be due to the widespread use of a carrying net or some alternative device on the bodies of most form 3 urns and biconical urns in this region. The marked shift, noted in section B4.6, towards a plain format for form 3 urns could mean that most Wessex urns were already physically encased and were consequently unsuitable for relief decoration. Without physical confirmation of the organic covering the argument unfortunately is largely a circular one.

There remains one feature linking the cage skeuomorphs of Wessex with those of the Irish series. On the internal basal surfaces of the South Lodge barrel urns relief crosses are a characteristic feature. (Calkin, 1964, 19-24, 55). Of the fifteen complete pots of this type cited by Calkin in Wessex 87% bear relief cross bases. This consistent association strongly suggests that there is a common relationship within the skeuomorphic model between the cage design and these very distinctive bases. A simple functional explanation might connect the vertical ribs of the cage with a basket base or slath with radial ribs but it must be admitted that the number of vertical ribs or stakes and the number of cross arms do not generally tally. On the other hand the number of cross arms is normally an even number (4, 6 or 8) and they are usually very carefully aligned so that each rib has an entry and exit point at the basal intersection in exactly the manner in which principle stakes are employed in a basket. If baskets were commonly used by these bronze age communities it would not be surprising for the internal and visible surface of the slath to be reproduced rather than the underside. In ethnographic examples such as Ibibio palm-wine jars of Nicklin (1971, pl. 10, 6) basketwork base plates are strapped to the pot by the vertical ribs. Such plates would explain the omission of the underside of the basketwork and also the reason why vertical ribs sometimes terminate just short of the base (e.g. Pokesdown, Calkin, 1964, fig.7.4; Tobernabrone, Kavanagh, 1973, no.47).

Pitt-Rivers was the first to compare the ribbed bases of the South Lodge

urns with those of Ireland although at this time no specific examples were cited (Pitt-Rivers, 1898, iv.30). At Tobernabrone, Co. Kilkenny a simple cross is repeated on an encrusted urn of the hooped type (Kavanagh, *ibid.* no.43). A further example has also been observed on an encrusted urn of the Drumnakilly type from Barney's Brae, Ballytresna, Co. Antrim. (ApSimon, 1969, fig.6.1).

There is some reason to suspect that in Ireland the relief cross base may be inadequately represented in the archaeological record. All known finds come from funerary contexts where the usual burial mode is inversion. Some 40% of these Irish urns have no surviving base and there has consequently been notable opportunity for relief cross bases to be lost. From the sample of complete encrusted urns the proportion of cross bases is not however high and comprises only 5%.

In addition to the evidence for the use of the ribbed cage in Wessex, Wales and Ireland there comes a little evidence from the Paris Basin. From the rock shelter at Videlles a fragment of a biconical urn F.B43.1 bears a finger-smear representation of multiple arc handles springing from an applied shoulder cordon. A functional basket may perhaps have been employed beneath. Another sherd from this site F.B43.9 bears FT body ribs closely resembling the South Lodge design.

B5.4 The hooped basket (fig. 29B)

This category embraces all skeuomorphs in which horizontal hoops or bands appear to comprise the main rigid component. The hoops are generally linked by diagonal struts which are normally either arranged in a running chevron or are inclined alternately between each hoop tier to present a general herringbone effect. There is clearly a relationship between these two basic forms of basket design and Longworth's motifs G and E. (Motif G significantly shows peak frequency during the production of form 3 urns and fig. 12 reveals that this motif is essentially associated with these urns and is employed only in a minor manner on contemporary primary series collared urns).

Like the cage design hooped baskets are generally equipped with multiple arc handles which are attached to the uppermost hoop. The urn from Ballyconnell, Co. Wicklow (Kavanagh, 1973, no. 84) gives perhaps the clearest representation (fig. 29B, no.9). Arc handles are usually shown erect but on the urn from Lislane, Co. Tyrone (Kavanagh, *ibid.* no.73) they appear as limp loops drooping from the rim (fig. 29B, no.10). Not all representations of hoops and loops are reliable and there is certainly an ill defined stage at which skeuomorphic replication gives way to either devolved or innovative

relief imagery in which conventional motifs are re-worked into random or nouveau designs (e.g. Kavanagh, 1973, nos. 36, 53, 77, 83).

Although on some urns the loop motif seems to have been re-employed as a general decorative design (e.g. Newtown, Cahercorlish, Co. Limerick, Kavanagh, 1973, no. 53; Carrowmore, Co. Sligo, Kavanagh, no.65) there is some evidence that the hooped basket may at times have been equipped with two sets of multiple loops. Such an arrangement is well illustrated on the urn from Kilwatermoy, Co. Waterford (Kavanagh, 1973, no.78) where a lower set of loops appears to be attached to a basal cage. Another set of additional loops arranged convincingly in drooped fashion appears on the urn from Shanahow, Co. Laois (Kavanagh, 1973, no.49). An unequivocal example of two tier handles is to be found on the atypical British encrusted urn (G.B1) from Nether Swell, Gloucs. The arc handles on this urn are restricted to four on each tier. The lower tier is positioned at the centre of gravity and is clearly intended to facilitate tilting and pouring (fig 29C no.17).

The relief decoration on the urn from Glenville, Co. Down (Kavanagh, 1973, no.31) suggests that an additional type of handle may also have been used on hooped baskets. The uppermost hoop on this urn is surmounted by an arrangement of five opposed diagonal bands which are apparently secured by vertical ribs (fig. 29B, no.12). The bands resemble Longworth motif F which has already been observed to be a notable feature on cordoned urns and the Tynings-Toterfout biconical urns (ApSimon, 1972, 151). No ready functional explanation can be offered for this feature.

On the Glenville urn there is some suggestion that the hooped basket was supplemented by a second form of container comprising a broadmesh network of cords drawn around the lower body. This particular relief skeuomorph seems to confirm the existence of a separate body net like that already intimated (as we have noted in section B4.10), by the specialized use of the incised body lattice on form 3 urns in northern Britain. At Annathill Lnk. 2A (fig 29C no.16) multiple relief arc handles are associated with an incised representation of a body net (Cowie, 1978, fig.25) and the same arrangement is implied by the combination of similar relief handles with more devolved body incisions at Ovingham, Northumberland Nor.3B (Greenwell, 1877, 72, fig. 59; Cowie, 1978, fig.8) and Howletts Ha' Ber.9 (Cowie, *ibid.* fig.22). This evidence suggests that on occasion multiple handles and a single girth or shoulder hoop were considered appropriate for relief skeuomorphy while a body net of less substantial material was either omitted or casually represented by incisions. The evidence provided by these particular Irish and British encrusted urns provides precisely the

rigid model appropriate to the shoulder cordons and arc handles found in the form 3 urns and biconical urns in the south.

B5.5 The Lattice Net (fig. 29C)

Some evidence for the use of a widemesh net in association with a hooped framework has already been discussed in the preceding section. Nets of a widemesh variety were also apparently used both without hoops or arc handles. At Mullaghreelan, Co. Kildare a deep net with large polygonal apertures is represented in relief on a large open-mouthed urn (Kavanagh, 1973, 44). The unaligned intersections in the relief design suggest that this container was composed of stretched cords rather than rigid basketry but there is surprisingly no suggestion of a drawstring at the top. (fig. 29C, no.14). At Rath, Co. Louth (Kavanagh, *ibid.* no.54) another ropework carrying net may be implied although in this case it is surmounted by multiple loop handles which are shown erect (fig. 29C, no.15).

In general the evidence provided by encrusted urn skeuomorphs for the use of a cord carrying net is poor. The topic might be dismissed if it were not for the evidence provided on other types of urn. In southern Britain arc handles and shoulder cordons are frequently positioned above the maximum girth of the pot where they could not possibly facilitate lifting and pouring unless anchored to a restraining network positioned lower down. The carefully fashioned biconical urn (D.B 31) from Bere Regis G49b provides a very clear indication of this. Its erect tongue lugs are clearly intended to restrain the pot when it is tilted downwards and held by its arc handles. A functional arrangement of handles and girth cordon in this position would however slip from the pot at first lifting unless secured below the shoulder. During holding and pouring it would be necessary for the functional girth cordons and handles to support the whole weight and contents of the pot. Urns like those from Bere Regis G49b (D.B.30 and D.B.31) are thin walled, exceedingly large and cumbersome and it would be quite impossible to successfully lift and tilt them when full unless the tension on their walls was dispersed by the cordon.

These practical considerations suggest that the shoulder cordon and handle were essential load bearing attachments to the pot and that the cords of which these fittings were composed would inevitably have been substantial ones. Such thick and heavy functional cords would be the natural subject for skeuomorphy and there can be little doubt that the relief cordons and handles on biconical urns such as those from Bere Regis G49b (D.B 31), Tarrant Monkton (D.B 38) and Bulford G67/71a (W.B 14) provide a very close approximation to the actual

functional components employed.

By contrast the main function of a net on the body of the pot would be to retain the shoulder cordon in its correct position and to provide some support when the pot is vertically lifted and the tension of the pot walls remains low. The tensile strength required for the body net is consequently considerably less than that required for the cordon. The decorative impressions applied to the neck of the classic biconical urn from Hilversum (LB20) probably provide a faithful representation of the functional net cords which once enclosed the body beneath. Thin cords we may conclude, did not generally attract skeuomorphic modelling but there are good functional reasons to suppose that they were frequently an essential adjunct to the load-bearing cordon and arc handle. Despite the lack of skeuomorphic representation we should be wrong to under estimate the importance of the body net and the Annathill and Ovingham encrusted urns are important reminders of its complementary role in certain arc handle designs.

B5.6 The nature of the basket and net container

The idea of British Early Bronze Age communities transporting heavy urns in custom-made nets or baskets is by no means new. Thurnam, prompted by the contemporary example of Victorian stone jars and their basketwork containers, first proffered the suggestion more than a century ago, when discussing Cornish urns (Thurnam, 1871, 340). The possibility of such baskets being represented by relief skeuomorphy was surprisingly overlooked by Thurnam even though he devoted some discussion to the nature of the ribbing on barrel urns.

Calkin (1964, 20) took up the question of relief decoration on barrel urns and concluded that those of his South Lodge type presented skeuomorphic versions of 'a rope network used for carrying the pots about'. Calkin considered that horseshoe handles could also be derived from similar carrying nets and drew particular attention to the Dorset urns from Thickthorn Down (D.B. 39) and Tarrant Monkton (D.B. 38) where multiple loops were represented. No explanation was offered by Calkin for scarcity of multiple loops on southern relief urns but he observed that horseshoe handles bearing the closest approximation to true functional cord handles were to be found on urns where the loops had apparently been separated and reduced in number to four or two (Calkin, *ibid.* 37).

In all his brief allusions to carrying devices Calkin used the terms net, cord and ropework and he was undoubtedly induced towards this interpretation by the cord impressions on the Ringwouldhandles (Calkin, *ibid.*). ApSimon,

discussing similar examples in 1972, widened the possibilities and suggested that a wickerwork carrying frame may have been constructed and that leather may also have been employed. ApSimon further suggested that certain FN decorated food vessel urns and biconical urns might be modelled on stitched leather containers (ApSimon, 1972, 146).

In discussions to date all proposals for the reconstruction of carrying devices have been very largely based upon the limited evidence for skeuomorphy provided by the southern relief urns. The analysis of encrusted motifs set out in section B5.5 has substantially increased the basis for discussion and there appears good evidence to suggest that carrying devices were commonly composed both of broad mesh netting and of basketwork of the ribbed or hooped type. Given these basic models it is appropriate that we should attempt to reconcile all evidence for the construction of pot carrying devices in Britain during the late third millennium and ⁿthroughout the ⁿsecond millennium BC.

The examples of netting and basketry in prehistoric Britain are regrettably meagre. At Handley Hill barrow 24 (secondary burial 17) Pitt-Rivers recovered a fragment of a large container thought to be some 46cm in diameter and composed of fine horizontal strands of rush or grass sealed within a clay matrix. The strands were apparently laid only in a horizontal direction although they might have been secured at broadly spaced intervals in the manner employed on the Welwyn Belgic mat (Stead, 1966, 40-41). In conjunction with the thin clay wash the strands seem to have formed part of an internal lining detached from a more robust vessel. This example of encased basketry was found with a cremation inside a type 2a globular urn but the diameter of the fragment is clearly too wide to have served as a lining for an urn of this type. Pitt-Rivers records that the inner face of the fragment was decorated with incised chevrons which were infilled with fine horizontal lines of white clay (Pitt-Rivers, 1898, iv. 164, pl 299, fig. 1). In view of the internal decoration it seems most unlikely that this example of fine clay-covered basketry belonged to the type of 'large vase' envisaged by Pitt-Rivers. A more practical explanation could however associate this find with the carefully prepared lining of a shallow basket or bowl.

Some evidence for the use of basketry principles devised to fulfil more robust purposes is to be found amongst the waterlogged material recovered from the base of the Wilsford Shaft (Ashbee, 1963). The Wilsford evidence includes twisted rods possibly composed of hazel, which were apparently used to secure stave-built tubs of the Stuntney Fen type. The tubs, staves and withies were, unfortunately, completely disarticulated. Other significant organic finds from

the shaft included portions of 'finely finished' ropes, apparently composed of lime bast fibres and Clematis (Ashbee, 1963, 118-119; Coles et al, 1978, 29) and fragments of stitched composite vessels which the excavator compares with the hollowed cylindrical wooden tub with sewn-in wooden base plate found in the Italian lacustrine deposits at Lago de Ledro near Trentino.

Some Irish examples of basketry are included in a recent survey of wooden items published by Coles (1978). At Aghintemple, Co. Longford a small Neolithic container has been recovered composed of alder rods bound with 'grass' strands. It contained a small stone axe (Raftery, 1970). At Twyford, Co. Westmeath two circular mats of unspecified material were sewn together to form a bag with handles and at Timorey, Co. Tipperary further examples of mats have been found (Raftery, *ibid.*).

Coles (1978) has conveniently summarised the qualities of British woods suitable for basketry and ropework noting that coppice rods of ash, oak, hazel, alder and willow withies or fibres of bramble, nettle or lime bast may be used. Despite its well-known qualities for rope-making canabis sativa (hemp) is not included in Coles' list. The halter round the neck of the Late Iron Age man found at Borremose, Jutland nevertheless attests its use in prehistoric times. The overwhelming use of cord impressions in the food vessel/urn ceramic tradition indicates that this particular type of binding was readily available to most potters and would be a natural and most convenient choice for the construction of carrying devices.

On cord decorated biconical urns in southern Britain and the Low Countries Longworth's motif F is employed in a dominant proportion yet the same motif is seemingly insignificant in all forms of the food vessel urn series. This motif it seems, is notably associated with biconical urns and it probably presents a stylised interpretation of double or perhaps multi-strand cord arc handles of the type represented on the Thickthorn urn (D.B.39) and previously noted by Calkin (1964, 37). Fingertip and fingernail decorated shoulder cordons and arc handles seem similarly to represent cord devices in the manner noted in section B5.2.

Some more accomplished cord skeuomorphs found in the Alpine lake sediments provide some helpful analogies. At Bourget, Later Bronze Age finds included an urn bearing an applied neck cordon which had been carefully modelled to represent the coils of a rope (Keller, 1878, 1, 332, 2, pl. CV1). Another find from this site was a small cast bronze pot on which two cord girth cordons had been faithfully reproduced (Keller, *ibid.* 1, 342, 2, pl. CLIX).

By contrast with the unequivocal record of the cord impressions there is

rather less evidence to associate rigid basketry with the works of Bronze Age potters in Britain. If our interpretation (set out in section B5.2) is correct pot-carrying baskets were essentially constructed according to the ribbed cage and hooped design and evidence for their use seems well attested on Irish encrusted urns.

In Britain there is no demonstrable evidence to associate basketwork with biconical urns but there is a very clear skeuomorphic indication that the cage design was firmly associated with barrel urns particularly those of the South Lodge type.

The cage design is by no means unprecedented in southern Britain for it is also very clearly in evidence in skeuomorphic relief motifs employed by the makers of Late Neolithic Grooved Ware (fig. 29A). The substantial body of domestic grooved ware finds assembled in the last decade provides ready analogies both for ribbed cages of South Lodge character and possible slath bases. (e.g. Durrington Walls P48, Wainwright and Longworth, 1971, 82).

Basket skeuomorphy is best developed in that part of the Grooved Ware tradition which has been termed the Durrington Walls style (Wainwright and Longworth, *ibid.*). Relief features in this style include close-set ribs (*ibid.* P48), wide-spaced ribs (*ibid.* P28, P29) and distinctive paired ribs (*ibid.* P168, P169). On rare occasions the baskets seem to have been braced with a certain number of horizontal hoops (*ibid.* P47). Durrington cages are usually surmounted by a horizontal cordon at the shoulder of the pot while sometimes another cordon or pseudo-slath is added at the base. Relief handles are only rarely represented in the Grooved Ware tradition and in most cases the evidence is too fragmentary to enable clear identification.

On Durrington style pots from the type site fragments of diagonal arc shaped loops are known (*ibid.* P125, P191, P194, P195, P192) and on a small urn from Mount Pleasant (fig. 29A) a close-set cage is surmounted by multiple loops (Wainwright, 1979, 100, P67).

Cord decoration on grooved ware is restricted to the Durrington Walls style. Type-site fragment P97 suggests that cord impressions included, on occasion, Longworth's uncommon motif F which may represent some form of multi-strand handle like that intimated on some cordoned urns and biconical urns. The same motif seems to occur in incised form on pot P48 from the same site.

With basket skeuomorphy occurring in relief form on both grooved ware and encrusted urns it is not surprising to find that an evolutionary development has been proposed from the former to the latter (Childe, 1940, 149-50; Wainwright and Longworth, 1971, 248 *cit.*). Such a development in general is unconvincing

for few other decorative features in the two series show any mutual compatibility. Encrusted relief commonly includes imitation of the hooped basket which is unknown in the grooved ware skeuomorphic repertoire.

In their re-appraisal of the Grooved Ware tradition Wainwright and Longworth (1971, 284) have drawn attention once more to comparative skeuomorphic features on the southern relief urns but it is undoubtedly in South Lodge barrel urns that the significant analogies in basketry techniques are to be found. The South Lodge urns attest a regional preference for skeuomorphy but there is no reason to suppose that the baskets on which these pots are based were confined to the same Wessex region.

Some important new evidence for the use of the basket is to be found on some Later Bronze Age sherds recently recovered from the settlement site at Billingborough Fen, Lincs. (fig. 30). Ceramics from the early phase of occupation have been generally equated with a date of 1198 \pm 57 bc (B.M. 1410) (Chowne, 1979). Vessels include heavy grog tempered urns displaying both thick applied FT shoulder cordons and sub-biconical and bucket-like profiles.

Basal fragments of two large urns from Billingborough are of particular interest (fig. 30). Sherd BFE.77.F47 comprises part of a large slab-based urn with a basal diameter of 36cm. On the underside 10cm from the edge is a deep and carefully incised u-shaped channel. The channel is 6mm deep some 8mm wide and it seems to have been designed to accommodate a load-bearing strand of a carrying device. The cord or withy had apparently been recessed into the base of the urn to avoid upsetting the vessel's stability. Further channels and intersections would no doubt have been necessary but the surviving portion of the base is unfortunately too small to reveal more.

On sherd BFE F439.2 at Billingborough may be found further evidence of a carrying device (fig. 30). This urn is 24cm in diameter at the base and on its lower wall are stained traces of organic bindings; 1.1 centimetres above the base is the stain of a horizontal band 8mm wide. Rising in the manner of a vertical rib from this band are two parallel lines of regularly interrupted stains set 1.2cm apart. The stains appear to have been formed on the pot as a result of the burning or chemical deterioration of its carrying frame. The broad horizontal band, and a similar short communicating stain which rises from the base, may perhaps belong to skeins of a basketry slath upturned from beneath the pot. The vertical interrupted stains seem to mark the points where chain paired rods of a rigid basket had remained in contact with the pot surface. On the upper portion of the sherd these marks are discontinued where contact is lost over a small depression.

From the evidence currently available to us we may conclude that the indigenous basketry industry of the late third millennium bc included cage-shaped containers used for carrying large storage pots. Such containers frequently comprised wide or close spaced vertical ribs which were attached to a radial slath at the bottom and a hoop-rim at the top. This simple and effective basket remained basically unchanged throughout much of the second millennium bc and was, on different occasions and in various geographic regions, used as a skeuomorphic model by disparate groups of potters. Such potters included the makers of grooved ware and barrel urns. Some food vessel urn communities also on occasion responded to ribbed cages (e.g. Newlands Lnk.6; Aberlemno Ags.1; Prescelly Mountain, (Thurnam, 1871, fig. 32) but they are also known to have been familiar with other forms of container such as the hooped basket and carrying net. Sometime during the use of the ribbed cage multiple arc handles were applied to the top of the rim. The earliest examples are probably those found on grooved ware urns of the Durrington Walls style. Basket skeuomorphy is not found on biconical urns and there is reason to suspect that these pots were carried in special rope nets. Such nets were commonly surmounted by arc handles and these may have been responsible for the initial stimulus for a handle response in the food vessel/urn tradition. Ribbed baskets were still used to encase storage pots at Billingborough Fen at the beginning of the 12th century bc (1198[±] 57 bc. B.M. 1410). Organic stains on a sherd from this site suggest that the twin-ribbed cage used at this time was still much the same as that employed during the temporal span of the Durrington Walls style.

B6 THE COLLARED RIM PHENOMENON

In section B2 we observed that the Primary Series of collared urns embraces a mature ceramic tradition containing specific textural and decorative characteristics which can be directly associated with formulative trends in the food vessel/urn series. The status and appellation of the collared rim series must therefore be treated with some caution for like Fox's encrusted urns, a single dominant relief feature has led to the premature creation of a specific collared urn class. In this case the collared rim phenomenon has been used as a single primary qualifying attribute which has excluded in many cases the significant attribute groups which represent the broader typological and temporal limits of the parent ceramic tradition.

Unlike encrusted urns, collared urns can, nevertheless, be viewed as a cultural entity for they belong to a major phase in the development of food vessel/urn tradition when a specific relief feature was apparently adopted in total by many ceramic communities. The large population of complete urns obtained from funerary contexts and the sherd material recovered from such domestic sites as West Row Fen, Suffolk, (Martin, forthcoming); Codicote Heath, Herts. (ApSimon, 1961) and Sant-y-Nyll, Glam. (Savory, 1960) indicate that collar relief was apparently often employed across the entire range of vessels in local domestic use.

If collared rims were produced as an innovative feature during the development of the food vessel/urn series we might expect to find rim forms characteristic of the innovation process to be present within the known population of urns. This proposition is by no means new for both Grimes (1939) and Brailsford (1951) pursued this matter well before the recognition of the Primary Series.

Key elements in the food vessel/urn-collared urn transition were clearly recognised in 1939 by Grimes. At this time the concept of enlarging food vessels to fulfil cremation purposes was still current but Grimes observed that the presence of collared urns in some of the Wessex Culture inhumations enumerated by Piggott (1938) provided a notable inconsistency. Grimes did not pursue the question of enlargement and he clearly accepted that the need to provide cremation receptacles was still a principal element in the development of the collared urn. He also considered that the associations with Wessex inhumations provided significant support for Abercromby's view of a southern genesis.

When examining the development of the collared rim Grimes clearly anticipated

some of the principal definitive traits which were to be set out some twenty two years later in Longworth's Primary Series. (Longworth formal traits nos. 1 & 2). Grimes conceded that 'the resemblances of early cinerary urn' [collared urn] 'rims to those of Neolithic B bowls' were 'very close' but his attention was also drawn towards ancestral features belonging to a more appropriate ceramic tradition.

In the early stage of collared rim development Grimes observed that an internal rim bevel or 'moulding' was often accompanied by a decorated external collar facet which remained narrow and had not yet attained its full depth. The urn (Db.2) from Holt, Denbs. clearly demonstrated Grimes' point and he stressed that this example also bore a form 1 stopped groove which signified its ancestral ties with the food vessel tradition.

In assessing the contributory influences of Late Neolithic and food vessel ceramic styles on early collared urns Grimes proffered caution. The reason for reservation seems to have been lacunas in the known geographical distribution of Late Neolithic and food vessel ceramics in 1939. Like Abercromby, Grimes favoured a southern genesis for collared urns (Grimes, 1939, 89) but the distribution of the food vessel culture which might provide the necessary ceramic background was heavily skewed in favour of Mortimer's research area and the north. Grimes concluded that 'the place and origin of the cinerary urn had yet to be settled' and he deferred further discussion in favour of more detailed future research.

In his account of twenty urns recovered from the Sheep Down pond barrow at Winterbourne Steepleton, Dorset, Brailsford, in 1951, took up the matter of the narrow rims and internal 'moulded' bevels observed by Grimes. Brailsford identified three 'narrow-rim urns' (nos. 14, 19 and 20) in the Sheep Down burial complex and these he compared with some thirty others which he observed were widely dispersed in England and Wales (Brailsford, 1951, 20 fig. 6). The definitive criteria used to identify 'narrow rim' or Sheep Down urns were not specified by Brailsford and the character of his thirty analogous urns suggests that these were not sufficiently rigorous. The main attributes appear to have been the presence of a concave internal rim bevel and a collar face which generally appeared to be narrow when compared with the overall proportions of the neck and body. By this means the secondary series collared urn from Stoney Cross III (Piggott, C.M. 1943, 21, fig.16) was admitted even when the rim of the urn was lost and the true collar depth remained unknown. Brailsford considered his narrow rim urns to be a 'primary form of Overhanging-rim Urn, and a natural development from Food Vessel and/or Peterborough ancestors.'

He was therefore able to cite Grimes' urn from Holt (Db.2) with its agreeable combination of incipient collared rim and food vessel stopped groove. On urn no. 4 from Sheep Down, Brailsford found a further stopped groove (in this instance of vestigial character) and although the collar proportions of this urn were by no means noticeably narrow this urn was added by him to his inventory of urns of the 'Sheep Down' type. At Clandon a further urn with a vestigial stopped groove had been found in questionable association with a Wessex Culture inhumation (Drew & Piggott, 1936) and although in this case a deep mature collar was present this urn too was added to the Sheep Down series.

Brailsford concluded that all the urns found within the pond barrow represented 'a single coherent group' which could 'be treated as broadly contemporary'. Although the definitive features of these urns were inadequately specified, Brailsford considered that the assemblage generally represented a primary stage of collared urn development. Some concurrence with this view was indicated a decade later when seven of the thirteen restorable collared urns were identified as Primary Series vessels by Longworth (1961, 294).

With hindsight Brailsford was undoubtedly right to cite narrow or incipient collars as a stage in the collared rim genesis but his reliance on vestigial stopped grooves as complementary evidence was unnecessary. Certainly the form 3 food vessels present at Winterbourne Steepleton would have provided a suitable profile for his transitional collared urns (i.e. urn no.1 transforming into urn no. 19) without recourse to form 1 examples.

In proposing the narrow-rim transition Brailsford undoubtedly envisaged the evolution of a mature collar but he surprisingly omitted any examples of the progressive stages involved. His agglomerated Sheep Down class did however include Carn Kief urn D13 (C.1) which certainly represents one of the earliest recognisable stages of collar development in the food vessel/urn tradition.

B6.1 The incipient collared rim

The earliest stages in the development of the collared rim are represented by food vessel/urn rim types A2, A3 and A5 (fig. 31). In Wales a regional variant which has been described by Lynch (1971) as the 'Anglesey neck' may also be relevant. All four types of rim may be described as incipient collars and with the exception of the 'Anglesey neck' which carries internal features reminiscent of the Drumnakilly style, there seems little doubt that these types were developed from the A1 type of bevelled rim.

The diagnostic features of the A1 rim type are a well inclined concave internal rim bevel and a narrow external bevel facet which is commonly cord decorated (fig. 31). This rim type is commonly distributed throughout Britain and is a major feature on food vessel urns of forms 2A, 2B and 3 (fig 34).

The corpus prepared by Cowie (1978) reveals that cord decoration occurs only infrequently on food vessel urns in northern Britain but when this decorative technique is employed it is very often associated with 'A series' bevelled rims. In the domestic assemblage at Hockwold steep internally bevelled rims of the A series are notably associated with cord decoration while the flattened rims of the B series are usually decorated in incised and impressed techniques (fig. 32). This dichotomy at Hockwold is further emphasised by the textural characteristics of the two series which show a shift in the preferred particle size mode of grog temper employed in the manufacture of the A series urns (fig. 33).

The textural differences at Hockwold offer persuasive evidence that the pots with 'A series' rims were the work of a distinct group of potters who were prepared to invest considerable time in applying impressed cord motifs to their products. Such workmanship is compatible with a household industry (Peacock, 1981) in which quality control may play a vital role in sustaining local or regional exchange systems. That complex rim bevels, incipient collars and cord decorative techniques should be developed by such specialised potting communities is entirely appropriate for sources of this nature would certainly seem necessary for the ensuing production of the elaborate Primary Series collared urns.

The character of the more accomplished A series ware at Hockwold provides some grounds to suspect that specialised modes of food vessel/urn manufacture may have made significant inroads into localised production during the floruit of rim type A1. Unfortunately the current evidence for this process is not strong for the sherds of the Hockwold A and B series come from disturbed contexts where evidence of contemporaneity is implied but not confirmed.

If collars are the result of innovation, incipient collared rim types A2, A3 and A5 may represent practical improvements perpetrated through the type of household industries outlined above. The wide flanged internal bevel of the A5 type could certainly accommodate and retain an organic lid while the deepening and thickening of the collar element in types A2 and A3 would greatly reduce racking stress and the risk of fracture during transportation.

Of a sample of 43 complete urns ^{of all forms} bearing A2, A3 and A5 type rims 12% were found to be plain. By comparison with the general range of food vessel urns of forms 1, 2A and 2B, this proportion is high and it can be readily

traced to the dominant association between incipient *collars* and the form 3 urns which have already been noted for their high frequency of plain forms (fig. 21; section B4.6). The occurrence of incipient rims on various forms of food vessel urn is of particular interest for a high frequency in a particular form in a specific area may direct us towards the region of collared rim genesis sought by Abercromby and Grimes. In fig. 34^{and 34A} the frequency of incipient *collars* in four main forms of British food vessel/urn is presented in histogram form. The diagram shows that incipient *collars* are principally associated with form 3 urns but they are also found in notable quantities in forms 1 and 2A. For the purpose of regional comparison the sample has been divided into southern and northern Britain (after Cowie, 1978) with a further division imposed for Wales. The dominant proportions of southern British examples are a firm indication that it was in the lowlands of southern Britain that the collared rim genesis was most positively felt.

The transition from incipient collared rim to mature collar is particularly well illustrated by a number of form 2A and 3 urns from Wales. At Brenig 51 an urn described by the excavator as an enlarged food vessel comprises a form 3 urn (Db.13) bearing a transitional A1 - A2 rim (Lynch & Allen, 1975). The primary cremation associated with this pot may be described as a 'pommel grave'; a Hardaker type IIa bone pommel being included in the urn's contents. The excavator's definition of this urn should be compared with her description of urn K recovered from the ring cairn at Bedd Branwen (Lynch, 1971, 28, 32). This latter pot, described as an undecorated collared urn, displays a difference in rim and collar profile which can only be described as one of nuance.

The transition from incipient collar to mature collar seems to be associated with the deepening and eventual devolution of the internal rim bevel. This process is very clearly demonstrated at Bedd Branwen where a series of twelve pots were deposited within and beneath the ring cairn. On pots K and 1813 (A.18; A.20) the concave internal rim bevel is clearly defined and lies well below the level of the rim. On the outside of the pot the base of the incipient collar has descended to a lesser degree than the internal bevel. On pots B and C (A.12, A.13) the depth of the internal bevel still exceeded the level of the Anglesey neck collar moulding on the exterior of the vessel. These pots may be contrasted with the mature collar on pot L from Bedd Branwen which shows the descent of the collar to the same deep level as the internal rim bevel. On pots F, J and M (A.16, A.17 & A.19) the collar moulding progressively descends while the internal rim bevel devolves.

The pots from Bedd Branwen mark several transitional processes in the food

vessel/urn tradition which need not necessarily be synchronous. These processes may be identified at three different levels.

1. The pots mark the transition of form 1 food vessel/urns to form 3. This process is clearly demonstrated by comparing pots F, J and 1813 (A.16, A.17 & A.20) with pots D, K and M (A.14, A.18 & A.19). Anglesey neck examples show the same transition in pots B and C (A.12 & A.13).

2. The pots show a deepening of the internal rim bevel and its transition to a weak shouldered internal profile. Residual internal decoration may denote the devolved bevel as in pots F and J.

3. The pots show the descent of the incipient collared rim type A2 in pursuit of the deepened internal bevel. The collar may reach the level of the internal bevel to form a mature collar (e.g. pot L) or the bevel may prematurely disappear as in pots F, J and M (A.16, A.17 & A.19).

The Bedd Branwen pots mark both changes and local variations in the food vessel urn ceramic tradition as witnessed by one local community practicing cremation burial in Anglesey on one particular site over a short period of time. The excavator has estimated that both phases of urn burial on the site could be accommodated within a period of some twenty years but this calculation cannot be substantiated even though pot J in the first period of burials appears to have been made by the same hand as pot F which was interred during the second period.

The level 1 transition at Bedd Branwen should be viewed together with more widespread evidence for the conversion in Wales and southern Britain of form 1 and form 2A pots into form 3. In Wales form 1 food vessel/urns seem generally to have undergone the transition. At Pentraeth, Anglesey a form 1 food vessel urn (A.6) shows a well defined shoulder groove with stops but at Bryn yr Hen Bobl (A.21), Treiowerth (A.22) and Rhiw (Cn.13) these features are treated vestigially. Further examples in southern Britain are given by Longworth (1961).

The level 2 transition begins with the introduction of A1 rims before the appearance of the incipient collar. The process of first deepening the internal rim bevel and later abandoning it, may proceed independently of collar development. For this reason the developmental stages of the collar during the level 3 transition may differ in appearance locally depending on the character of the internal bevel. At Pentraeth (A.6) the steep concave bevel is accompanied by a weak A2 rim form in which the collar base remains higher than the base of the internal bevel. At Bryn yr Hen Bobl (A.21) a more scalloped internal bevel has emphasised the collar while the base levels of these two features still remain unchanged. At Rhiw (Cn.13) the collar reaches the same level as the deep internal

bevel base thus presenting the appearance of a mature collared rim while at Bedd Branwen F and J (A.16, A.17) the incipient collar appears anachronistic by comparison with the devolved internal bevel. All these examples concern form 1 urns on which the shoulder groove and stops are generally treated in a vestigial manner prior to the imminent adoption of form 3. Such forms appear to represent a relatively short stage of development when we consider the evidence of associations and absolute dates.

In southern Britain the descent of the incipient collar facet in pursuit of the deepened bevel may also be observed on form 2A urns at Hengistbury (H.16) Winterbourne Stoke G66 (W.8) and Windmill Hill (W.34). Like the Welsh examples cited above the collar base usually remains higher than the bevel base and the relationship between these two features essentially governs the visual impact of the incipient or evolving collar which still occupies a notably small proportion of the total height of the pot. Such evolving collars may provisionally be termed type C but the typological distinction between them and incipient and mature collars cannot at present be rigorously defined and it must be admitted that their form is determined by the nuances in bevel depth, bevel eversion and collar to neck proportions.

Despite the variation in their character, incipient and evolving collared rims may be identified as a fundamental stage in the later development of the food vessel/urn series. The notable number of late form 1 and form 2A urns bearing such rims strongly suggests that the collared rim phenomenon is an innovation which occurred at a time when the form 3 food vessel/urn, with its increased incidence of plain versions, was emerging in southern Britain and Wales from the form 1 and form 2A series. This emergence of form 3 (termed here the level 1 transition) cannot be synchronised with the bevel and rim transitions of levels 2 and 3 even though these events are broadly contemporary. The independent progression of each level of transition according to local circumstances is readily attested at Brenig 51 (Db.13) where a form 3 profile was achieved while a type A1 rim was still employed bearing only the slightest suggestion of an incipient collar. By contrast a mature collared rim on an urn recorded as 'probably Gloucester' (Longworth, 1961, fig. 10.89) was accompanied by a well executed stopped groove which shows little if any suggestion of imminent transition to the form 3 profile. At Bedd Branwen pot H (Lynch, 1971) which was included in the excavator's first phase of burials comprised a mature primary series collared urn bearing no trace of an internal bevel which had been extinguished by the deep level of the collar. If the excavator's estimate for the short duration of burials at this site is correct we must envisage

incipient rims continuing in common use when mature collars are also in circulation.

B6.2 Absolute dates for the collared rim transition

Seven contexts yielding radiocarbon dates are relevant to the inception of the collared rim phenomenon (fig. 35). At Earls Farm Down (Amesbury G71) a date of 1640 ± 90 bc (NPL - 75) provides a terminus post quem for the phase III remodelling and raising of the turf stack. The date is particularly applicable to the form 2A urn (W.19) found scattered on the pre-stack platform at the same level as the dated charcoal from the hearth (Christie, 1967, 343-5, fig. 6 no.5). This urn bears a type A1 rim with a jabbed external bevel facet which may herald an incipient collar. Typologically and stratigraphically this urn precedes the form 2A urn (W.2) with A2 type rim which was inserted with a cremation burial some time later through the turf stack (Christie, *ibid.* fig.6 no.4). This latter urn belongs to a series of six burials comprising four inhumations and two cremations ascribed to phase 3 of the barrow. One inhumation of this period was accompanied by a form 2A food vessel. All food vessel/urn pottery from this phase apparently precedes the insertion of a collared rim food vessel urn and the biconical urn (W.B2) into the final chalk envelope of the mound.

From the main earthwork ditch in the Mount Pleasant henge monument comes a quantity of domestic food vessel/urn sherds with associated radiocarbon dates (Wainwright, 1979). The sherds were deposited in a series of secondary silts comprising derived aeolian silts which also contain much derived grooved ware. (The levels were numbered in descending order). Some isolated sherds (P.245, P.250, P.251) of food vessel/urn character have been recovered as low as layers 10 and 9 in trenches XXIX and XXVII but their positions at this level could well be due to disturbance. In layers 7 and 6 in trenches XXVIII - XXX notable quantities of food vessel/urn sherds have been recovered along with grooved ware sherds which apparently persist as a derived phenomenon. Beaker sherds found in these levels may mark an extension of the beaker occupation attested in the preceding layer 8.

Sherds with A1 - A2 rims occurring in layers 7 and 6 have been described by Longworth (1979) as collared urns but sherds with mature collar profiles (P.261-3, P.266 and P.274) cannot be reliably attested until level 6. Sherds of a mature collared urn P.27 were however found dispersed vertically across the interface of layers 7 and 6.

In general it would seem that the collared rim genesis took place sometime

during the deposition of layers 7 and 6 and that the development of the incipient A2 rim form is represented in level 7. The same food vessel/urn rim types persist in level 6 where mature collared rims are also found.

Due to the mode of deposition of the secondary silts at Mount Pleasant the sherd yields from these layers must be presupposed to have been washed in from occupation nearby. The opportunity for mixing prior to deposition is consequently high. For this reason the combined ceramic assemblage from both layers may be taken to be generally representative of the collared rim transition while further refinement of the layer yields should be viewed with reservation. The radiocarbon samples which have yielded complementary dates of 1509 ± 53 bc (B.M.-189) for layer 7 and 1556 ± 55 bc (B.M.788) for layer 6 may be taken on aggregate to indicate that some part of the collared rim genesis was in process at Mount Pleasant at c. 1500 bc.

The dates for the genesis at Mount Pleasant are well complemented by dates for transitional urns at three other sites. At Brenig 51 the form 3 food vessel/urn (Db.13) bearing an A1 type rim shows the first suggestion of change to the incipient collar type A2 (Lynch & Allen, 1975, 17 fig. 3.B). From the secondary fill of the outer causewayed ditch at Windmill Hill comes a form 2A urn (W.34) with a transitional collared rim which lies closer to type C than A2. (Smith, 1959, 159, fig. 6 no. 1). The scattered sherds of this domestic urn are associated with a date of 1540 ± 150 bc (B.M.-75) for this level of the ditch fill. A complementary date of 1560 ± 80 bc (HAR-2516) has been obtained from the domestic assemblage containing form 3 urns and type A2 rims at West Row Fen site MNL130. At Harland Edge, Derbs. the form 2A food vessel with type A2 incipient collared rim (Der.53) is associated with a date of 1490 ± 150 bc (B.M.-178) (Riley, 1966). At Bedd Branwen the radiocarbon date of 1307 ± 80 bc (B.M.-455) for the 'Anglesey necked' urn B (A.12) is surprisingly late and a measure of corroboration for this date is offered by urn L from the same site which has been dated at 1274 ± 81 bc (B.M.-453). Neither of these urns bear typical incipient or transitional rims and the entire burial sequence at this site is believed to be short. Nevertheless if we accept the collective value of the well clustered absolute dates from Amesbury G71; Brenig 51; Windmill Hill; Mount Pleasant and Harland Edge for a genesis and transition stage occurring during the sixteenth century bc then the dates from Bedd Branwen would imply that the duration of the burial period at this ring cairn may have been considerably longer than the excavator's estimate.

B6.3 Associations with transitional collared rims

Daggers and pommels

There are five dagger associations with urns of the collar transition.

At Bishops Waltham two daggers (Gerloff, nos. 89 and 310) were associated with a form 3 food vessel urn bearing a type A2 rim. (The rim shows a clear overhanging profile and a well ordered zone of cord decoration on the incipient collar facet). The oxidised flat blade of miscellaneous type (Gerloff, no. 89) belongs to a small and ill-defined group which Gerloff suspects may be coeval with both phases of the Wessex Culture. The small midrib knife-dagger (Gerloff no. 310) is almost exclusively confined to the Wessex region. Its distribution and timespan seems to coincide with the Camerton-Snowhill daggers (Gerloff, 1975, 170).

At Sutton Veny, Wilts. a fragmentary flat riveted dagger was accompanied by the form 3 food vessel urn (W.6) and a small accessory vessel. The form 3 pot is generally agreed to be the work of the same hand or school as Bishops Waltham urn H.1. The dagger in the flexed Wessex inhumation was very much decayed but it appears to have been similar to the Bishops Waltham example (Johnston, 1980, 41-3, pl. 7).

From Winterbourne Stoke G66 comes a form 2A food vessel with a type C transitional collar. The grooved knife dagger found with this burial may be equated with the Armorico-British C and Camerton-Snowhill dagger series (Gerloff, 1975, no. 324: 171-2). This particular urn closely resembles the form 2A urn (W.34) from Windmill Hill (Smith, 1959, fig. 6 no. 1).

The form 3 urn (A.1) with type A1 rim from Llanddyfnan, Anglesey has produced a further dagger association. This dagger (Gerloff, no. 107) belongs to the Aylesford Group, a geographically dispersed collection of blades which show affinities both with earlier flat daggers and later grooved Wessex pieces. The rain pattern on the blade suggests that its affinities lie closest to Camerton-Snowhill daggers and Irish Ballyvalley axes, all of which are contemporary with later Wessex burials.

Dagger pommels found with or without bronze blades cast some further light on the chronological position of the transitional urns. Five pommels have been recovered of which four were buried without blades. All examples belong to Hardaker's group II and IIa trough type. Hardaker (1974) has stressed the significant absence of blade in this particular group and has proposed a special funerary cult. Of the seven known pommels of this type only the atypical amber pommel from the female Wilsford Series grave of the Manton Barrow (Preshute G1a) was accompanied by a blade. This flat riveted knife-dagger (Gerloff, no. 241) may be equated with both Armorico-British and Camerton-Snowhill contexts.

In Wales, cremation burials with trough pommels at Brenig 51 (Db.13), Bedd Branwen B (A.12), Pentraeth (A.6) and Rhiw (Cn.13) have provided a concise group of urns which mark the transition from the A2 incipient rim to collar.

A notable association occurs at the barrow on Gallibury Down, Isle of Wight. Here a form 2A urn with A5 flared incipient rim (IW.5) was found inverted over an inner upright form 3 urn containing a cremation (Tomalin, 1979 and forthcoming). The inner urn (IW.6) of this secondary burial was also accompanied by a Breton vase à anse. The vase association may best be equated with the Armorico-British contact between early 'Second Series' Breton communities and Wessex II but the persistence of vases throughout the Second Series of the Armorican tumulus burials cannot preclude the transmission of the vase at a later date. On the floor of the Gallibury grave lay a single fine bronze pointille pin which had apparently been dislodged from the handle of a dagger employed during the final scooping out of the grave prior to burial. Pointille decoration using clous d'or is well known on the pommels of Armorico-British daggers, principally the Armorican ones, while bronze pin inlays are known only on Milston type daggers which have been assigned to the Late Beaker - early Wessex I overlap. (Gerloff, 1975, 52-57). In an adjoining secondary burial at Gallibury Down a form 3 urn (IW.4) identical to the inner urn (IW.6) of the vase cremation was covered by an inverted form 3 urn (IW.3). Urns IW.4 and IW.6 are undoubtedly the work of the same hand and consequently it seems unlikely that there is any significant difference between the dates of these two burials. The inverted food vessel urn F353 was constructed in biconical urn fabric. The collective evidence from these two related burials suggests that the Armorican vase and the biconical/food vessel urn hybrid are unlikely to be later than Wessex I/II overlap.

Beads

Three associations with faience beads should be noted. At Llangwm (Db.9) a form 3 urn with Lynch's 'Anglesey neck' was associated with two segmented faience beads and a smaller form 3 food vessel/urn bearing an A1 rim. At Tynings Farm T12 the form 3 urn Sm.4 was accompanied by five segmented faience beads, four sub biconical jet beads, a triangular jet bead and a bronze awl. At Brynford (Fl.5) one segmented and one elipsoid spacer bead were associated with a form 1 urn bearing a type A2 rim.

On current evidence it would appear that a small number of artifacts associated with transitional rims can either be assigned to the timespan of Wessex II or the combined span of Wessex I and II. Gerloff (1975, 199-200, 204-208) has observed that faience beads have never been found with Armorico-British daggers or with objects known to be associated with these daggers but

they do appear to be indirectly associated with daggers of the Camerton-Snowhill series. Such evidence suggests that the Tynings Farm urn Sm.4 with its type C rim and the Brynford urn F1.5 with its A3 rim form should be assigned to the Wessex II phase. The Tynings example is a form 3 urn which appears by its collar development to belong to an advanced stage of the transition process. The persistence of form 2A from Brynford is notable. At Llangwm a Wessex II date for the Anglesey neck agrees well with the absolute date of 1307 ± 80 bc (B.M.-455) obtained for the similar neck form at Bedd Branwen B (A.12). This absolute date conforms well with the present known dates for the second phase of the Wessex Culture obtained from the graves at Edmondsham, Earls Barton and Hove (1119 ± 45 bc B.M.-708; 1219 ± 51 bc B.M.-680 and 1264 ± 64 bc B.M.-681; 1239 ± 46 bc B.M.-682).

The trough pommel associations can offer no more precise method of dating for although the Manton amber pommel and the Brenig 51 date of 1560 ± 70 bc (HAR 801.36) appear compatible with Wessex I the Bedd Branwen B (A.12) association suggests that these pommels were still employed during Wessex II.

If most associated artifacts can be dated no closer than the combined temporal range of Wessex I and II to what extent can any part of the collared rim transition be attributed to Wessex I? The answer to this question lies in the known ceramic associations with Wessex I graves. At Bishops Waltham and Sutton Veny the form 3 food vessel/urns with type A2 rims were both associated with contracted inhumations which are generally a characteristic of Wessex I. The flat riveted blades from these burials accord with such a designation while the small midrib knife dagger (Gerloff no. 310) from Bishops Waltham suggests that these events took place in the final part of this phase where Gerloff has identified an overlap with the onset of the Camerton-Snowhill series.

Also near the end of Wessex I may be placed the urns from Wilsford G7; Wilsford G50a; Hengistbury (Cunliffe, 1978, barrow no. 3); and Upton Lovell G2e which were all recovered from Wilsford Series graves which Gerloff attributes to a limited phase of female burials. These too may be equated with the latter part of the Armorico-British series. The urns from Wilsford G7, Hengistbury and Upton Lovell G2e all carry mature rims which demonstrate that the full transition had been achieved by this stage. At Wilsford G50e the plain lost urn figured by Hoare (1812, I, pl. 31) may have carried a late transitional rim of type C. At Upton Lovell G2e an early mature collar appears on a form 2A urn but the association of this find with the Wessex I grave cannot be confirmed. At Winterbourne Martin G31 a further mature collar occurs on a form 1 urn which was found in an ambiguous context just above the Wessex grave. The Armorico-British B dagger in this questionable association need

not be earlier than the Camerton-Snowhill overlap.

The evidence of the above associations demonstrates that the transition to fully developed collared rims and the exclusion of the internal bevel was achieved before the conclusion of the Wessex I period. Whether or not complete transition was achieved before the beginning of the Wilsford Series of graves cannot be demonstrated for there are no artifact associations which can be securely confined to this earlier stage.

B6.4 The nature of the collared rim genesis

In this review of food vessel urn development we have established that the genesis of the collared rim phenomenon may be associated with a specific form of externally bevelled rim which we have termed type A1. This rim form is commonly found throughout Britain but its conversion to an incipiently collared rim (A2) is particularly evident in southern Britain where the new rim type is most notably associated with another southern innovation, the form 3 food vessel/urn. Incipient rims also occur in minor proportions on other forms of food vessel/urn but whether such examples represent a subsequent response by more archaic ceramic communities cannot at present be ascertained. The only other notable incidence of incipient A2 rims occurs on five form 2A food vessels/urns of which four occur in the south. Such pots might perhaps lie close to the form 2A-3 transition.

The conversion of incipient collared rims to mature collar appears to have been rapidly achieved and the evidence in southern Britain shows that the process was completed before the termination of Wilsford graves series.

Although the collared rim appears to be an innovation which was rapidly embraced, its emergence need by no means have precluded the continued production of established food vessel/urn rim forms including the A1 rim type upon which the collar was based. (e.g. food vessel urn Db.10 from Llangwm). It is however the widespread acceptance of the collared rim that has given this phenomenon its distinctive status in British Early Bronze Age ceramics. The predominant occurrence, in the archaeological record, of this type of pot in cremation contexts has often reinforced the view of several writers (Thurnam, 1871; Abercromby, 1912; Kavanagh, 1976) that urns with collared rims were designed primarily to fulfil an explicit funerary purpose.

The general uniformity of the collared rim urns has also given rise to comment. Grimes (1941, 89) considered it a remarkable illustration of 'the unity of native culture'. To Longworth (1964, 3) it represented 'a single pottery tradition'.

The uniformity of collared rim food vessel urns may be partly due to the general omission from the genesis process of forms 1 and 2B. These appear to have been largely superseded by the rise of form 3. In section B6.1 we observed that a move towards specific preferences in grog quantities and particle size at Hockwold (fig. 33) might perhaps be equated with the choice between incised and applied cord decorative techniques. The cord decorated vessels at Hockwold include A series rims which provided appropriate prototypes for the collar transition. This carefully made cord decorated ware we have suggested might be equated with an organised ceramic industry while the hastily stabbed and incised vessels might be attributed to a domestic mode of production.

The analysis of the domestic food vessel/urn assemblage at West Row Fen, Mildenhall, Suffolk, presented in section E4 sheds some further light on the organisation of later food urn production. This assemblage almost entirely comprises cord decorated vessels which show a more positive shift in decorative preferences and tempering technique. The rim forms at this site comprise incipient collars of type A2, some mature collared forms devoid of an internal rim bevel and some undeveloped food vessel/urn rims. All pots are grog tempered and their temper quantity - particle size measurements presented in fig. 36 show a marked preference for reduced quantities of grog with a particle size mode of 2mm or less. This tempering technique agrees precisely with a characteristic tempering recipe which appears to have been employed by most producers of collared rim urns in southern England (fig. 6).

The shift towards greater uniformity in production methods may point towards organised distributive production during the floruit of form 3 and the use of collared rims. The writer's observations amongst the Ila of Zambia showed that grog temper was hoarded over quite long periods. Certainly the reduction or discarding of grog temper in collared urns would be an expedient move to improve output.

The dispersal of the pair of form 3 urns W.6 and H.1 found 72km apart at Sutton Veny, Wilts. and Bishops Waltham, Hants. would accord with an exchange system operating within a regional sphere. In the South West Peninsula some petrographic evidence for the dispersal of food vessel/urn ceramics has been assembled by Parker-Pearson (1979) who has observed that the form 3 food vessel urn and its plain lugged companion from Trethem, St. Just-in-Roseland (Bousfield P & S, 1952) both originate from the gabbroic clays situated 16km to the S.W. on the Lizard. The form 2A and form 3 urns (C.1, C.2) from Carnkief Perranzabuloe both appear to have travelled 32km from the same source. Despite the evidence for some centralised production of either pots or raw clay by food vessel/urn communities, Parker-Pearson has observed that several other dispersed sources were also responsible for some food vessel products. Among

the collared rim varieties however seven of the eleven thin-sectioned pots contained gabbroic clay and five of these had travelled 24 to 40km. A further collared rim urn (containing greenstone inclusions) had been ferried some 75km to Normandy Down in the Isles of Scilly.

The petrographic evidence from Cornwall provides some affirmative evidence for improved distributive production of food vessel urns during the collared rim floruit. Other factors also point towards specialist potters. At Yateley, Hants. a Primary Series collared rim urn (Winchester acc. no. 33.00.1) is decorated in line cord with Longworth motifs B, C, E and J. One portion of the rim is also intensely marked with deep clear fingernail impressions which are very probably the work of the right thumb. The fingernails of this potter are well developed and are certainly not those of one accustomed to persistent heavy manual work. From Woodford Down, Wilts. (Salisbury Mus. cat. no. 195; unpublished) comes a motif AB and O cord decorated collared urn bearing clear incidental fingernail markings on the collar overhang and internal rim bevel. On a sherd of collared urn fabric found at Stratford sub Castle G1 Wilts., motif J has been incised with deep well-formed fingernail impressions (Salisbury Mus. cat. no. 215; unpublished).

Although FN decoration is not generally employed on collared rim urns, where intentional or incidental impressions do occur they reveal a little of the potter's physical disposition. Zambian female village potters observed by the writer all have well worn, damaged and recessed fingernails incapable of leaving effective impressions on pottery. In the lives of these women however pottery-making is only an intermittent occupation. The retention of well formed fingernails by collared urn potters suggests that for these potters much of the regular work of the community may have been exempt. Such arrangements accord well with a community organised to support the continual production of pots for exchange or barter in a distributive system.

Although a move towards organised distributive production of collared urns might explain much of the uniformity within this particular style, the change is unlikely to have been sudden and other factors too must have influenced the widespread adoption of the collared rim feature. A primary consideration here must be ApSimon's observation on the bias of selection of funerary pots for as much as this warning is appropriate to food vessel/urns of various sizes, it is most certainly appropriate to urns with collared rims. In a recent lecture, Longworth (1979) has cited a known population for the British Isles of 2164 collared urns of which the very great majority belong to burial contexts. The carefully executed decoration found on many of these pots

and the very low incidence of repair holes (3 examples) suggests that a bias in the selection of collared urns for funerary purposes may well have been operative and only the best examples were selected for the grave.

If such a bias is accepted, the 2164 examples recovered from the archaeological record may offer us a substantial sample of the 'professionally' produced urns but our knowledge of collared forms which may have flourished through a domestic mode of production may well be seriously deficient.

The dissemination of the collared rim feature was probably promoted through the interaction between the competitive distributive producers and conservative domestic norms. Until substantial settlement site material is obtained the nature of such interaction can only be guessed and further discussion of this topic can be of little value. The transition to the mature collar can however be recognised as a rapid innovative process for there is certainly a quantum leap, before the termination of Wessex I, from Thurnam's 'moulded rim' or transitional rim type A2 and C to the deep mature collar and thickened robust profile represented by the urn from Wilsford G7.

For explanations of the collared rim genesis we should perhaps re-examine the other nouveau traits associated with the conversion of the southern 2A food vessel urns into form 3. These may be summarised as follows:

1. The acquisition of FN and FT decoration.
2. Occasional acquisition of arc lugs.
3. Assumption of a biconical profile and the discarding of girth groove or girth grooves.
4. Occasional display of gloss burnishing.
5. Reduction of decoration.
6. Innovation in tempering technique marked by the mixing of flint particles to the grog temper recipe and a hardening of the fabric.

Of these features given above all but numbers 5 and 6 are characteristics which are also known to have been employed by collared urn potters. With the exception of feature number 4 all the above attributes are also characteristic of the biconical urn tradition. If the producers of form 2A food vessel/urns in the Wessex region responded in such an overt manner as signified by features 1 - 4, to the biconical urn tradition it might almost be predicted that they should respond also to the ingenious handled rope carrying-nets in which the biconical urns were ^{apparently} suspended.

The plugging and modelling of functional tongue-shaped retention lugs of the Bere Regis- Grafton type (D.B.31; W.B.50) is not a technique that might readily be assimilated by another ceramic tradition and there must be severe

doubts whether such lugs would resist the localised stress in soft food vessel/urn fabric. The lowering and reinforcement of an incipient projecting rim would however provide an expedient solution to this problem and would enable food vessel/urn pots to be bound with a girth cord and suspended in the biconical urn manner. The broad collar band would provide a clear zone on which an appropriate display of traditional motifs might re-assert the food vessel/urn tradition while immediately below the collar overhang a blank zone of appropriate width might be left to accommodate the girth cord (e.g. Wilsford G7).

In this examination of the collared rim genesis it is proposed that a functional explanation is best suited to this major innovative adaptation in the food vessel/urn ceramic tradition. This particular attribute is appropriately accompanied by other related traits acquired from the biconical urn tradition and it seems likely that both the carrying net and the collar adaptation were rapidly adopted by southern British ceramic communities. In certain highland areas such as Wales the adoption of the carrying net may have preceded the inception of the mature collar and the form 3 profile. The Clocaenog urn (Db. 11) with its drooping arc handle skeuomorphs hints strongly at a prematurely applied carrying cordon while the form 1 urns from Pentraeth F462, Bedd Branwen A. 13, A. 16, A. 17, A. 20, Bryn yr Hen Bobl A. 21 and Rhiw Cn. 13 suggest the retarded arrival of the form 3 profile.

During the proliferation of the functional collar it is predictable that non-functional collared forms should also develop, especially on the smaller urns. In the South West Peninsular the development of the massive 'ribbon' handles on form 3 urns marks a unique solution applied by a more remote community to the same problem of suspension endemic to biconical urn contact. This particular innovation largely precludes later development of the Cornish collared urns which are very largely supplanted by the distinctive Trevisker style.

In this review of the indigenous food vessel/urn tradition we have identified a series of technological, formal and decorative attributes which unite the production of British urn style ceramics in the Late Beaker and post Beaker period. Such ceramics we have labelled the food vessel/urn tradition and specific variants we have indicated are encrusted food vessel/urns and collared food vessel urns. Due to historic accident the nomenclature remains clumsy and if any rationalisation might be attempted at this very late stage the term 'food urn' might identify the parent tradition while the term 'encrusted food urn' or 'collared food urn' might identify these distinctive variants or styles.

The purpose of this review has been to examine the character of the indigenous food urn tradition and to identify, within it, the nature of change or response which might be attributable to the presence of biconical urns in southern England. A detailed analysis of formal and decorative attribute groupings or the identification of regional styles has not been attempted. Such work must await the compilation of complete British corpora including the publication of Dr. Longworth's eagerly awaited corpus of collared urns.

In the course of this review we have identified five significant food urn features which may be traced to biconical urn inspiration. (The sixth, no. 4, may be associated with one of the continental sources for the same urns.) Of these five intrusive traits the incidence of numbers 1 and 2 are of small scale but high value while the effect of number 5 cannot be objectively assessed. The effect of trait number 3 is profound but its biconical urn connection can only be corroborated by traits 1, 2 or 6. Trait no. 6 is an important characteristic for it may corroborate implied biconical urn influences signified by traits 3 and 5. In the southern English milieu it may also attest, independently, the technological influence of the biconical urn tradition.

Collectively the five intrusive attributes provide persuasive evidence for an indigenous response to biconical urn influence during the latter part of the floruit of form 2A and specifically during the floruit of form 3. To these five intrusive traits must be added a further trait which is of an innovative nature. This trait is the mature collared rim which makes its appearance during the latter part of the floruit of form 2A and the inception of form 3. The apparent synchronisation of these events in southern England suggests that the response of the indigenous ceramic tradition to biconical urn contact may have been profound. The association of the collared rim genesis with such contact cannot however be substantiated and unless corroborative evidence for the use of rope cordons on collared urns can be obtained the relationship can only be implied.

C. THE BRITISH BICONICAL URN CERAMIC TRADITION AND
ITS CONTINENTAL RELATIONS

C1 A HISTORY AND INTERPRETATION OF RESEARCH ON BRITISH BICONICAL URNS

Since John Thurnam (1871, 349) first classified biconical urns or 'urn with border in place of a rim' as a specific ceramic type, this class of pottery has frequently evaded precise evaluation. Writing in 1964 Bernard Calkin described the group as the 'Cinderella of the British Bronze Age' but a claim of neglect cannot truly be substantiated.

The revival of interest in the biconical urn group may be traced to the review of Deverel-Rimbury origins discussed by Preston and Hawkes in 1933. At this time Doppelfeld's view of an Urnfield origin for the Deverel-Rimbury culture in the Lower Rhine region was generally accepted but these writers also drew attention to indigenous ribbon handles, lugs and arc handles which Doppelfeld could not accommodate amongst his parent types in the Low Countries.

The most important landmark in the 1933 paper was the tentative attempt to seek a spatial and cultural significance in the distribution of relief decorated biconical and Cornish urns. Preston and Hawkes observed that these urns denoted a well-established 'native' presence in Wessex and south west Britain which was less susceptible to Urnfield domination. In this area a hybridisation of ceramic traditions and barrow burial customs was proposed.

For biconical shaped urns with either Cornish ribbon handles, applied lugs or arc handles, Hawkes and Preston borrowed the short-lived term 'Rimbury group'; an inappropriate term employed by Doppelfeld to distinguish the indigenous elements of the Deverel-Rimbury culture which at this time was thought to be principally an Urnfield intrusion (Doppelfeld, 1930). The interaction between the 'Rimbury group' and the Urnfield culture was of particular interest and these writers were quick to seize upon the hiatus of urns in northern France. They observed that "south western Britain with its cross-Channel and Atlantic connections was clearly of great importance in the [Late] Bronze Age as in earlier and later periods", and that Wessex in particular was open to the direct influence of northern France. "Unhappily" they observed "northern France has less to tell us than we would like."

A small but important contribution to biconical urn studies was made in 1936 when two significant urn finds on the continent were reported by Dunning. These comprised an old find at Hilversum (L.B20) on the southern shore of the Zuider Zee and a similar early discovery at Marquise (F.B23) near Boulogne.

Although these finds were both misleadingly described as overhanging rim urns the pot from Hilversum was a biconical urn which was later to be designated the type-object of the Dutch biconical urn tradition (Glasbergen, 1954 b). The reliability of ^{the} Marquise reconstruction figured by Dunning (1936, fig. 3) remains unclear but its motif H cord decoration, questionable cordon and 'sparse grit' could readily conform to the characteristics of a British collared urn. Dunning provided little discussion in his paper other than to observe that these pots seemingly signified 'trade'. The direction in which these items had travelled was clearly implicit in the title of the 1936 paper which recorded two urns of the overhanging rim type found 'abroad'.

C1.1 It is perhaps in the light of Dunning's paper of 1936 that subsequent developments in the study of biconical urns should be viewed. In 1954 Glasbergen reported his extensive excavations on the barrow cemetery at Toterfout Halve Mijl situated on the podsolised heathlands of North Brabant. (Glasbergen, 1954 a). The burials in tumuli 1 and 1B were found to comprise tall cordoned cinerary urns of Doppelfeld's continental 'Deverel' type. The primary burial in tumulus 1B comprised a cord-decorated biconical shaped urn which, like Dunning's example from Hilversum, was distinctly reminiscent of some southern British ceramics.

In his discussion Glasbergen consolidated his re-evaluation of the Dutch 'Deverel' urns (Glasbergen, 1954 b). The 1B urn was now grouped with the cord-decorated Hilversum pot (L.B20) and some further unpublished cord decorated finds from Baarle-Nassau, De Vuursche (L.B3.1) and Wijchen (L.B48). Glasbergen introduced the term Hilversum class to describe these cord decorated urns and also some similar biconical-shaped cordoned urns which lacked cord decoration.

The suggestion of British origins for some Dutch pre-Urnfield pottery had already been ventured by Van Giffen (1930) when he compared his gritty textured sub-biconical shaped urn from Great Drakenstein (L.B3.2) with some British examples. The idea of such derivation was however largely eclipsed by Doppelfeld's views on Urnfield expansion which were accepted at this time by Preston and Hawkes. Glasbergen now reasserted the Van Giffen view by first dispensing with the term Deverel urn for the Dutch pre-Urnfield pottery and re-ordering this material under the general heading of Dutch cordoned cinerary urns. At the beginning of the series Glasbergen placed the Hilversum urns and at a later stage he observed that a devolutionary process had transformed these urns into weaker shouldered forms which he termed the Drakenstein class.

A radiocarbon date of 1500 ± 100 bc (Gr-N₁₀₅₀) obtained for the Hilversum urn from tumulus 1B happily confirmed Glasbergen's case for a pre-Urnfield

genesis for Dutch urns which might be equated with British ceramics but unfortunately the full implications of an Early Bronze Age date were to be left unheeded. In 1954 the collared urn series was still believed to be generally synchronous with the British Middle Bronze Age and it was to these urns that Glasbergen now turned. Glasbergen consequently followed Dunning in believing Hilversum urns to be 'degenerate offshoots' of the British collared urn tradition. As a result the case for an early Middle Bronze Age 'invasion' or 'settlement' from Britain was now advanced (Glasbergen, 1954 b, 170). Glasbergen was further persuaded of a Middle Bronze Age date for his British incursion by the injudicious coupling of a poorly provenanced bronze find of 1846 with some recent palynological evidence. At tumulus 1B the low yield of cultivation pollen from the old ground surface was equated with an horizon of similar character identified by Waterbolk beneath the Zwartenberg disc barrow at Hoogeloon. The Hoogeloon horizon was presumed to be contemporary with a palstave chisel which had been found at the barrow over a century before (ibid. 167, 169, fig. 72).

Within the linear barrow cemetery at Toterfout, Glasbergen had recognised a number of discrete barrow clusters or foci. These he attributed to the work of local 'clans' who had dispersed their burial monuments during a period of several centuries along the course of a prehistoric track. At least one clan Glasbergen believed to be British and with these he equated his Hilversum urns. To the same clan Glasbergen attributed disc barrows nos. 1, 1B, 2 and 9 all of which he believed to represent the traditions of a homeland set on the other side of the English Channel and North Sea.

C1.2 British archaeologists were not slow to respond to the Toterfout proposal. Piggott (1955) was first to acknowledge the importance of the 1B radiocarbon date and he cautiously proposed that the British emigration might be sought at a date prior to the opening of the Middle Bronze Age. In the following year the unsatisfactory suggestion of a collared urn origin for the Hilversum ceramics was effectively dismantled by Butler and Smith. Dr. Smith observed that the British counterparts to Hilversum pottery were to be identified in certain relief decorated urns of biconical shape which were to be found in southern lowland Britain. Smith clinched her argument with two excellent examples. From Kendrick and Hawkes' publication of 1932 she cited the cord and relief decorated urn (Sm.B2) found in the Mendip barrow T11 at Tynings Farm, Cheddar, Somerset. This urn, she observed, bore a remarkably close resemblance to the 1B urn from Toterfout. (Butler & Smith, 1956, 39, fig. 7). From Budel in Zuid Holland, Smith illustrated a newly discovered cord-decorated

biconical urn (L.B12). This urn carried five applied horseshoe handles of British character and Smith observed that its general appearance compared well with a number of southern British examples including the urn from Bulford G47 in Wiltshire (W.B12).

Smith described her British counterparts to the Hilversum series as 'Southern relief urns' but in 1956 she remained uncertain of their origin. These relief features seemed incompatible with collared urns, but the similarity of cord decoration and the presence of an urn with collar affinities and relief horseshoe handles at Ringwould, Kent (K.88) persuaded her that some relationship might exist between the two types. Smith proposed that grooved ware might provide an appropriate ancestry for most of the relief features, the urn-shaped profiles and FN and FT decoration found on her southern relief urns. She further suggested that the relief decoration on the encrusted urns and cordoned urns of highland Britain might be derived from the same source.

In advocating a late Neolithic ancestry it was necessary to establish the use of biconical urns during the Early Bronze Age. Associations with biconical urns cited by Butler and Smith included Lukis' find of gold cased beads at Bircham, Norfolk (N.B1). These they observed were unlikely to post-date the Wessex Culture burials. The association of faience beads also favoured the use of biconical urns during the Wessex period and the writers emphasised that the survival of such personal ornament for any appreciable time during the past Wessex period seemed unlikely.

In 1961 the development of the southern relief urns was further amplified by Smith. Smith observed that although a complete distribution map could not then be constructed, a notable concentration of the urns in Dorset and Wiltshire seemed to justify the term 'Wessex biconical urn'. This paper presented a number of unpublished urns and described the principal characteristics as follows:

1. A more or less sharp carinated profile sometimes marked by a cordon at the maximum diameter. The form is usually unequally biconical though some rounded versions also occur.
2. Normal height range between 0.3m - 0.4m although other sizes outside these limits are known.
3. Maximum diameter is usually just slightly less than height but may equal it.
4. Impressed cord decoration may occur between rim and shoulder.
5. Lugs may occur at or just below shoulder.
6. Horseshoe lugs may occur above or below shoulder.

7. Finger printing commonly occurs on rims, cordons and shoulders but not elsewhere.

An invaluable component of the 1961 paper was a synthesis of artifacts known to be associated with biconical urns. Although these were notably small in number they provided clear confirmation of contemporaneity with ApSimon's second phase of the Wessex Culture. These associations chiefly comprised faience beads, and due to the paucity of other grave goods it was impossible to establish use before the faience horizon. In the post-Wessex period Smith proposed a progressive devolution of the biconical form until the bucket urns of the Deverel-Rimbury series were finally achieved. In Holland a similar transformation could be observed in the Drakenstein phase which culminated in the Dutch bucket shaped urn later to be termed by Glasbergen (1969) the Laren type.

A notable omission from the 1961 discussion of biconical urns was the question of origins. In the introduction however Smith withdrew her earlier suggestion of a grooved ware ancestry and commented simply that the Wessex biconical urns were the result of the interaction of several Bronze Age ceramic styles including a dominant contribution from the ribbon-handled Cornish urns and their derivatives.

C1.3 The resurrection of Hawkes' Cornish connection appears to have been based on the work of Calkin and ApSimon, both of whom were engaged on this topic in 1961 (Smith, 1961, 100, n.21). Calkin published his observations in 1964 when he presented his important re-evaluation of the Deverel-Rimbury ceramics of south Wessex.

Calkin's contribution to the biconical urn problem was to identify traits shared with the Cornish urns. Key traits were:

1. 'Rounded' biconical forms
2. Concave necks
3. Hollow rim bevel
4. Vertical chevrons in applied cord
5. 'Ribbon' handles and 'vertical' handles
6. Imperforate lugs in ribbon handle style
7. Internally ribbed bases

To Calkin these features constituted 'a large Cornish element' which he compared with the more positive contribution of 'ribbon handled pots' of Cornish derivation found on the 'Dorset Downs', Sturminster Marshall and Winterslow. Calkin also considered it significant that the main concentration

of biconical urn finds which centred on Amesbury and Bere Regis, both lay in close proximity to the Cornish derivative urns. In these considerations however no allowance seems to have been given for the intensity of antiquarian activities in these areas. From these criteria Calkin concluded that the floruit of biconical urns might be recognised in a series of developmental stages arranged in the following order:-

1. Cornish biconical urns
2. Cornish derivatives in Wessex
3. Wessex biconical urns
4. Dorset sub biconical urns
5. Dorset bucket urns

Although this scheme had much to commend it, the matter of applied plastic decoration remained unresolved. Neck and shoulder cordons, horseshoe handles and FN and FT decoration could not be accommodated within the Cornish tradition and Calkin was consequently obliged to resort to the chronological leap to grooved ware origins abandoned by Dr. Smith in 1961. For horseshoe lugs Calkin proposed an innovative development based on a skeuomorphic translation of functional rope handles which he believed had been used to assist the handling of the pots in transit. Calkin favoured the Amesbury district for his horseshoe lug genesis but in such an area where evidence of a strong food vessel/urn tradition abounds no explanation was offered to demonstrate how such a totally alien ceramic tradition might emerge. In Cornwall a similar problem arose for although Calkin had placed his earliest examples in this region the question of origin had merely been deferred.

Since Dr. Smith in 1956 had alluded to the parallel relief development of encrusted and cordoned urns in highland Britain the question of biconical urn development outside southern lowland Britain had been somewhat neglected (Smith, 1956, 43). In 1964 however Calkin had made a general survey of possible counterparts outside Wessex and had noted a total of 39 urns. The dispersed distribution of these urns Calkin found perplexing for many seemed to show only typologically early features which to him seemed incompatible with a northerly spread of an expanding tradition.

C1.4 The question of biconical urns outside Wessex was taken up by ApSimon (1972) in a festschrift to Miss Lily F. Chitty. Calkin had observed a dearth of distinctive 'southern' features north of the Humber and ApSimon now explored both this phenomenon and Smith's hypothesis of parallel relief decoration on encrusted urns and cordoned urns in the north. ApSimon observed

that the relief decoration of the encrusted urns was an optional skeuomorphic phenomenon which sometimes replaced the cord motifs on conventional food vessel urns. Within the typological range of food vessel urns and cordoned urns in the highland zone ApSimon drew special attention to select examples which resembled the biconical urns of the south. Such northern urns were frequently plain, and where occasional southern relief features occurred on food vessel urns the definitive criteria for the southern biconical urns was thrown critically into question. The examples illustrated in the 1972 paper were deliberately provocative; thus the plain food vessel urn from Alstonefield, Staffs. (St.B1) with its applied southern tongue lugs exemplified the ambiguity of a distinction between some food vessel urns and biconical urns (ApSimon, 1972, fig. 2.1). In the cordoned urn series the choice of examples was equally unusual. ApSimon illustrated urns bearing only one cordon pointing out that the body cordon which generally typified the cordoned urn series was no more than a functional reinforcement which might be optionally employed. He also pointed out that motif F which frequently occurs on such pots is equally at home on biconical urns like those from Tynings Farm T11 (Sm.B2) and Toterfout 1B (L.B 42.1). The similarity between these particular cordoned urns and some biconical urns of the south was further emphasised by their curved convex shape. In the south ApSimon appropriately cited the biconvex and rather exceptionally styled cordoned biconical urn from Bloxworth, Dorset (D.B6). At Cherhill (W.B33) and Winterbourne Monkton, Wilts. (W.B35) he noted similar profiles.

ApSimon did not pursue the question of biconical urn origins neither did he comment upon the Trevisker relationships advocated by Calkin. The discussion was instead deliberately orientated towards the theme of the festschrift in which ApSimon demonstrated that mean dimensional statistics of collared urns, food vessels, food vessel urns and convex cordoned urns of the highland zone might be used to measure formal similarity or dissimilarity between these and the biconical urns of the lowland zone.

ApSimon concluded that cordoned urns and food vessels in the highland zone showed a notable formal similarity with southern biconical urns and that the cordoned urns, notably the convex type, also displayed decorative similarities. ApSimon further concluded that biconical shaped urns could develop within various ceramic styles in the highland zone and he intimated that the biconical forms in Cornwall and Holland might be evoked in the same way. The process by which such forms might occur as a synchronous development was not discussed but ApSimon observed that a case could be argued for a flow of biconical traits from the highland zone which could provide the basic form to which plastic

embellishment was added in the south. This conclusion provided a possible model for indigenous development which seemingly obviated the need to draw upon contemporary continental forms, a proposal then currently introduced by Dr. S. Gerloff. It did not however accommodate a source for applied plastic decoration.

C1.5 A further re-appraisal of Wessex biconical urns was advanced by Dr. Ellison in the prelude to her study of Later Bronze Age pottery and settlements (Ellison, 1975, 60-85). Ellison believed the sample sizes employed in ApSimon's formal comparanda to be too small to justify confident interpretation, commenting that the total number of known Wessex biconical urns was inadequate for the application of statistical techniques. Ellison, nevertheless, felt that typological and geographical sub-divisions were readily apparent in the southern biconical urns and she advocated a classification comprising six classes.

A Classification of Southern Biconical Urns after Ellison, 1975

1. Cornish Urns
2. Type A WBUs with cord or pricked decoration
3. Type B WBUs with miscellaneous plastic decoration
4. Type C WBUs with 'horseshoe' handles
5. Type D WBUs with plain carination, plain shoulder cordon and/or plain lugs and handles
6. Type E WBUs with FT shoulder (Dorset only)

Unfortunately a more detailed examination of the Wessex urns reveals that these proposed classes are really a list of major attributes.

In her first class Ellison encountered the same problems of definition and origins observed by Preston and Hawkes (1933), Smith (1961), Calkin (1964) and ApSimon (1972). Ellison followed Calkin in regarding the urns from Dorset Downs (D.C1), Sturminster Marshall (D.C2) and Winterslow (D.C3) to be the most likely imports from Cornwall. From Wiltshire however she also added Calkin's Cornish C derivatives from Avebury (Beckhampton) G17 (W.C1) and Bromham G1 (W.B40). Although opposed handles are present on both of these urns their form bears no resemblance to the Cornish type. The urns are moreover mounted with applied FT cordons, a feature which is unknown on the Cornish urns but is characteristic of Ellison's 'type B' biconical urns of class 3.

In her second class Ellison assembled 9 urns which she regarded as a

distinct group and termed type A. The qualifying feature for these urns was the presence of cord or 'pricked' decoration. Other features were a rounded biconical profile, a mounted internal rim bevel, sometimes decorated, the occasional use of FT on the shoulder and rim, and the application of elongated horizontal lugs. As a group these urns display notable inconsistencies. At Bulford G47 the presence of applied horseshoe lugs places this particular urn in class 4 while applied FT shoulder cordons on the urns from North Wiltshire and Wilsford G5 are characteristic of class 3. Ellison believed the cord and comb point (pricked) decoration to distinguish these urns as a special class derived from local collared urns, but the textural qualities of urns like North Wiltshire (W.B37), Gussage St. Michael G7h (D.B39) and Bulford G47 (W.B12) are incompatible with the tempering tradition of collared urns. Certainly a more convincing case can be argued for the use of such decoration as an optional embellishment on various formal types.

In the third class Ellison placed five 'type B' urns distinguished by the use of miscellaneous plastic features which usually comprised strips applied to the neck. Other characteristic features were a fairly sharp biconical profile; a plain internal rim bevel and an applied, usually plain, cordon at the carination. Ellison acknowledged that the cohesion of this selected group seemed uncertain. The group included the lost urn from Winterbourne St. Martin G5a (D.B59) which carried no miscellaneous plastic features other than a possible plain shoulder cordon. (This urn also bore two close-spaced horizontally perforated lugs).

A substantial proportion of Ellison's Wessex sample was embodied in the fourth class. This comprised 24 urns distinguished by the presence of horseshoe handles. Ellison observed that a typological and geographical distinction might be made between the urns of central Dorset (type C1) where FT shoulders are common and the south Wiltshire urns (type C2) on which biconical profiles were sharper and the horseshoe handles never descended lower than the mid shoulder level. Unfortunately the formal attributes of these urns showed few common factors other than the unifying presence of horseshoe handles. Several urns could be readily identified as characteristic of other groups. Those from Bloxworth G4 (D.B7), Dewlish G6 (D.B2), Idmiston G11 (W.B21) and possibly the lost urn from Avebury G43 (W.B31) (Ellison nos. 15, 16, 39 and 46) bore fingertipped shoulders characteristic of her type E while those from Bere Regis G46d; 'Fordington Field'; Wimborne St. Giles G24; Ackling Dyke; Amesbury G71; Bulford G27; Bulford G47; and Bulford G48 (Ellison nos. 29, 31, 35, 37, 40, 42 and 43) were clearly members of her type D. A

further group will be distinguished by its strong applied FT cordons.

It will be demonstrated later that the analyses of biconical urn domestic assemblages suggest that it is highly unlikely that optional skeuomorphic features such as non functional horseshoe lugs can be used as a single qualifying attribute for a specific localised tradition (a case made readily apparent in Wessex by the presence of horseshoe handled urns at South Afflington and Wareham).

Like Calkin (1964) and ApSimon (1972) Ellison could not account for the derivation of horseshoe handles other than to reiterate the general analogy with basket skeuomorphy. She also discounted Gerloff's proposal for a Franco-German contribution of relief features on urns contemporary with the Wessex Culture (Ellison, 1975, 91).

The fifth class devised by Ellison comprised fifteen plain urns distinguished by their lack of shoulder cordons and termed type D. Ellison observed a geographical division within this group which could also be supported by further consistent attributes based on form and textural characteristics. The D1 urns were smaller and more rounded than their counterparts and all carried horizontally elongated lugs applied to the carination. Such urns appeared to be confined to central Dorset and south Hampshire, and all were tempered with dominant quantities of grog sometimes accompanied with some sparse flint filler.

In Wiltshire seven urns, some carrying circular, upright lugs, or erect tongue lugs (upturned ear-shaped lugs) were distinguished by their flint temper. In two of the type D2 urns grog temper also occurred.

Ellison observed that the lack of decoration on these urns could not be paralleled in Cornish urns, grooved wares or collared urns but she suggested that the food vessel urn series seemed to be suitably plain. This proposal did not however explain the origin of the various forms of applied lugs which are a notable characteristic of this proposed type.

In her sixth group of Wessex biconical urns Ellison assembled seven urns characterised by the presence of FT decoration on the shoulder. This type E group was very loosely defined for it included both simple carinated shoulders bearing FT impressions and urns bearing pinched up or applied shoulder cordons with similar decoration. These FT cordons were similarly present in types A, B and C where the classification was weighted in favour of other attributes.

In summary Ellison used her six-fold classification to advocate the presence of four separate components within the Wessex biconical urn tradition. Like Calkin she considered that the Cornish urns might represent a primary

component pre-dating the main development but the discarding of most Cornish traits such as 'ribbon' handles, chain plait cord impressions and the distinctive Cornish cord motifs was not explained. Type A urns were attributed to collared urn derivation but we have observed that such an argument might be sustained only for the motifs and not the ceramic forms on which they occur. For the plastic decoration on the type B urns, Dr. Smith's abandoned proposal for grooved ware derivation was again revived but any unequivocal evidence for the survival of this Late Neolithic tradition in post-Beaker contexts has yet to be found. (cf. section B5.2 for the longevity of basketry traditions). A similar derivation was also proposed by Ellison for the Ardleigh group of biconical urns which she felt might be closely related to the Hilversum type. For type D biconical urns a food vessel urn origin was proposed but the means by which such a process might be effected was not explained. In addition to these various difficulties concerning the indigenous multi-source hypothesis one major obstacle also remained. The applied horseshoe handles found on 24 of the Wessex urns remained an explicit reminder that the relief features on biconical urns signify the introduction of an intrusive ceramic tradition into the south of Britain.

C1.6 In 1933 Professor C.F.C. Hawkes had chosen the term 'Narrow Seas' to describe that which may either divide or unite the Bronze Age community of southern Britain and its continental counterparts. Since the Glasbergen proposition of 1954 Dutch and British archaeologists had each pursued regional urn typologies on either side of this narrow divide.

In 1974 a report on the extensive excavation of a Late Beaker settlement at Molenaarsgraaf added new substance to the growing suspicion that the initial stages of the Hilversum culture contained a much stronger indigenous bell beaker contribution than had previously been supposed (Louwe Koojimans, 1974). The Molenaarsgraaf site was occupied from about 1800 to 1500 bc. Within this period the excavator identified three major phases during which the ceramic array employed by this small farming community had changed from the Veluwe bell beakers to plain and barbed wire beaker pottery. During phase 2 of the occupation the use of FN rustication became very common and plain cordons were also introduced. Pot beakers bearing FN decoration were also seen to have been employed. The final phase was characterised by a marked increase in plain beaker wares amounting to some 80-90% of the sherd yield.

Louwe Koojimans observed that the transition to plain forms, the acquisition of cordons and the preference for FN decoration was precisely the

type of autochthonous process that might facilitate that genesis of the Hilversum ceramic tradition (Louwe Koojimans, 1974, 296). As a result of this excavated evidence he questioned the Glasbergen hypothesis, strengthening his argument by reference to the strong barbed wire and FN rusticated beaker elements present in the Hilversum urn from Vorstenbosch (L.B45).

Louwe Koojimans also pursued the development of cremation practice in Holland observing that the enlargement of Veluwe bell beakers to necked pot beakers was accompanied by the apparent use of these and later domestic pot beakers for a new type of burial. In the podsolised soils of the Netherlands pot beakers recovered from barrow sites have generally lacked any trace of an accompanying burial but Louwe Koojimans cited the Waxdorf burial in the German Lower Rhine where an inverted riesenbecher had covered a burial skull (Wegewitz, 1960). He noted seven barrow sites in Holland which had yielded 'unassociated' pot beakers and a further five sites at which large beakers had been found upside down.

Louwe Koojimans considered pot beakers, German riesenbechen and large barbed wire pots to comprise a single regional group centred on the Veluwe. He observed that a further skull and beaker association had been found at Llancaiachisaf in Glamorgan (Griffiths, 1957, fig. 7.1; Clarke, 1970, no. 993) and this he compared with the inverted BW beaker which was found covering a cremation in the silted flint-mine shaft at Findon, Sussex. Since the publication of the Molenaarsgraaf report further inverted pot beakers have been noted by ApSimon (1976) at Eglwysilan, Glam. (cremation) and by Brennan Briggs and ApSimon at Cluntaganny, Co. Tyrone (possible burial). (The skull burial recently reported at Rockbourne, Hants. (Saunders, 1980) may also be relevant).

Loowe Koojimans made little further comment on Dutch inverted pot beakers other than to observe that 'soon' after the introduction of such beakers into Britain this mode of cremation burial became very common amongst the users of biconical urns and collared urns.

C1.7 A new and perceptive view of British biconical urns was given by Dr. S. Gerloff in her re-appraisal of Wessex Culture published in 1975. Gerloff's thesis dealt primarily with the relative chronology of Wessex culture graves and the typology of British Early Bronze Age daggers. Gerloff re-defined the original division of the Wessex Culture made by ApSimon into Wessex I and II observing that a more rigorous analysis of the daggers and their continental affinities revealed a certain amount of overlap between

the two phases and burial customs. This new corpus revealed that the origin and development of the daggers was more complex than previously supposed and that the floruit of each dagger type need not necessarily be synchronous with particular modes of burial.

In her analysis of the Wessex graves Gerloff defined two separate funerary traditions based on male and female requirements for the after-life. In the early male graves, daggers of her Armorico-British type usually accompanied contracted or extended inhumations (a few instances of cremation also occurred). The use of these Armorico-British daggers generally approximates to ApSimon's Wessex I period.

In the later phase of male burials cremation practice was totally adopted. In accordance with the new dagger type associated with these burials Gerloff termed this period the Camerton-Snowhill phase. It approximated in general terms with ApSimon's original Wessex II. During some part of this period some earlier dagger types remained in use and some found their way into funerary assemblages which Gerloff demonstrated were of later character.

Parallel to the male burial sequence Gerloff defined a series of burials unaccompanied by daggers which she considered to be of female type. These 'female' graves could also be divided into two series but Gerloff was careful not to equate these divisions directly with the two phases in the male series. Gerloff noted a paucity of anatomical evidence to justify the sexing of these graves which was based on the presumptions of Hoare and the single scientific inspection carried out on the Manton skeleton in 1906 (Gerloff, 1975, 197).

In pursuing the origins of the Wessex culture grave goods Gerloff demonstrated strong links with south-west central Europe. Gerloff observed that the biconical shaped cups of amber and shale were generally comparable with ceramic types in the Unetice-Straubing-Adlerburg complex and the Rhine-Alpine group (Gerloff, 1975, 186-189) and she confirmed the Unetician (Oder-Elbe hauptvariante) inspiration for the Armorico-British dagger designs. Gerloff observed that during the Camerton-Snowhill period technical analogies between artifacts of the Wessex culture and those of the north Alpine and upper Rhone regions became more marked, perhaps at the expense of earlier Unetician connections. Pointille decoration on the mid rib of Camerton-Snowhill daggers could be traced through northern France to the middle Rhine and Swiss Rhone region. The Camerton-Snowhill blade bearing the Swiss style flutings or rillen noted by ApSimon (1954, 45) from Ashford, Kent (Gerloff, no. 206) was compared by Gerloff with Swiss blades from Arbon-Bleiche. Gerloff shifted the generally proposed Unetice source of the Camerton bulb-

headed pin to a more specific source in the Lake Constance region observing that finer decorative detail comparable with Camerton occurred here as well as in the Rhone valley and north Italy. In the Arreton bronze industry Gerloff compared the use of hatched triangles on dagger blades and the design of tanged and socketed spearheads with some Swiss and Rhodanian examples which showed some similarity in technique.

Gerloff pressed her argument for a north Alpine and south German connection by demonstrating evidence for two-way traffic signified by the presence in Alsace, south Germany and Switzerland of spacer-beads resembling the British style. (To these she might have added the Fritzdorf gold cup which Hartmann (1970) and Taylor (1980) have observed displays trace elements compatible with Wessex and Irish goldwork.)

In discussing the central European and Unetician origins for fine craft artifacts in the Wessex Culture Gerloff had re-examined in illuminating detail some well tested ground. Since Piggott's pioneer study of the Wessex Culture presented in 1938 the transmission of central European metalwork or metalwork styles to Brittany and southern England had generally been attributed to a north-west European trade network accompanied by certain unspecified movements of craftsmen and smiths. The point of departure in Gerloff's thesis concerned the proposal of a Wessex-Alpine connection sustained on a fundamental demographic level in which some form of continental immigration linked Wessex to a cohesive ethnic community dispersed across the north west European plain.

Gerloff based her argument on the distribution of coarse biconical shaped urns decorated with applied fingertipped cordons. In Austria, south Germany and Switzerland pottery of this type had been recovered from a number of domestic assemblages in hilltop sites where in some cases it could be traced to Neolithic antecedents. Much of this material was very fragmentary and poorly published (e.g. Hundt, 1957 who provides only distribution maps) but she observed that it was particularly abundant in some of the Swiss lakeside settlements and in the upper Rhone where in some cases it had been well illustrated (e.g. Fischer, 1971; Bailloud, 1966; see also Bocksberger, 1964). In the Bavarian Alb Hundt (1957) had recorded a number of sites to which Gerloff added some further finds on the north west periphery at Frankenthal, Fussgonnheim and Russingen at the head of the Rhine rift valley.

North west of the Rhine evidence of cordoned pottery was generally unobtainable but Gerloff placed considerable emphasis on the hilltop occupation site at Fort Harrouard which was situated on the western side of

the Paris Basin (Phillippe, 1937). Phase 3 at this site had produced appropriate cordoned pottery including urns with paired vertical neck ribs like those found in Wessex (e.g. Amesbury G77) and south Germany (Hundt, 1957, 41 map 5). Gerloff considered this site to represent a kind of halfway house or 'milestone' between Wessex and south Germany. The Wessex contribution to this site comprised a pair of bone tweezers (otherwise unknown outside Britain) and a whetstone pendant which Gerloff considered to be of Wessex type (Gerloff, 1975, 122). (The significance of further Continental whetstone pendants of British style is discussed in section C6.8). Significant continental craft items comprised crutch-headed and ring-headed pins. The presence of heavy cordoned pottery at Fort Harrouard convinced Gerloff that the craft items represented more than the trade of 'wandering smiths'. A further significant ceramic find included fragments of a distinctive cylindrical jar with lid. Gerloff observed that similar deckeldosen were to be found in some Adlerburg contexts as well as the Swiss settlements. At Arbon-Bleiche Gerloff cited a pointille decorated deckeldose which was almost identical to the single Wessex example cited by her at Little Durnford (Gerloff, *ibid.*, 185, pl. 58L).

Gerloff did not discuss the means by which ceramic styles and forms might be transmitted nor the interaction between conservative and innovative elements in Bronze Age societies which might effect the character and maintenance of their ceramic traditions. Her north Continental assemblage did not moreover include horseshoe handles. The Fort Harrouard link nevertheless convinced Gerloff that the cordoned designs of vertical ribs and crossed and arc shaped patterns on the necks of biconical urns in Switzerland and south Germany presented evidence for an ethnic connection with the Early Bronze Age potters of Wessex which could not be denied.

C1.8 Since 1956 an important series of urn burials found near the Aisne-Oise confluence at Compiègne on the north side of the Paris Basin had escaped the forum of biconical urn debate. Between 1927 and 1934 at Carrefour d'Aumont in the forest of Compiègne Marcel Hemery had excavated some ten burials in a complex of some twenty pits which had been encountered during the process of gravel extraction (Hemery, 1956). In pits 10 and 11 Hemery had encountered cremation burials in plain round-shouldered biconical urns each bearing two plain moulded horseshoe handles (F.B13.1 & 2). A plain cordoned biconical urn (F.B13.3) bearing two oval lugs and containing a cremation was also encountered in pit 13.

In 1975 Blanchet and Lambot re-illustrated Hemery's finds in a catalogue of the Bronze Age collections in the museum of the Dept. of Oise. The urns at this time were compared with the Hilversum Culture.

In 1976 Blanchet published a vital complement to the works of Glasbergen, Smith, ApSimon and Gerloff. In a survey of bibliographic resources Blanchet had encountered the unpublished manuscript of Louis Delambre, Conservateur of the Musée de Picardie, who had excavated four barrows on the chalk ridge at Eramecourt (Somme) in August 1881. Within an unusual rectangular barrow (no. 4-3) Delambre had found a cremation burial enclosed within an inverted biconical urn (F.B16). The urn was decorated on the shoulder with two plain horseshoe handles. Like Hemery's finds at Compiègne the urn was tightly enclosed and capped by a box-shaped stone cist.

Blanchet observed that Delambre's urn was the first discovery in a series of horseshoe handled biconical urns now known in north east France. (The presence of such handles in post-S.O.M. contexts had first been observed by Bailloud (1964) when reviewing the later intrusive finds from some allées couvertes including Argenteuil 2). In his article Blanchet cited seven sites comprising Eramecourt (Somme) F.B16; Compiègne (Oise) F.B13; Argenteuil (Oise) F.B1; Pontavert (Aisne) F.B30; Bucy le Long (Aisne) F.B5; Cuiry-les-Chaudardes (Aisne) F.B15 and Les Roches, Videlles (Essonne) F.B43. On the Aisne gravels at Pontavert and Bucy le Long the urns were recovered from primary cremation burials at the centre of concentric ring ditches. (Boureaux, 1974; Letterle, 1976). He also commented that the radiocarbon date of 1370 \pm 110 bc (GSY-91) obtained for a double concentric ring ditch with unenclosed cremations at Cys-la-Commune (Aisne) might represent the same funerary tradition.

Blanchet considered that the modest number of urns recovered from the Paris Basin and north east France presented an homogenous group for which he proposed the term Eramecourt type. He observed that the closest analogies were to be found in Wessex and he considered that an immigration from this source might have implanted this ceramic tradition in much the same way as that proposed by Glasbergen for Holland. This did not however preclude contact from other sources. Dunning's urn from Marquise and the Hardelot find confirmed in Blanchet's view that British ceramics had been introduced into northern France even though the form of these particular types could not be directly compared with Eramecourt. Blanchet compared British derivation for the pottery in north east France with a possible southern traffic in British and Irish bronzes represented by the sparse

finds of Arreton axes, Irish halberds and flat daggers documented in the region by Gaucher and Mohen (1972) (to these Blanchet added a further dagger from Cires-les-Mello (Oise) recorded by Breuil in 1889). Some further contemporary bronzes of continental origin were also noted. In the absence of closely datable associations Blanchet observed that the time span represented by the Eramecourt ceramic tradition might be protracted. The Wessex analogies could be equated with the latter part of the Bronze Ancien but Blanchet also noted Letterle's observations that cordoned biconical forms were still flourishing at Cuiry-les-Chaudardes during Bronze Moyen when a bronze anvil mould of the Porcieu-Ambiguieu type was deposited at structure 55. (Letterle, 1976, fig. 42). (See also O'Connor, 1980, i. 61-2 & ii. 443-444).

In discussion Blanchet observed that temporal and cultural variations were undoubtedly present within the Eramecourt group. The inverted mode of cremation burial at Eramecourt and the incidence of Hiberno-British bronzes in north east France indicated contact from across the English Channel but elsewhere in the region continental affinities had been observed by other writers. At Cuiry-les-Chaudardes (F.B15) where the use of applied FT cordons was evident, Soudsky (1974) had compared the ceramics with the German finds from the Rhine Palatinate. At Videlles Bailloud (1959) had cited central European analogies for the material from bed C.

Blanchet did not discuss the social implications of his Eramecourt type neither did he examine the relative strength of the morphological similarities between the French material and the British, Dutch and German ceramics. From the British point of view however Blanchet's survey was invaluable for it had established a potential continental source for the Wessex horseshoe and arc handles relief features. This source comprised a parallel biconical urn ceramic tradition operating only 50km inland from the French Channel coast.

C1.9 Since the publication of the Eramecourt ceramics in 1976 further material has come to light in northern France. In Brittany a small number of urns, mostly obtained from late secondary burials in megalithic tombs, has been reviewed by Briard (1981). As Gerloff has revealed at Kervellerin A (F.B22), such urns may bear applied cordons and may date from the period of Armorico-British contact (Gerloff, 1976). Briard's contribution has also revealed the presence of horseshoe handles in Brittany where they are found on fragmentary urns from Rosporden (Finistère) F.B39 and Penhouet (Loire-Atlantique) F.B26 (Briard, 1981, 41, fig. 1 nos. 3, 4). From the stone

alignments at St. Just (Ille-et-Vilaine) in central Armorica a further example of a plain horseshoe handled biconical pot (F.B37) has recently been reported (Le Roux, 1980, 20; 1981, 399, pl. 6). South of the Armorican peninsular horseshoe handles have also been found at Port-des-Barques on the Ile d'Oléron F.B31 (Gomez, 1980, 38 fig. 13, nos. 3,4).

Since the sources of British Bronze Age urns were reviewed by Preston and Hawkes in 1933 the model for origins of the British biconical urns has shifted from Dutch immigration to indigenous development and eastward emigration. In 1975 the flow was once more reversed by Dr. Gerloff who was able to propose a north Alpine source but was unable to demonstrate the nature of the Anglo-French connection.

When the problem was reviewed almost half a century ago the reviewers observed that "south western Britain with its cross-Channel and Atlantic connections was clearly of great importance . . . and that Wessex open as it was to the direct influence of northern France should not be left out of the reckoning". (Preston & Hawkes, 1933, 439). In this current study it will be demonstrated that in this caveat lies the essential key to the biconical urn problem.

C2 THE FORMAL AND TEXTURAL CHARACTERISTICS OF BICONICAL URNS

C2.1 The Characteristics of British Biconical Urns

The formal classification of British biconical urns is beset by a number of taxonomic difficulties. The urns represent a timespan of several hundred years during which considerable formal modification might have occurred. During this period however very few closely-dated artifacts were interred with the urns and there are consequently very few fixed chronological points by which we may measure the progression of formal change.

The design of the biconical urn was a versatile one and domestic assemblages suggest that it may have fulfilled almost all the ceramic functions required by its users. The urn was consequently fashioned in a very wide range of sizes. At Mildenhall Fen the mouth diameter of the urns ranged from 10 to 40cm comprising vessels which appear to have served the function of small cups to items well suited for food storage. At Hockwold site 8 a very small vessel (N.B8.37) with a mouth diameter of only 6cm was still fashioned in the style of a full size urn and was equipped with miniature horseshoe handles. (The results of detailed analyses carried out by the writer on these two sites is presented in section E).

Although the conservative style of biconical urn potters ensured the repetition of the basic form, the shape was generally so simple that a number of inadvertent variations might easily be introduced. The finish of the urns and the general lack of decorative embellishment indicates that, whatever their size, biconical urns were never treated in the manner of a fine ware and consequently they appear to have been immune from the stylistic influences which were responsible for significant changes or nuances in the shapes of beakers or food vessels. With little deliberate stylistic control the shapes of biconical urns seem to have varied within broader functional limits. In the smaller urns the precise proportions of the large vessels were often abandoned in favour of a wider base or mouth which might facilitate easier access to the interior. When urns were selected for burial a fairly random choice seems to have been made from the intermediate and large sized urns with the consequent result that no characteristic norms may be identified in the very varied profiles of the urns recovered from funerary contexts.

While biconical urns were first introduced into Britain there arose in

the food urn ceramic tradition of southern England a biconical response in which many of the new features were assimilated and indeed replicated. Some elements of this response we have identified in sections B4.8 and B6.5 where we have noted the rise of the plain format form 3 food vessel urn and the genesis of the collared rim urn.

The replication of biconical urns by indigenous food-urn potters introduces a further taxonomic category into the problem of British biconical urns. The sample population of reconstructable pots, which is less than 200, is inadequate for valid statistical analyses and clustered groups fail to differentiate changes based on time, function, style and assimilation.

Despite these difficulties there remain a number of significant attributes which may enable us to recognise some of the characteristics of the primary phase of intrusive biconical urn production. Such attributes are mostly incidental ones and their absence cannot preclude the possible contemporaneity with the primary or inception phase. As inessential attributes the life of these features seems to have been generally short-lived, and consequently their value as potential indicators of an early pedigree would appear to be enhanced. As only one of these attributes effects the form of the pot it is not however possible to use shape to determine a relative chronological sequence.

The consistent association of certain early attributes with a particular formal feature might in some cases however enable us to predict an early date for additional urns which do not otherwise possess the attested evidence of an early pedigree.

C2.2 The Inception Series of British biconical urns

Nine attributes may be used to identify some of the urns associated with the inception period of biconical urns in Britain. Of these nine features eight are inessential attributes which occur on some of the continental urns and which in British contexts betray cross-channel origins. The ninth attribute concerns the shape of certain British and continental urns and is the only attribute which may be considered a key rather than an incidental one.

1. Bifurcated lugs

Bifurcated lugs are a distinctive and exceedingly rare feature found on two urns in Dorset. The lugs resemble conventional tongue lugs but are split latitudinally by a well formed horizontal groove. At Thickthorn Down, Gussage St. Michael G7h (D.B39) four such lugs were employed on the shoulder of the

urn where they might conceivably have restrained a functional cord . Distinctive cord arc impressions were applied just above on the neck of the pot. At Winterbourne Houghton (D.B41) two bifurcated lugs were applied to a biconical urn which had been fashioned in food vessel urn fabric.

Bifurcated lugs are absent from the Paris Basin, neither are they to be found in Rhone-Alpine contexts. Unlike most features of the Inception Series, these lugs may be equated with cross Channel connections with the Armorican peninsular. A precise parallel for the Thickthorn lug is to be found amongst some unpublished urn sherds recovered from the double stone circle at Er Lannic in the Golfe du Morbihan. Another urn sherd from this site bears a well formed tongue lug. Both lugs appear to have been employed on plain weak shoulders. A number of vase supports are known to have been recovered from the same site. (Mus. Polymatique, Vannes; Section C2.5; Gerloff 1975).

2. Mammilated lugs

These lugs comprise a pair of well formed globular projections which are usually mounted on an oval flattened boss set at shoulder level. Three Wessex examples are known (fig. 37) - At Sturminster Marshall (D.B62) the pairs of mammiform projections have been fashioned directly onto the shoulder cordon where they are sited beneath applied cross cordons on opposite sides of the pot. At Piddlehinton (D.B53) two pairs are mounted on flattened bosses on opposed sides of the pot and the same arrangement is repeated on the weak pinched shoulder cordon on the urn from Lambourn , Berks. (Bk.B 6)

Mammilated lugs are unknown in the Paris Basin but the ceramic sample here is notoriously inadequate and their use in this region can by no means be precluded.

In the Alpine province a comparable lug occurs on a small FT cordoned bowl at Arbon Bleiche (GAS.B10) where a triple-tipped version is also known (Fischer, 1971, taf 13.1, 23.3, 38.8). At the recently excavated site at Padnal, Savognin (GAS.B13) a twin-tipped lug from an unprovenanced context may probably be equated with the abundance of appropriate cordoned pottery from horizon C/D (Rageth, 1976, taf 28, 48). This site has also yielded a substantial amber hoard including two Wessex type spacer plates bored in basic pattern (ibid. 172-4, Abb. 41 nos. 6, 7).

3. Paired neck ribs

Paired vertical neck ribs occur on complete inception series urns from Dorset Downs (D.B44), Mottistone Down (IW.B1) and Amesbury G77 (W.B4).

Fragmentary examples are known from Selsey (Sx.B7) and Hockwold (N.B8.24). All are embellished with FT decoration (fig. 38).

Continental examples of paired neck ribs may be readily found at Rhone-Alpine sites such as Padnal, Arbon Bleiche and Morges les Rouseaux. The ribs of this region may be FT decorated (e.b. Fischer U.71, Arbon, taf 37.7, 38.7) or plain like those at Padnal (Rageth, 1977, 61 Abb. 24 no. 23). In the lower Rhone and Languedoc, Rhodian potters employed or omitted FT decoration indiscriminately on ribs and cordons. At Pouzilhac (Gard) two large biconical urns (F.B32.1 & 2) of identical shell tempered fabric epitomise the contrast.

North of the Alps appropriate examples of paired FT neck ribs have been recorded in the Bavarian Alb and lower Maine valley by Hundt (1957, Abb. 5). In central and western France evidence of this device is absent. Recent regional surveys in the Charente and Brittany (Gomez, 1980; Briard, 1981) have failed to detect such decoration. If the device was carried north to the Channel coast the Moselle-Marne route offers the most attractive connection. At Fort Harrouard (F.B16b) and Videlles (F.B43) two sherds bearing single vertical ribs may represent fragments of formerly complete pairs.

The paired rib device appears to be a skeuomorphic feature representing twin cords tied to a girth cord at a point where upward slippage of the latter could be prevented by judiciously placed tongue lugs. The paired ribs usually terminate abruptly just below the rim; perhaps at a point where functional cords rose up over the vessel in the manner of a bucket handle. At Grotte du Chataigniers (Pyrenees-Orientales) an atypical arrangement of cordons appears to represent the sagging position of lifting cords when not in use (Guilaine, 1962, fig. 19.2).

Most continental examples of paired ribs disclose the potter's close familiarity with functional cords. At Pouzilhac (Gard) no girth cordon is present and the ribs are directly associated with the functional handles. At Dergenu (GAS.B1) and Frankenthal (GAS.B2) FT ribs and cordons intersect at the tongue-lugs (Gerloff, 1975, pl. 59, C & D) while at Arbon Bleiche (GAS.B13) the plain cordons are associated with similar lugs.

In Britain the closest replication of this arrangement is found on the Mottistone urn (IW.B1) where two opposed tongue-lugs served twin ribs while two further lugs set at right angles to the first provided anchorage for arc handles. At Hockwold urn N.B8.15 shows further evidence of knowledge of the anchorage value of tongue lugs but on the urns from Dorset Downs (D.B44) and Amesbury G77 (W.B4) the lug portion has unfortunately been detached.

4. Erect tongue lugs

These lugs appear to be a functional device intended to restrain the pot when lifted by its carrying net and tilted during pouring. The lugs occur at Bere Regis G46a (D.B28), Grafton (W.B50), Mottistone (IW.B1), North Wiltshire (W.B37) and Temple Guiting (G.B3.4). At St. Just-in-Roseland (Patchett F21) and Escolls Sennen (Patchett C9) similar lugs were affixed to form 3 urns which are embraced within the regionally discrete group which ApSimon (1972) has termed the Trevisker Series.

The rarity of these lugs on British urns and their geographical restriction (fig. 39) suggests a short-lived introduction.

At Cuiry-les-Chaudardes structure 64 a similar lug occurs on a globose sherd associated with arc handled biconical urns (Letterle, 1976, fig. 43.2). Tongue lugs are common in the Rhone-Alpine province and in the Bavarian Alb and Middle Rhine region but in all these areas the upward projection of the tongue is at best poorly developed (e.g. La Barmaz 1 (Bocksberger, 1964) and Padnal (Rageth, 1977, Abb. 53.4). The arc handle skeuomorphy on the Bere Regis G46b urn (D.B31) suggests that erect tongues may have been developed as a particular modification to assist the use of arc handles. Appropriate arc handles are now attested in the Paris Basin but insufficient examples are currently known to establish association with erect tongue-lugs. The Dutch urn from Vorstenbosch (L.B45) was formerly equipped with strong functional lugs which were probably of the erect tongue type. The scars left by the detached and missing lugs indicate that they were originally plugged deeply into the body of the pot.

5. Cross Cordons

Urn D.B62 from Sturminster Marshall presents the only British example of applied cross-cordons (fig. 40). On this urn two plain applique crosses occur on opposed sides of the pot.

Cross cordons have not been reported from northern France but they are well attested in the Alpine province and in a number of outliers in the Bavarian Alb (Hundt, 1957, Abb.5).

Cross cordons appear to be a skeuomorphic feature representing cross cords employed above handles or lugs. Sherds from Arbon Bleiche show a consistent relationship between cross cordons and tongue lugs or handles which are carefully positioned underneath. A similar arrangement occurs with the mammilated lugs on the single British example.

6. Arc or diagonal cordons converging on tongue-lugs

This arrangement has a skeuomorphic significance similar to paired neck ribs and cross cordons. In Britain knowledge of this skeuomorphic model is attested only on the urns with plain cordons from Amesbury G68 (W.B1) and Bere Regis G46b (D.B31) (fig. 40). This combination of cordons and lugs is well attested in Rhodian contexts at Morges les Rousseaux, St. Gervais-les-Bagnols (Bailloud, 1966, figs. 7 & 10) and La Barmaz 1 (Bocksberger, 1964, fig. 9.76). In the Middle Rhine plain diagonal cordons and girth cordons converge on a shoulder sherd from Frankfurt-Prauheim but the lug concerned is boss-like and atypical (Gerloff, 1975, pl. 59D).

7. Potters' Marks

Localised symbols inscribed on the necks of the urns from Shrewton G3(W.B52) and Charmandean (Sx.B5) have recently been proposed as potters marks (Gerloff, 1975, 242). Gerloff has compared these marks with some other symbols found on pottery of the Milazzese Culture and dated by pottery of LH III A1 to the late 15th century BC. Gerloff comments that the Milazzese marks have been compared with Aegean linear scripts and that one particular symbol may be likened to that on the Shrewton urn. At Shrewton the symbol is incised while at Charmandean dots are aligned in comb point technique. Both techniques, Gerloff notes, seem comparable to Aegean symbol techniques.

Potters' marks on British Bronze Age urns are perhaps slightly more common than previously supposed. Not all marks however suggest a pictographic content. At Ackling Dyke D.B1 a localised group of FN marks was added to a very short section of the rim. In view of the ease with which such an embellishment may be accomplished, the practice seems unlikely to have been simply a decorative technique employed vestigially. The urn certainly shows no suggestion of haste or carelessness. On the inscribed Charmandean urn an FN symbol of the Ackling Dyke type also occurs on the rim. At Mildenhall, on urn Sf.B6.12, the localised FN marks appear to have been applied to a short section of the shoulder but due to the fragmentary state of this reconstruction the arrangement cannot be verified.

A small area of FN decoration on the neck of an unpublished rimy collared urn from Penton Mewsey, Hants. (Winchester Museum, unpublished) indicates that localised impressions cannot be used as an infallible indicator of continental biconical urn ancestry. The deployment of these devices in the indigenous British food urn tradition may nevertheless owe its inception to such a source. Two further examples of localised symbols employed on



indigenous urns also occur in the region of biconical urn impact. From Handley G23 Gerloff has cited a collared urn bearing a specific chevron device enclosed within a rectilinear field (Pitt-Rivers, 1898, IV, pl. 297). At Gallibury Down, Isle of Wight a form 2A food vessel urn with type A2 rim carried localised triangular impressions on a short section of rim (Tomalin, forthcoming); (fig.48).

Gerloff was unable to cite Rhone-Alpine, German or French analogies for her Wessex and Mediterranean symbols but due to the dearth of complete urns from the Continental domestic contexts this obstacle seems hardly surprising. General examples of potters' inscriptions on European ceramics are not however as scarce as Gerloff suggests. Inscribed sherds from Meilen (Vogt, 1952) attest pictographic abilities in the Swiss Late Neolithic Horgen Culture which precedes the production of Alpine biconical urns. In the upper levels at Grotte du Queroy (Charente), ceramics of the Venat Group reveal a detailed series of pictographic symbols employed during Bronze Final III (Gomez, 1980, 85, fig. 82). Similar incised pictograms have also been recovered from Moras-en-Valoire (Drome) in the Middle Rhone (Nicholas & Martin, 1972, fig. 6).

At Shrewton (W.B52) the incised symbol is accompanied by vertically perforated lugs (attribute 8) which might be attributed to a Continental source. At Charmandean the groove above the plain shoulder cordon appears to be an intrusive feature generally confined to the Low Countries. These additional features may provide some slight indication that the symbols may have been introduced into Britain along with other features which were employed not too far south of the English Channel coast (fig. 41).

8. Vertically perforated lugs

Vertically perforated lugs are found on only six British biconical urns (fig. 42). At Shrewton G3, two lugs occur on the urn with potter's mark (W.B52). Two further lugs on the same urn are imperforate. At Lake (W.B17) a small urn with concave neck bears two vertically perforated lugs just below the shoulder and at Kingston Deverill G2 (W.B53) four lugs were similarly placed on a small biconical urn with cord decoration on the neck. The urn from Radley 14 (Bk.B1) carried four perforated lugs formed on the shoulder cordon. At Bincombe G4 a plain and slightly burnished urn (D.B22) of deckeldose shape carried two vertically perforated lugs. At Mildenhall Fen similar lugs were employed on the FN rusticated urn Sf.B7.35.

Continental lugs comparable to these British examples are best found on the Rhone-Alpine fineware deckeldosen. At Arbon Bleiche Gerloff has compared

one such deckeldose without lugs with a solitary British example from Little Durnford, Wilts. (Gerloff, 1975, 185, pl 58L). Other examples from the Arbon provide good analogies for the lugs on British biconical urns (Fischer, 1971, taf. 18, nos. 3, 8B).

It should be noted at this point that the Little Durnford find is not the only British analogy with the Rhone-Alpine deckeldosen. At Ringwoud, Kent the biconical urn hybrid K.B8 contained a small biconical accessory vessel of deckeldose size K.B8a. This small vessel which was decorated with random FN incisions should be compared with another similar receptacle found 50km N.E. at Hollingbourne, Kent (fig. 43). The Hollingbourne find is very similar to the Ringwoud vessel but has the added distinction of more refined FN decoration and two vertically perforated lugs of deckeldose type. The analogy with the Alpine deckeldosen is further strengthened by the presence of a carefully fitted lid which was equipped with a small central perforated lug. A macroscopic examination of the Ringwoud and Hollingbourne vessels suggests that both were probably the work of the same potting group. The Ringwoud example has presumably lost its lid.

The coarse finish of Kent receptacles can only justify a derived knowledge of the continental containers which generally retain their characteristic cylindrical shape and display finer workmanship. In the Little Durnford example however Gerloff has observed that all the definitive continental features are fully met and the decorative technique and motifs of this vessel show very close affinity with her Arbon example.

The distinctive pointille-filled triangles on Gerloff's Wiltshire vessel is to be found on two further significant vessels of deckeldosen style found in Dorset. At Moreton in the valley of the lower Frome a single chance find comprises a small jar shape receptacle with an atypical everted bevelled rim (D.C.M., 1903.3.1). The body is decorated with alternate zones of incised lines and lozenges. The lower surviving lozenges are pointille-filled (fig. 43). A further find of this decorative style (now lost) was found with an inhumation in the Badbury barrow in 1845 (Warne, 1866, TOVP 52-7 pl. 7.2). The vessel which was 6.4cm high was decorated with three rows of open bottomed triangles filled with pointille stabs. It was originally equipped with four vertically perforated handles like those found on a decorated deckeldose at Arbon Bleiche (Fischer, 1971, taf 18.7).

9(a-b). Cordons above maximum girth or multiple cordons

The position of the cordon is a distinctive feature of British biconical urns. With very few exceptions the major girth cordon is situated precisely

at the maximum girth or shoulder of the pot. In this respect the British urns share a proportional arrangement very similar to collared urns.

By contrast the major girth cordon on many continental urns is positioned above the shoulder. In the Rhone-Alpine province the neck and belly of the pots are often almost equally proportioned while lugs and their associated skeuomorphic cordons remain high on the neck. (e.g. Pouzilhac, Gard F.B32; Grotte Nicholas, Gard F.B18a; Arbon Bleiche taf 24.1). Even when these urns are high shouldered in the manner of their more northerly counterparts the cordon may be sited yet still higher (e.g. Fischer, 1971, Arbon Bleiche taf 22, 1 & 2).

In the Middle Rhine and Bavarian Alb, cordon height and maximum girth approach an uneasy compromise. At Degernau (GAS.B1) and Maxdorf (GAS.B3) the maximum width remains low on the pot but the girth cordon descends to only a short distance above it. At Frankenthal (GAS.B2) the cordon apparently descends to the low level shoulder but the precise shape of the body below this point may be open to doubt. Such an arrangement is nevertheless confirmed by the urn from Rixheim (F.B33).

In the Paris Basin high shouldered urns are clearly favoured but the incidence of cordons is extremely poor. At Videlles urn F.B43.1 displays an FT cordon sited just above maximum girth. The tongue lugs on urn F.B43.11 suggest that a functional rope cordon may also have been employed above the shoulder of this pot.

In the Low Countries high shouldered urns are commonly found but the cordon position generally remains slightly higher. Where analogies occur between British and Dutch urns they are specific ones and a case for overall similarity cannot be maintained. This differential indeed applies to the Toterfout 1b urn (L.B42.1) which despite its appealing affinities with the urn from Tynings Farm (Sm.B2) nevertheless carries its cordon in the lower neck position: an arrangement that confirms its essentially Continental character.

The placing of the major cordon above the point of maximum girth occurs on only nine British urns (fig. 44). At Bere Regis G8b (D.B4), Milbourne St. Andrew (D.B15), Amesbury G77 (W.B4), Tilshead (W.B19) and Temple Guiting (G.B3.6) FT cordons occur on the lower neck of globose urns in a manner which we may term attribute 9a. On the former two examples the cordon adjoins the top of two horseshoe handles while at Amesbury (W.B4) the cordon is accompanied by paired neck ribs (attribute 3). Both of these additional relief features provide further evidence of a continental origin although the prolonged

survival of horseshoe handles in Britain negates the value of this particular feature as an indicator of primary date. The presence of the paired neck ribs and the low-shouldered globose profile of these urns suggests a Middle Rhine or Rhone-Alpine contribution while the occurrence of horseshoe lugs intimates a possible contribution from some area of France where these handles were employed. Appropriate globose forms are not at present known in the Paris Basin but some possible affinities should be noted with the globose urns bearing horseshoe handles found on the Atlantic coast at the Port-des-Barques on the Ile d'Oleron (Gomez, 1980, 38, fig. 13, nos. 3,4). These particular urns however are devoid of appropriate cordons.

The group of high-cordoned British urns of attribute 9b requires special consideration. The urns from Ramsgate (K.B1), Collingbourne Ducis (W.B24, W.B25, W.B26) and Shrewton (W.B51) all display barrel-like or sub cylindrical profiles which may converge markedly towards the base to a relatively narrow foot. The unquestionable Dutch affinities for the Ramsgate urn were readily recognised by Hawkes (1942) who drew attention to its important association with a small hoard of Picardy pins. O'Connor (1980, 1.76) has recently observed that these pins attest a common tradition of ornament shared between the Somme region and south east England during the later Middle Bronze Age.

Like the Ramsgate find the urn from Shrewton (W.B51) has been well known for its Dutch affinities since its review in 1961 by Dr. Smith. Smith recognised the marked affinity of this urn with the Drakenstein style of Dutch ceramic production and she cited the urns from Ramsgate (K.B1), Collingbourne Ducis (W.B24, W.B25) and Tilshead (W.B19) as evidence of a further Dutch connection which was then attributed to the British Middle Bronze Age. (The Tilshead urn W.B19 has been re-assigned in this present study to attribute type 9a. Urn W.B24 from Collingbourne Ducis G9 does not convincingly fulfil the criteria of a high-cordoned urn. A further urn (W.B25) from this barrow group nevertheless provides a further example of 9b type).

Due to their close Drakenstein affinities this group of high cordoned urns could indeed be equated with the primary or inception phase of biconical urn contact for the absolute dates obtained at Toterfout 1B, Dodewaard and Eersel suggest that the Drakenstein style need no longer be restricted to a subsequent phase of Dutch biconical urn production in the manner advocated by Glasbergen (section C5.12). Certainly Dr. Smith was undoubtedly right in suggesting that flint temper of these pots represents a substitution of quartz temper effected by Dutch potters in Wiltshire. The use of fingertip grooving above and below the cordon on urn 115 from Collingbourne Ducis G9 is an

additional Dutch characteristic which is very rarely employed to accentuate the relief of British urns. On the three other known examples at Charmandean (Sx.B5), Pokeswell (D.B66) and Weymouth (D.B67) the groove is applied below the cordon only.

C2.3 The significance of tempering recipes in the Inception Series

The incidence of nine continental traits or attributes enables us to recognise 25 British biconical urns which may be assigned to the inception phase. In section C2.1 we have already observed that eight of these attributes were employed optionally by continental potters and consequently their absence cannot preclude membership of the Inception Series. The absence of these attributes may however seriously impair our ability to recognise less distinctive urns which lie within the true limits of the inception range.

Within the group of 25 urns which have been recognised by their overt continental features two further inherent characteristics may now be identified. These we may term attributes 10 and 11.

Attribute 10 concerns the tempering recipes introduced by the early biconical urn potters. In section B4.8 we observed that within the Wessex region some small quantities (up to 4%) of fine angular calcined flint was added to the traditional grog tempering recipe in a small number of form 3 food vessel urns. An analysis of the textural characteristics of the above 24 urns **suggests** that the source of this innovation, together with the form 3 biconical shape, lay in the inception of continental biconical urns in southern Britain.

Of the 25 urns so far recognised in the Inception Series 14 are are tempered with non grog inclusions comprising flint or flint with grog or shell. At Mottistone (IW.B1) and at Temple Guiting (G.B3.6) fossil shell only was employed. A further 4 of the urns were not available for analysis and in only 7 was grog identified as the single constituent.

The small number of exclusively grog tempered urns in the Inception Series deserve special attention for these would appear to represent a very rapid assimilation by indigenous potters while minor conventions of continental style were still actively observed. At Bincombe (D.B22), Radley (Bk.B1) and Lake (W.B17) the grog tempered urns bear horizontally perforated lugs which suggest that indigenous potters may have responded to the appearance of handled deckeldosen rather than the urns which are contemporary with these cylindrical Continental vessels. At Kingston Deverill (W.B53) and Lake (W.B17)

the urns bear cord decoration characteristic of the indigenous tradition while at Bincombe (D.B22) the atypical urn of modest size assumes a deckeldose profile. (fig.43)

Mammilated lugs are a further feature which appears to have been rapidly absorbed by indigenous potters. At Piddlehinton (D.B53) the simple grog tempered biconical pot which bears two such lugs apparently belongs to the form 3 tradition. The temper of the other two British examples from Sturminster Marshall (D.B62) and Lambourne (Bk.B6) is unconfirmed although the latter is known to be high in grog.

The urns from Thickthorn Down, Gussage St. Michael (D.B39) and Winterbourne Houghton (D.B41) present a particularly interesting case. These two urns, which were found 17km apart, both bear bifurcated lugs. The Thickthorn example comprises flint tempered biconical urn fabric while the Winterbourne Houghton specimen displays indigenous grog temper. The Winterbourne Houghton lugs may be claimed as inferior versions of those from Thickthorn Down. The Er Lannic fragment which bears a bifurcated lug is also composed of grog temper.

Fifteen urns in the Inception Series contain inclusions other than grog. With the exception of the urn from Dorset Downs (D.B44) which contains only 2% flint supplementing 12½% grog the quantities of added flint are usually high, ranging from 5 to 20%. At Ackling Dyke (D.B1), Milbourne St. Andrew (D.B15), Amesbury G68 (W.B1) and Grafton (W.B50) angular calcined flint is supplemented by inferior quantities of grog. At Charmandean (Sx.B5) flint and grog inclusions both comprise 6%.

These quantities of comminuted flint filler betray a ceramic technology which is quite foreign to the indigenous food urn tradition of southern Britain and it confirms, appropriately, the evidence of Continental contact provided by attributes 1 to 9. Where the use of flint filler is subordinate to the commitment to indigenous grog temper the value of the formal attributes may also be weakened as at Dorset Downs (D.B44) where the attendant tongue-lugs were omitted from the base of the paired ribs.

In 1961 when discussing the affinities of her select Wiltshire urns with the Drakenstein series, Dr. Smith proposed that the flint temper was employed in this case as a substitute for the crushed quartz temper of the Low Countries. Although the preference for siliceous filler may indeed unite those Wiltshire urns bearing attribute 9b with their Dutch counterparts the conspicuous absence of attributes 1 to 9a in Holland must preclude this region as a general source for urns of the Inception Series.

A superficial macroscopic examination of some urns from northern France should be considered at this point. In the Aisne valley most of the biconical urns seem to have been principally tempered with quantities of comminuted shell. At Carrefour d'Aumont those urns recovered by Hemery contain some 15% to 20% shell. The urn recently recovered from the double ring ditch at Pontavert contains similar shell particles including some fragments of the bivalve Lopha which may be tentatively equated with Kimmeridgian clay of this region.

At Videlles a variety of tempering materials is evident including 3% and 5% rounded quartz particles mixed with some 2% grog and employed in the neck ribbed urn (F.B43.2) and the urn with vertical FT body cordons (F.B43.9). In the tongue-lugged biconical urn (F.B43.12) and the small lugged sub-biconical vessel (F.B43.5) crushed calcite particles were employed. The horseshoe handled sherd (F.B43.17) from this site contained some 2% comminuted shell. The shell might perhaps be equated with the ceramic tradition of the Aisne region.

At Fort Harrouard 3% quartz particles were employed in a plain biconical urn (F.B16b) which resembles some British examples. The cordoned bucket-shaped urn containing 2% quartz sand closely resembles the form of Dorset bucket urns.

The evidence from northern France indicates that in some cases quartz sand, crushed quartz, crushed calcite and quartz grog mixtures were employed as tempering materials and we might, with caution, propose that these preferences for siliceous tempering agents might provide a suitable background for the tempering of the Inception Series in southern Britain.

In Dorset, the Isle of Wight and Gloucestershire the use of shell filler was similarly employed and is attested in the Inception Series urns from Mottistone (IW.B1), Bere Regis (D.B4) and Temple Guiting (G.B3.6). Like the potters of the Aisne region the makers of these particular urns were able to readily exploit a fossil shell source without recourse to other tempering materials. In this case the Dorset Kimmeridgian and Gloucestershire Lias would seem the natural choice.

The preference for flint or shell temper which we have observed in the urns under discussion may be used, with caution, to identify further vessels which we might consider to be supplementary members of the inception range. Using flint temper as the key attribute a further 18 urns may be considered in the supplement. Of these examples 11 carry horseshoe handles and a further example, Bulford G67 (W.B14), carries arc handles. In the inception range, 28% of the urns carried these handles while a further 6% are present

in the supplementary series.

The Inception Series may be further supplemented by those urns which were produced by potters familiar with the use of fossil shell. In Dorset and the Isle of Wight the two members of the shell tempered group (Bere Regis (D.B4) and Mottistone (IW.B1)) have already been identified by the presence of continental traits. Both urns were also decorated with horseshoe handles. These urns may be combined with three further finds from the Isle of Wight. At Pay Down (IW.B4) the urn found by Skinner bore horseshoe handles and cord decoration in motif F. The lost urn (IW.B3) from Afton Down, also unearthed by Skinner, appears to have carried a similar motif and possibly some form of tongue lug. The similarly decorated urn (D.B63) found in 1805 in a barrow 'near Weymouth' may have belonged to the same geographically discrete group although its finders gave no account of its texture other than to observe that it was composed of 'a species of bad clay'.

In the Cotswolds a further source of molluscan clay appears to have been exploited. At Nether Swell, Gloucs. the distinctive two tiered arc-handled urn (G.B1) contains some 20% comminuted shell. The cylindrical lugs on this urn suggest a derived knowledge of horizontally perforated lugs. At Temple Guiting, Gloucs. (G.B3) a number of biconical urns were interred over a period by a community habitually using a similar source of fossil shell. Erect tongue lugs were known to this group who were responsible for a number of other features including lids and horseshoe handles and FN decoration.

From this review of tempering techniques it will become apparent that the ability and commitment to use siliceous or fossil shell filler in preference to grog can be traced to a time when inessential continental traits were introduced into southern Britain in association with early biconical urns. Once implanted however, these techniques developed into a major and persistent ceramic tradition and for this reason the presence of flint or shell can be used only as an indicator of the intrusive tradition and not as evidence of an early date.

In the Inception Series horseshoe handles occurred in 31% of the sample and in all cases the urns concerned were tempered with flint or shell. The domestic assemblages indicate that the normal incidence of these handles was probably very low and we must suspect a strong bias in their favour when funerary urns were chosen. The incidence of horseshoe handles in the Inception Series is consequently high and when the supplementary urns are included the proportion in the Combined Series becomes still higher (43%). The Combined Series accounts for some 70% of the known population of British

horseshoe handles and there seems good reason to associate these relief features with the workmanship of those potters firmly committed to the Intrusive tradition.

In Wessex a total of 24 horseshoe handled biconical urns may be recognised of which 21 are available for analysis (the Wessex group comprises 5% of the total British population). Of the analysed urns 40% were tempered solely with flint and an additional 25% contained flint as the major constituent supplemented with minor inclusions of grog. A further 15% were tempered with shell. This group of 80% comprises the Combined Series for Wessex and it embraces 4 Inception Series urns and 13 urns of the Supplementary Series. Of the remaining 20% a further 10% also contained flint but this was added in lesser proportions to grog. (The urns concerned were Bere Regis G86 (D.B4) and Bloxworth G4 (D.B7)). Only the urns from Long Crichel (D.B10) and Shepherd's Shore (W.B39) were grog tempered in the conventional food-urn manner.

The close association between horseshoe handles and flint temper clearly implies that both may be used to identify biconical urns containing a strong affinity with the parent continental tradition. The presence of horseshoe handles may be termed attribute 11 but the value of this feature as an indicator of early date cannot be substantiated. By the time Later Bronze Age bucket urns had emerged horseshoe handles generally appear to have been supplanted by arc handles fused to a shoulder or girth cordon but examples like the freely sited handle found on the bucket urn from Colbury, Hants. (Preston & Hawkes, 1933) attest late survival in at least one region.

Handles resembling horseshoe handles but generally displaying a broad radius and usually fused with shoulder or neck cordons may be termed arc handles. These handles are found on Rhodian sites and in some Middle Rhine contexts where they are associated with Inception attribute 7 (section C2.2) Arc handles are also found on some pots of the Eramecourt group where they are always plain and are generally employed like horseshoe handles below neck or shoulder cordons. Eramecourt arc handles may be distinguished from horseshoe handles by their constant radius and they are generally weakly moulded in a manner which suggests degeneration. At Argenteuil (F.B1) and Cuiry-les-Chaudardes (F.B15) the careless manner of their manufacture makes differentiation between horseshoe and arc form difficult. At Mezieres-sur-Seine (F.B24) the curve is acute and difficult to classify.

In Britain arc handles survive into Later Bronze Age times but their use may also be equated with horseshoe handles. At Bulford G47, urns W.B12

and W.B13 respectively present horseshoe handles and arc handles. Both urns were found in a context which suggests their contemporaneity. At Bulford G67 W.B14 finger tipped arc handles are fused to a shoulder cordon by small finger tip-faceted lugs which suggest a skeuomorphic translation of functional knots. This urn presents a vertically formed neck which suggests a proto-bucket profile. At Bere Regis D.B31 the unusual carefully executed urn from G46b displays plain arc handles which are formed in low relief similar to the Eramecourt arcs. The handles on this particular urn are arcaded and are associated with erect tongue lugs which strongly hint at a functional significance (section B5.5). The arrangement may be interpreted as a variant of attribute 6. The cord impressed arcading on the Thickthorn urn T45 may be seen as a similar arc handle feature.

Like the horseshoe handled urns arc handled pots may be assigned to the siliceous tempering tradition and all contain comminuted flint. Those from Bere Regis G46b (D.B31) and Dewlish (D.B2) also contain grog but in each case the quantity of flint is substantial although in the case of the former, it is not dominant.

Like the Eramecourt urns the distinction between arc handles and horseshoe handles on the British series cannot be readily defined (e.g. Dewlish D.B2; Winterslow W.B49) and until further French examples of horseshoe handles are located an imposed definition seems inadvisable. Handles with in-bent tips and constricted outlines truly approaching the horseshoe or croissant analogy are largely to be found in England and their occurrence near the seaboard of northern France remain few (fig. 45). At St. Just in the Armorican peninsular the recently discovered urn F.B37 exhibits four horseshoe shaped handles modelled in high relief. The application of four of these carefully made handles on two levels of the pot suggests that this example was made by a potter who was firmly committed to the skeuomorphic principles of the horseshoe handle design. At present the only comparable example of a high relief horseshoe handle in northern France appears to be the incomplete portion F43 found in the occupation debris at Videlles in the Paris Basin. The horseshoe handles recently published from Penhouet F.B26 and Rosporden F.B34 (Briard, 1981) confirm the use of the constricted horseshoe device on the Atlantic seaboard.

At Budel in North Brabant the well known pot (L.B12) illustrated by Dr. Smith provides the only complete example of horseshoe handles in the Low Countries (Smith, 1961, 40-1, fig. 8). The urn is in private ownership but a full scale photograph in the Museum Nairac at Barneveld reveals generous

tempering with quartz fragments. A further important find housed in this museum is urn fragment L.B19 from Harscamp which bears an incomplete horseshoe-shaped FT cordon and is similarly tempered (Metz, 1975, fig. 25). The base of this handle is unfortunately lost but it was probably attached to an FT shoulder cordon in a style similar to the British example N.B12 from Brettenham, Norfolk. A fragment of a further Dutch horseshoe handle has also been recovered from a domestic assemblage at Meerlo (Verlinde, 1971, fig. 5.21).

In this review of flint and shell tempered biconical urns we have established a firm connection between the use of these materials and the perpetration of horseshoe and arc shaped relief handles in southern Britain. The use of shell and siliceous tempering we have equated with a parent tradition generally practiced in northern France and we have observed that in this region of the continent similar horseshoe and arc shaped relief handles may also be found. In both regions the distinction between horseshoe and arc handle forms remains unclear but the former are often more carefully modelled while the latter in some cases at least appear to be degenerate versions of the former. In southern Britain where a handle response may be detected among indigenous potters during the inception phase the horseshoe handles alone were adopted by the producers of form 2A food vessel pottery. This evidence suggests that horseshoe handles may have preceded the introduction of arc handles into Britain or that arc handles may have developed in both regions at a slightly later date.

The presence of flint temper in excess of 5% and the presence of horseshoe or arc handles (attributes 10 & 11) will identify urns which may be grouped together as a supplement to the Inception Series but without further Continental attributes these features cannot alone be used to postulate an early date.

C2.4 Form 3 biconical urns and the indigenous response

In our earlier review of the food urn ceramics (sections B4.8/9, B5, B6.5) we observed that a major transition could be detected within the indigenous food vessel/urn tradition of southern Britain and that the result of this process was the emergence of collared urns and the production of food vessel/urns of form 3. The development of the form 3 food vessel/urn I have attributed directly to biconical urn influence which could be readily detected through the transmission of formal traits such as FT shoulders, and false FN impressions and most significantly by the cautious and infrequent addition to the traditional grog tempering recipe of minor quantities of comminuted calcined flint.

In the collared food urns, discussed in section B6.5, it has been observed

that the acquisition of similar FN and FT features and the occasional borrowing of horseshoe handles betrays a similar influence and it has been postulated that the collar itself might be a practical innovation intended to facilitate cord suspension. We further observed that whereas soft grog tempered fabric was ill-suited to the application of suspension cords, a fully developed or descended collar might resist the necessary stress. Once this modification was established non-functional collars might be widely manufactured in the same manner as skeuomorphic horseshoe handles.

Close to the English Channel coast in Dorset, Devon and Cornwall, we have observed in section B4.9 that a small number of form 2A food vessel/urns had acquired horseshoe handles and these can be attributed to an early response to biconical urn contact at the beginning of the period now termed the Inception Phase. Where horseshoe handles had been acquired by food vessel urns which were devoid of tell-tale shoulder grooves, we observed that a problem of recognition arose. At this point we deferred further discussion until Inception Series biconical urns had been separated from the background of form 3 urns.

Form 3 biconical urns may be readily identified by their biconical or sub-biconical profile and by the presence of grog temper which unites them with the food urn tradition. In Wessex the urns from Shepherds Shore (W.B39) and Long Crichel (D.B10) are the only examples to carry horseshoe handles. The latter example also betrays its indigenous ancestry by the presence of false FN impressions on the shoulder.

Form 3 biconical urns present two sets of attributes characteristic of their dichotomous background. Indigenous attributes may be given as follows:-

12 Pseudo grooves

A pair of appropriately spaced horizontal cord impressions on the weak shoulder of the sub-biconical form 3 urns from Puncknowle (D.B20) is the reminder of the persistence of the form 2A tradition in Dorset. The carelessly opposed and pinched fingertip dimples appear to be a vestigial representation of the form 1 food vessel stop. The food urn tradition was particularly well established in Dorset and its temper and decorative traditions persisted. The Puncknowle urn approaches bucket form in profile yet strong food vessel urn traits persist. At Rimbury the grog temper recipe still persisted in mature bucket urns. At Morvah Hill, Cornwall (C.13) the dual row of tubular impressions are a reminder that this particular form 3 urn is very closely related to its form 2A counterparts from Nymet Tracy, Wareham and South Afflington.

13 Foot-rings and recessed bases

Foot-rings or deliberately recessed bases are an optional but persistent feature of the food urn tradition. At Hockwold the domestic assemblage at site F61 has yielded carefully made examples. The form 2A urn from Llanddyfnan (A.2) provides another. In the south an unpublished urn from Yateley, Hants. (H.3) bears a recessed base and the food vessel/urn base from Bishops Waltham Great Barrow (Ashbee, 1957, fig. 10.5) displays a particularly well formed recess which reduces the foot to a narrow ridge best described as a foot-ring. Foot-rings also occur in the collared variety of food-urns. At Niton, Isle of Wight a carefully made example has been recorded by Dunning (1932, fig. 2).

Recessed bases persisted during the form 3 stage of indigenous urn production but they are significantly absent from the Inception and Supplementary Series of urns. The Norfolk biconical urns from Salthouse Heath (N.B3) and The Hangings, Bawburgh (N.B11) each display recessed bases and they are both composed of form 3 fabric. In Dorset, where the food vessel urn tradition is equally well attested, similar bases occur on form 3 biconical urns at Bere Regis G46a (D.B24, D.B26), and Puncknowle (D.B20).

14 Cord decoration

Cord decoration is a notable characteristic of the British food urn tradition. On continental biconical urns it is exceedingly rare. In the Rhone-Alpine province and in northern France, where most of source material has been identified it is unknown. In Holland a small number of instances might be attributed to Anglo-Dutch contact following the expanded use of the later biconical urns from the 16th century bc onwards and the 'feed back' between Britain and the Low Countries of Arretan style bronzes (see sections C5.12 and C6.9).

In section B4.6 we observed that a principal feature of the form 3 transition was the retreat of decoration towards the internal rim bevel and an increased preference for totally plain pots. The form 3 transition may be detected in most regions of the British mainland but it is beyond the scope of this study to examine the detail of these changes outside the area of biconical urn impact in southern Britain. In the highland zone we should nevertheless be aware that the form 3 manifestation of biconical urn influence was the production of the cordoned urn on which the cord motifs of southern biconical urns were clearly favoured (ApSimon, 1972, 151).

During the Inception Period cord decoration appears to have been one of the four indigenous traits readily absorbed by the intrusive tradition. On

the Inception Series urn from Thickthorn Down (D.B39) the use of cord impressions clearly replaced conventional moulded arc or horseshoe handles. At Bulford (W.B12), Afton Down (IW.B3), Pay Down (IW.B4), Weymouth 1805 (D.B63) And Tynings Farm (Sm.B2) motif F was employed on urns which all appear to belong to the Inception or Supplementary Series. To this period of reciprocal trait exchange we should attribute the motif F cord designs found on the Dutch urns at Toterfout 1b (L.B42.1) and Hapert (L.B17). This motif is an infrequent feature of collared urn designs and its recurrence on biconical urn and cordoned urns may perhaps be due to a hybrid development drawn from the food urn cord technique and the biconical urn potters' eye for skeuomorphy. The opposed inclined cord shafts could perhaps represent multiple taut suspension cords but we are given few further clues other than the Weelde loops discussed below. At Boeschoten (L.B8) Dr. Smith has drawn attention to the double cord arcs replicating the Thickthorn D.B39 design (Smith, 1961, 110-111). A further find from Baarn (L.B3.1) confirms the Dutch regard for cord impressions as a means of conveying multiple arc handle skeuomorphy (Glasbergen, 1954b, 97-98, fig. 57.2).

Some cord motifs on form 3 biconical urns provide further suggestions of skeuomorphy. Motif G employed on the urn from Winterbourne St. Martin D.C6 appears to represent a taut version of the Baarn cord arcs. On this urn the impressed chain plait skeuomorphs descend to a point on the shoulder just above the location of a functional girth cord. The presence of a functional cord set at this position on the urn is confirmed by four horizontally perforated handles set on the shoulder. A cross section through the handles reveals that they were plugged through the body of the pot and were clearly intended to be functional. Motif G is repeated on the urns from Morvah, Cornwall (C.13) and Nottage (Gl.B1) where some knowledge of a taut cord arcade might also perhaps be implied.

An additional intimation of cord skeuomorphy is provided by a select group of biconical urns recovered from southern Britain and the Low Countries. The motif concerned is the elongated or loop-shaped version of Longworth's motif M. On biconical urns this motif is employed in a specially restricted manner which suggests a skeuomorphic version of taut horseshoe cords. From the ditched round barrow at Mont d'Enclus at Ruien, Flanders comes a biconical urn (L.B31) bearing carefully grouped sets of cord loops. The loops are grouped in four sets of four and each group is enclosed within a cord impressed zone. The loop motif is also found on two other Belgian urns which have been recently recovered from the turf barrows at Weelde (L.B47.1 & 47.3)

The Weelde urns display taut cord loops rising from a weak FN shoulder cordon. The loops are inclined towards each other in pairs in a manner which strongly suggests a progenitor for motif F. The use of grog temper in the Weelde urns suggests that these particular Belgian vessels owe much to the British form 3 tradition. At Leiston, Suffolk an appropriate comparison in the form 3 series is provided by urn Sf.B2. Between four plain horseshoe handles on the neck of this urn appears a profuse arrangement of vertical elongated cord impressions of motif M. Most notable however are the pairs of inclined impressions which are set above the shoulder and most closely resemble the arrangement of the Weelde loops. The interspacing of these designs between the four horseshoe handles at Leiston recalls the four interspaced gaps on the Ruien urn (L.B31) which may have appropriately accommodated functional rope handles. The same loop motif is found on the shoulder of the form 3 cord decorated food vessel Yor.68 from Garrowby Wold 147. It is also employed in a less ordered manner on the neck of the form 3 food vessel/urn from Cross Low, Der.30. Weelde loops appear to represent a functional arrangement of multiple suspension loops employed by the users of form 3 biconical urns but the indigenous background of form 3 potters meant that the same device might readily be applied to form 3 food vessel/urns such as Trelystan, Powys (Mt.7) or to collared urns. Longworth (1961) has noted the use of the loop or M motif on the shoulder of a number of Primary Series collared urns but perhaps of greater significance is the manner in which this motif is occasionally used on "the collar. At Hollingbourne, Kent a series of broad cord arcs were impressed in this position in much the manner in which horseshoe handles might be applied to a biconical urn. This urn might be equated with the arc handle response observed at Ringwould in the same county. Also from the Channel coast comes a similar example from Bullock Down, Eastbourne, Sussex (Drewett, 1982, 59-61, fig. 21). The markedly biconical profile of this Secondary Series collared urn and the use of upright and inverted cord loop impressions on the collar suggest a response to functional cord loops closely akin to that of Weelde, Ruien and Leiston.

In the instances given above, cord impressed technique was employed to produce certain specific designs which appear to have been particularly favoured by the users of biconical urns. The examples given are however exceptional and in most examples of cord decorated urns the motif chosen readily betrays the food-urn discipline.

15 Cordon grooves

On a small number of biconical urns a shallow fingertip groove applied either below or above and below the cordon gives emphasis to the relief. In

Dorset the urns from Pokeswell (D.B66), Weymouth (D.B67) and Rimbury (D.B68) attest the use of this technique in the form 3 tradition. All are tempered with grog and at Pokeswell and Weymouth the food vessel/urn tradition is further betrayed by the attempt to imitate FN decoration on the cordon by the use of an incising tool. On these Dorset urns the groove is applied beneath the cordon only and the effect resembles the relief of a collared urn. Both may indeed owe their origin to attempts to affix a rope cordon.

In Wiltshire the Anglo-Dutch urn from Collingbourne Ducis (W.B25) carries grooves above and below the cordon and is closely comparable in appearance to certain Dutch urns from Soest (L.B39.1; L.B38.9), Hooge Mierde (Hongerensche Heide) (L.B21.8) and Toterfout (L.B42.2). The Dutch urns may be singly grooved below the cordon as at Soest L.B39.1 or double grooved in the manner of Collingbourne Ducis. At Turnhout (L.B43.1) the double grooved urn was tempered entirely with grog while at Hooge Mierde (L.B21.5 & 21.8) grog was mixed with quartz. Grog tempering is uncommon in urns of the Low Countries and its incidence with Leiston loops and cordon grooves suggests a British derivation.

16 False FT decoration and impressed decoration

The use of an incising tool to imitate FN incisions on shoulder cordons has already been noted in relation to attribute 15. Stabbing, jabbing and incising techniques are the stock-in-trade of food vessel/urn potters and the restrained use of incisions to imitate FN shoulder cordons at Pokeswell (D.B66), Weymouth (D.B67) and Cherhill (W.B33) shows a positive commitment to the copying of biconical urn designs.

At Cherhill (W.B33) the false FN decoration is appropriately accompanied by the food-urn motif H which is executed in comb point technique. Traditional comb point technique is also employed on the form 3 urn (D.B16) from Milbourne St. Andrew and it was, on occasion, resurrected by late form 3 potters at Shearplace Hill (Rahtz & ApSimon, 1962, 314, fig. 18, no.43) and Ardleigh (Erith & Longworth, 1961, fig. 4a).

The impact of intrusive biconical urns on the indigenous food vessel urn tradition is particularly well illustrated in Dorset where the urns from South Afflington (D.45) and Wareham (D.44) with their borrowed horseshoe handles provide unequivocal evidence of an early response. At Frampton G4 the fragmentary form 3 urn (D.B45) recovered with a secondary cremation bears punched impressions which are characteristic of the food vessel urn technique and were possibly arranged in an arcade or swag design. The punch marks (which

were omitted from the original report; Forde-Johnston, 1958, 114, c) should be compared with the South Wessex form 2A food vessel/urns from Latch Farm (H.7) and Southbourne (H.19) where the same technique is used to convey the impression of suspension loops or swags.

In Holland a single example of circular punched impressions occurs on the atypical cordoned vessel (L.B27.3) found in tumulus 1 on Leusderheide in the province of Utrecht. Like the urns with British attributes from Weelde (L.B47.1 & 47.5) and Hooge Mierde (L.B21.5 & 21.8) this urn is tempered with grog and some additional quartz.

17 Lugs

a) Tongue lugs

Tongue lugs attached to the shoulder or shoulder cordon are commonly found in the Rhone-Alpine province, the Middle Rhine and northern France. These lugs assume an ovoid shape which gently protrudes from the shoulder in the manner of a tongue tip. Unlike the erect tongue lugs there is no suggestion of upward protrusion and no concavity occurs on the upper surface of the lug. Despite these minor differences there seems little doubt from the siting of the lugs that these lesser protruberances were intended to serve the same purpose as the erect type and we have already observed in section C2.2 that on continental examples the distinction between the two types is frequently unclear. Complete continental urns like that from Rixheim (F.B33) display four or more tongue lugs arranged in a manner which would readily assist the anchorage of diagonal or cord arc handles like those shown on the skeuomorphic urns from Morges les Rousseaux (Bailloud, 1966, fig. 7).

On biconical urns in Britain tongue lugs are commonly found in the form 3 series. Even in the Midlands where the form 3 transition may have been largely based on an imperfect or derived knowledge of biconical urn model the appropriate lugs are still found like those on the form 3 urn from Alstonefield, Staffs. (St.B1). The siting of tongue lugs may also on occasion betray an ignorance of their function like the impractically positioned lug on the concave neck of the lost form 3 urn from TarrantKeynston (D.B36). Although tongue lugs of the erect variety are found in the Inception Series examples of the weaker conventional type are absent. One reason may be that conventional tongue lugs are a devolved version of the former which were very short-lived. The marked association of tongue lugs with the grog tempered urns of the form 3 series suggests however that some alternative explanation may be required for although erect tongue lugs may indeed have been short-lived, their weak profiled successors should predictably have persisted in the Supplementary Series.

One explanation of the high incidence of conventional tongue lugs on

indigenous urns may be the role played by the vertically perforated handles of deckeldose type. In section C2.3 we observed that indigenous potters employing vertically perforated lugs may have responded to the appearance of these features on deckeldosen rather than the urns introduced with the continental siliceous tempering tradition. At Radley, Berks. a small biconical urn (Bk.B1) bears four vertically perforated lugs (attribute 8) which present a possible prototype for imperforate tongue-shaped versions. The form of the Radley urn is indeed closely replicated by the form 3 urns from Bincombe 60e (D.B21) and Bere Regis G46a (D.B24; D.B34) all of which bear imperforate tongue-lugs which are arranged in much the same style as the perforate examples on the Oxfordshire urn.

Tongue lugs are of little value as chronological indicators. At Bere Regis (D.B3), Tuckton (H.B6) and Winchester (H.B11) they persist on 'straightened' form 3 urns which are virtually buckets. In Cornwall on the other hand at Porthlooe and Brane Common (Patchett, 1946, D10 & D7) they are to be found on form 2A and form 3 urns which bear type A2 incipient collared rims. These urns are unlikely to be later than the earliest stage of the form 3 and collared rim transition in Cornwall. Urn D from Upton Pyne (Dv.B2) provides a conventional example of a form 3 urn with tongue lugs in the South West Peninsular. Its grog tempered fabric and cord motifs of types A and M attest its indigenous origins while its biconical form and applied non-functional tongue lugs proclaim the potter's concession to the biconical urn style.

b) Subrectangular faceted lugs

These lugs comprise a geographically discrete group found mostly in south Wessex and the South West Peninsular. They appear to be more carefully made versions of tongue lugs on which the surrounding edges and outer face have been squared up. At Weymouth G2-3 (D.B61) the four lugs which occur on a cord decorated form 3 urn of food vessel size are particularly well made. The small plain form 3 vessel from Clahar Gardens III Mullion (Patchett, 1946, c.13) carries two lugs of similar character. At Harbridge, Hants. (H.B3) two faceted lugs placed on the upper body of a rather cylindrical shaped form 3 urn look as though they may have been imperforate copies of vertically perforated lugs like those on the urn from Bincombe G4 (D.B22).

At Wilsford G5 (W.B15) the form 3 urn from an uncertain context in this important Wessex barrow carries a single large atypical lug with a flattened outer face. The upper surface of the lug carries a cord motif similar to that found on the 'borrowed' horseshoe handles employed on food-urn wares at Ringwould (K.B8, K.B9), South Afflington (D.45) and Morvah (C.13). In

section B4.9 the latter two urns were equated with an early phase of arc handle response and it seems possible that the Wilsford lug may represent an incomplete or derived knowledge of the same type of horseshoe handle.

At Iford (H.B4) and Portesham (D.B18) weakly faceted lugs occur on the FT shoulder cordons of form 3 urns. In both cases the cordon is diminished just short of the point of application in order to give greater emphasis to the shape of the lug.

In general faceted lugs do not appear to be an homogenous group but their careful workmanship suggest that they might be deliberate attempts to copy more complicated lugs like those with vertical perforations. Their siting on the body of the pot at Harbridge (H.B3) and their association with cord decoration at Weymouth (D.B61) and Wilsford G5 (W.B15) suggests that they may possibly belong to an early stage of the form 3 response; perhaps providing an appropriate prelude to the less detailed tongue lugs which apparently persist until the end of form 3 production.

c) Boss lugs

Boss lugs are round boss-shaped features weakly applied usually in multiples of two, to the shoulders of late form 3 urns. The lugs usually occur in weak relief and are undoubtedly non functional. At Shaugh Moor (Dv.B1), a boss lug had been cleanly detached from the shoulder of the urn revealing a well finished surface beneath. Boss lugs are not found on urns of the Inception Series and their occurrence in the form 3 series appears to be associated only with the typologically late urns which approach a more bucket-like profile. Boss lugs are usually sited in the same position as conventional tongue lugs and there appears good reason to suspect that they are indeed their devolved non-functional successors. On urns like Wool (D.B43) and Dorset 'Poor Syd' (D.B57) they are treated vestigially and are difficult at first glance to detect. Boss lugs may be safely used as an indicator of a late date within the biconical urn series. They occur principally on late form 3 urns but they are also found on late members of the Supplementary Series such as Roke Down (D.B35) and Collingbourne Ducis G9 (W.B24). Applied boss lugs continue to be used on bucket and globular urns of the Deverel-Rimbury series where they become a common feature of that tradition. In the Rimbury cemetery the persistence of boss lugs in association with the form 3 grog temper recipe in bucket urns of mature appearance attests the tenacity of the indigenous tradition.

18 Arched functional handles

Arched functional handles with substantial horizontal apertures were of particular interest to form 3 potters in south western England. The character of the Cornish handles has been discussed by many writers and views on origins have ranged from food vessels (Childe, 1940, 143) to Armorican Vases (Patchett, 1946). In 1972 ApSimon suggested indigenous development possibly drawing on some Barbed Wire Beaker sources including perhaps the pierced lugs on a pot from La Varde in Guernsey (ApSimon, 1972, 362-4). Childe (ibid) undoubtedly perceived the essence of the problem when he observed that the Cornish handled urns bore both food vessel/urn and collared urn characteristics and that collared urns in any case were 'just food vessels of unusually tall form'. In 1972 ApSimon examined the relationship between Cornish handles and collared urns when defining his Trevisker series but his conclusions were not at that time encouraging. ApSimon observed that six collared urns carried pierced lugs of Trevisker style and a further six carried imperforate versions. Although this high incidence of handles provided a promising start ApSimon went on to observe that none of the collared urns provided any of the decorative traits which would contribute to the Trevisker series. He concluded that the Trevisker urns and collared urns had existed in Cornwall as a 'basically independent' but simultaneous series and that pierced lug handles had been first developed in the Trevisker series and then copied as a functional device by the makers of collared urns.

It is most important at this stage to recall the nature of the form 3 transition proposed in sections B3.5 and the process of collared rim genesis discussed in sections B6.1 and B6.5. These proposals are summarised at the beginning of section C2.4.

Our starting point in this appraisal must be the nature of the collared rim on those vessels which have conventionally been termed Cornish Primary and Secondary Series collared urns with handles (ApSimon, 1972, 360).

In Cornwall the functional collared rim, in the terms set out in section B6.5 hardly exists for its services as a practical reinforcement to aid cordon suspension was never really required. Like their counterparts in other regions of Britain, Cornish food vessel urn potters entered a stage of internal bevel development which resulted in the production of incipient collars which had nothing to do with the functional requirements of mature collars (e.g. Porthlooe (Patchett, 1946, D10)).

It was at this point that the desire to affix suspension cords seems to have occurred in Cornwall. This requirement may have been transmitted as

an idea from Wessex for there is no evidence for the introduction of Inception Series urns into this part of Britain. This requirement constitutes the commencement of the form 3 transition in Cornwall but its manifestation is unique. In the absence of Inception Series models the replication of the biconical urn style was never required. To facilitate suspension Cornish food vessel/urn potters invoked the functional pierced lug handle, a move which was to preclude the development of the functional collar in Cornwall.

Elsewhere in southern Britain we have proposed that collared urns were probably produced by specialist potters who were inadvertently responsible for much standardisation in the areas which they served (section B6.5). In Cornwall parallel specialist production based on the gabbroic clay source was responsible for the Trevisker series. In the generation of the Trevisker series the form 3 requirement of shape and a means of suspension were accepted while the decorative conventions of the collared urn series were not. Early examples of form 3 are probably those from the Try Menhir at Gulval (Russell & Pool, 1964, fig. 7). In 1972 ApSimon believed handled collared urns such as those from Denzell Downs II, Chapel Carn Brea, Tresvenack, Mullion, Connor Downs and Bochym, Curry (Patchett, 1946 & 1952, nos. D.1-4, D9, D11) to be parallel products with handles copied from the Trevisker series but the absence of mature collars suggests that these urns represent the earliest stage of handle production. The absence of Trevisker motifs and chain plait cord need be no impediment here for these urns still carry the out-going motifs of the old food vessel/urn repertoire prior to form 3 decorative reforms.

The appearance of the Cornish handle is of some importance for as Calkin observed the same handle types appear on a limited number of biconical urns in Wessex (Calkin, 1964). Calkin rightly believed that a small number of handled Wessex urns which he termed Cornish B derivatives (Dorset Downs (D.C1), Sturminster Marshall (D.C2) and Winterslow (W.C2)) were derived directly from Cornwall. This prediction is now confirmed by the petrological analyses for Sturminster Marshall and Winterslow. (At the former site Parker-Pearson (pers. comm.) has observed gabbro in thin section; at Winterslow the present writer has observed copious quantities of cassiterite in a macroscopic examination). The occurrence of handles on five additional urns from Dorset convinced Calkin of a further Cornish connection. These urns he equated with Miss Patchett's class C but the analogy is not entirely appropriate for these urns from Winterbourne St. Martin G8a (D.B59 and D.C7), Weymouth G23 (D.C5) and 'Weymouth, near' (D.C6) retain their concave necks and biconical profile and

are more characteristic of class B. In Wiltshire an additional urn from Avebury G17 (W.C1) displays a similar appearance. The large handled urn from Bromham G1 (W.B40) cannot however be admitted to this group for it bears no resemblance to the Cornish style.

Although select handled urns were actually transported from Cornwall to Wessex, Cornish handled urns cannot be cited as the primary source of biconical urns in the manner proposed by Calkin (section C1.5). Cornish handles were short-lived in Wessex and none are to be found in the Inception Series. The chain plait cord technique and the motifs of the Cornish urns do not generally occur on Wessex urns (other than at Weymouth D.C6 and on the proven imports). Cornwall, moreover, has not provided the plastic features characteristic of the Inception and Supplementary Series urns.

A closer examination of the Wessex examples of Cornish handles and their imperforate derivatives reveals that they had a very limited effect which was taken up only by the indigenous form 3 tradition. At Winterbourne St. Martin G8a (D.C7) the plugging or tenon technique for affixing handles was fully understood but the perforations were cautious and diminutive. At Portesham G2a (D.B17), Bere Regis G46a (D.B25) and Wool G5 (D.B42) bold arched handles were applied but the horizontal perforations were substituted by dimples. On the form 3 food vessel from Latch Farm (H.10) the handle was abandoned in favour of a cord impressed skeuomorph which presented only the handle decoration (ApSimon, 1969, 64; compare Rosecliston, Dudley & Thomas, 1965, fig. 5). Only at Dewlish D.C4 and Weymouth D.C5 and D.C6 were true functional Cornish arched handles employed and these might perhaps be attributed to Cornish potters working in a local form 3 potting community in south Dorset.

It seems by now apparent that a variety of lugs comprising tongue, faceted and boss forms were readily employed by the makers of form 3 biconical urns in Wessex. To this array were added perforate and imperforate versions of Cornish arched handles but these latter forms owe nothing to the continental source of the Inception Series in southern Britain. In Cornwall, arched handles were acquired immediately prior to the development of the mature collared rim, an event which on the evidence of associations with the Wilsford burials (noted in section B6.3) may have taken place before the end of Wessex I.

The clear exclusion of Cornish handles from the Inception Series indicates that Cornish potters acquired these features from a source, or by a means, that was independent of the Gallo-British milieu which we have generally proposed for biconical urns. One potential source now deserves re-evaluation. Abercromby (1912, II, 48) was first to cite Armorican handled vases. He was

later followed by Hencken (1932, 78-9) and Patchett (1946, 26-8). The analogies were generally poorly selected from the Du Chatellier collection at St. Germain-en-Laye. Breton vases are a fine-ware of Bronze Ancien and their size, fabric, finish and handle design cannot generally be compared with Cornish handled urns. In addition to the handled vases there are however complementary handled urns which approximate in size to the smaller Cornish urns. The finish of the Breton handled urns is generally similar to the vases. The thinness of most Breton handles and the broad curvature of the arc bear little comparison with Cornish handles.

The recognition of a small but significant number of Armorican handled vase imports in the region of Wessex and its seaboard re-opens the question of an Armorican contribution to the Cornish handle genesis. (Details of the five British finds are discussed in detail in section E7.) Two of the vases concerned, from the Isle of Wight and Studland, are single handled and are unsuitable models for the Cornish type. The vase from Portland bears four handles of broad reach type and also appears to be generally inappropriate. An analogy which can no longer be dismissed however is the vase from Winterbourne Stoke G5. The five 'handles' situated on the neck of this vessel show precise similarity with a number of Cornish handles such as those from Trevisker (ApSimon & Greenfield, 1972, fig. 14, nos. 2A, 2B).

The Winterbourne Stoke vase is an indicator to us that appropriate short-reach handles were on occasion employed by Armorican potters and that they were moreover introduced into southern England. The number of pots making the crossing seems likely to be small and the number of potential potters was perhaps even smaller. There is nevertheless persuasive evidence that a limited amount of Armorican ceramic technology was also introduced with the vases. This evidence comprises the red gloss burnishing technique described in section B4.7. The Armorican gloss technique is found on just three vessels of the food urn tradition in Britain. In Wiltshire and the Isle of Wight the pots concerned have been found in the general vicinity of the vases. The third example however comprises the Cornish food urn with incipient collar which was recovered with charred wood at Pendennis Castle, Falmouth (Patchett, 1946, no. D12). It has been described as a beautifully burnished brick red vessel, well fired but not finished with haematite (ApSimon, pers. comm.). The urn was also accompanied by a fragment of a grooved red ware handle of distinctly exotic appearance. (ApSimon, *ibid*)

The Pendennis find certainly provides an indication that in Cornwall a cross-Channel connection may have been maintained in the same restricted

manner as that proposed for communities on the Wessex seaboard (see section D1.8). Unlike Wessex however the point of contact on the Continental seaboard or the nature of the connection appears to have been quite different for in Cornwall there is no evidence for the cross-Channel introduction of Armorico-British daggers, grape cups, vase-supports or biconical urns. The matching of the workmanship of the Harlyn lunula with the Armorican pieces from St. Potan and Kerivoa suggests that the passage of Irish gold and smiths between the two peninsula may have provided the appropriate link. (Taylor, 1980, 34). A reciprocal effect might indeed have been the incidental acquisition of technical details for handle construction on coarse ware vessels.

The rigidly enforced bias of selection in favour of fine ware vases in Armorican tumulus burials has deprived us of critical information concerning the full repertoire of Breton Early Bronze Age potters. Nevertheless the domestic sherds recovered from the disturbed habitation site at Colledic, St. Nicholas-du-Pelem (Côtes-du-Nord) (Le Provost et al, 1972) suggests that heavy horizontally perforated handles were indeed employed on large coarse ware pots and that these were in contemporary use with the vases. Like the Winterbourne Stoke example some further Breton vases also occasionally reverted to this inelegant lug-shaped form (e.g. the four detached lugs on the urn from Kerma^rquer and the single handle at Kergogl^e, Plouhinec).

South of the Armorican peninsular on the Ile d'Oleron appropriate heavy arched lugs are to be found on globose storage jars. Similar vessels at this site also carry plain horseshoe or arc-shaped handles. (Gomez, 1980, fig. 13b is no. 10, also 3, 4). The size and weight of the Winterslow urn (D.C3) makes transit by sea the only practical means of transporting this urn from Cornwall to Wiltshire. The urns from Sturminster Marshall (D.C2) and Hardelot Plage (F.1) attest similar traffic. The form 1 food vessel urn from Plomodiern (Finistère) F.2 suggests further evidence of British seafaring ability. It is clear from the evidence discussed above that the French Atlantic seaboard offered a ready source of arched handle devices. Through their maritime connections it would seem that the Cornish food vessel/urn communities might tap this source at any time without recourse to an influx of Inception Series biconical urns like that witnessed in contemporary Wessex.

C2.5 Intrusive and Indigenous methods of ceramic production in East Anglia

In 1936 Clarke published a short report on the domestic assemblage recovered from zone VIIb peat at Mildenhall Fen, Cambridgeshire. Some 35sq. metres of peat were removed from the lower slope of a sand hillock

to reveal a scatter of sherds, charcoal and animal bones. Near the summit of the peat covered hillock a small circular pit contained a substantial assemblage of biconical urn sherds and two plain cups.

The account of the Mildenhall excavation remains the seminal work on British domestic biconical urns but the ceramic information it imparts is not large. Clarke illustrated only eight reconstructable biconical urns and an additional thirteen decorated sherds. To these he added profiles of sixteen different rim types and four further illustrations of the plain cups and the distinctive incised Mildenhall fine ware.

With a single notable exception the Mildenhall sherds were all tempered with grog, a recipe which is clearly associated with the form 3 tradition. Despite their temper however certain of the Mildenhall pots also display attributes of the Inception Series. The FN decorated urn Sf.B7.35 displays a vertically perforated lug (attribute 8) which has been plugged through the shoulder of the pot and at least one urn seems to have carried an FT cordon applied above maximum girth in the manner of attribute 9 (Clarke, 1936, fig. 5, no. 10).

Since 1936 further domestic biconical urn assemblages have been uncovered in East Anglia and these too have revealed textural and formal characteristics similar to those of Mildenhall Fen. These assemblages, analysed in section E, comprise the unpublished sherds gathered as discrete field scatters by Frank Curtiss at Blackdyke Farm, Hockwold-cum-Wilton in Norfolk. In the upper shaft fillings at Grimes Graves pottery of biconical urn type has also been recovered from tipped midden material (Mercer, 1976). According to Mercer's recent summary of this site the urns from the various midden tips, including Armstrong's unpublished 'Black Hole deposit', are homogenous. Armstrong's urns comprise grog and flint tempered wares bearing FT and FN shoulder cordons. This assemblage has a distinct 'late' appearance which is emphasised by the high incidence of rounded rims and the 'straightened' profiles of many of the urns. Some urn sherds reveal the generous use of comb point decoration, a technique which is well known on the urns found in the Later Bronze Age cemetery at Ardleigh (Erith and Longworth, 1960; Couchman, 1975).

With the exception of the late urns from Grimes Graves and Ardleigh, evidence for the use of flint temper is difficult to find in the East. At Mildenhall Fen the FN rusticated urn Sf.B7.35 was the only vessel to show such temper and at Hockwold the only exception to the grog tempering tradition on the site was a single stone tempered sherd which was poorly provenanced. Despite the absence of flint temper however both domestic assemblages suggest

a familiarity with the biconical urn ceramic tradition which surpasses the usual level of indigenous response. The use of arc handles, the reproduction of attributes 8 and 9 at Mildenhall and the use of attribute 3 at Hockwold (N.B8.24) reveal a detailed knowledge of the Inception Series. This knowledge is also accompanied by the ability to produce an improved grog tempered fabric which is hard fired in a reducing atmosphere.

The evidence from Mildenhall Fen and Hockwold suggests that the potters responsible for the production of these domestic wares were primarily concerned with the perpetuation of the biconical urn style whilst employing modified methods of firing and clay preparation based upon the food vessel/urn tradition. The sex of the potters cannot be determined but if the high bias evident in ethnographic studies is accepted, those involved are most likely to be women. The absorption of local women by intrusive or pioneer communities whose identity might be partially proclaimed in their ceramic tradition would be one means of explaining this phenomenon.

C3 NON-CERAMIC ASSOCIATIONS

Artifacts associated with British biconical urns are notoriously meagre. Most finds associated with cremation burials have been described and discussed by Dr. Smith (1956, 1961) but there remain some notable additions. Cremations in biconical urns were usually unaccompanied but where grave goods are known some minor consistencies in choice are discernible.

C3.1 Razors

Razor associations occur at Winterslow (W.C2), Amesbury G71 (W.B2), Radley (Bk.B1), Nether Swell (G.B2), Stainsby (Ln.B8) and Ogof-yr-Esgyrn (Br.B1). The 'spearhead' found with urn W.C1 at Avebury G17 and illustrated by Merewether may well be a further example (Merewether, 1849, fig. 23). At Hollesley (Sf.B1) a green stain on some cremation fragments might perhaps denote a lost example. At Amesbury (W.B2) Butler and Smith (1956, 29, 33-4) classified the razor as their type 1 A/B hybrid due to the intermediate state of development of its riveted tang. All other examples belong to their type 1B.

The most recent classification of British razors is that devised by Jockenhovel (1980). This scheme divides the Early Bronze Age class 1 A & B razors into four typological groups comprising:-

1. Two edged razors with handle-plate. (Group HP)
2. Two edged razors with broad perforated tang. (Group BPT)
3. Two edged tanged razors with long oval blades. Variant 1 plain (Group TLO.1)
4. Two edged tanged razors with long oval blades. Variant 2 decorated (Group TLO.2)

At Amesbury G71, Winterslow and Nether Swell, where the precise razor forms can be recognised, the respective groups represented comprise one example of BPT and two examples of TLO.1. The remaining examples are too fragmentary to permit precise classification.

Only at Winterslow (W.C2) do these razors show association with indigenous urns. This urn is, nevertheless, itself an exceptional type being one of the two proven Cornish imports into Wessex. At Amesbury (W.B2), Nether Swell (G.B2) and Stainsby (Ln.B8) the urns are Supplementary types and at Radley (Bk.B1) the urn belongs to the Inception Series.

C3.2 Faience Beads

Faience beads show a consistency of choice at six sites although the bead types themselves are wide-ranging and embrace Beck and Stone's types 1 to 4. In each case the quantity of beads is characteristically meagre; the maximum number occurring at Ringwoud where three segmented and one oblate bead were included in the burial. Smith (1961, 107) observed the absence of quoit-shaped beads on the Continent noting the exceptional example found at Arbon Bleiche which she considered might represent a significant connection with Britain. Due to the paucity of all types of faience beads in Holland, Piggott (1973, 380) proposed British derivation for the single segmented bead found in the domestic biconical urn assemblage at Vogelenzang.

The urn types associated with faience beads are worthy of note. The description of the lost vessel from Idmiston (W.B23) suggests a horseshoe handled urn which might, with reasonable confidence, be assigned to the combined intrusive tradition (Inception/Supplementary series). The lost urn D.B59 from Winterbourne St. Martin G5a exhibited a perforated handle with Cornish affinities and a concave neck. The presence of similar concave necks on the Cornish import at Winterslow (W.C2) and the form 3 urn from Frampton (W.B45) favours indigenous production. At Ringwoud K.B9, Chard Sm.B1, Semer Sf.B4 grog tempered urns of the form 3 tradition were employed and the urn (Ln.B8) at Stainsby appears to have been similar. The Stainsby urn also carried an incised version of the cord motif F.

With the exception of the poorly recorded find from Idmiston the bead associations cited above reveal a positive correlation with the form 3 version of the biconical urn tradition. The bead associations with other ceramic types also reveal a strong connection with form 3 or collared rim changes in the food urn tradition. At Oxtedde Bottom, Easton Down, Calais Wold and Arbroath (Beck and Stone, 1936, nos. S-12, 35, 36, 64) the bead associations were with collared urns. At Frampton (D.7) Idmiston G25e (W.1), Tynings Farm T12 (Sm.4) and Llangwm (Dn.B9) form 3 food vessel/urns occurred and at New Luce (Wigtown) a quoit bead was contained with a crutch-headed pin and bronze lugged tool within a plain cordoned urn (Burgess and Cowen, 1972, fig. 5). At Stevenston (Ay.3) a form 3 urn with cordoned urn affinities and motif F cord decoration was associated with a segmented bead of Scottish type (Beck & Stone, 1936, S.61). The Knackyboy find appears to be the Scillonian equivalent of a form 3 urn. Only at Brynford, Flints. (Fl.5) and Mill of Marcus, Angus (Ags.4) where form 2B features survived on encrusted urns can pre-form 3 characteristics be associated with faience beads.

C3.3 Amber beads

Amber beads are associated with only two urns. At Winterslow (W.C2) twenty seven beads and buttons were included with other grave goods which comprised a linen cloth, a bronze awl, a type 1B razor and material considered to be either hair or moss. All were contained within an imported Cornish handled urn which may be equated with an early phase of the indigenous biconical urn response. The Winterslow beads comprised a large conical and a large disc shaped bead and four beads described as 'diamond cut'. All were V perforated conical forms which might be termed buttons. At Chard, urn Sm.B1 was found to contain at least 30 amber beads and one oblate faience bead. (Many more are said to have fallen to pieces when first touched.) The beads comprise oblate and biconvex forms with straight-through borings. Some show hexagonal cross sections. (I am grateful to Mr. C.W. Hoskins for sketches of the beads and urn.) These beads closely resemble those found with two complex bored spacers of basic pattern in an isolated hoard of 119 beads found in the Rhone-Alpine settlement at Padnal (Rageth, 1976, Abb. 41). None of the Chard beads show borings suitable for spacer arrangements but we should bear in mind the quantity of beads which appear to have been lost. The Winterslow beads also make little provision for complex or multi-strand arrangements and the collective evidence suggests that components of the classic crescentric Wessex spacer necklaces were not employed by those associated with the form 3 ceramic tradition. Individual spacer components bored in the basic Wessex pattern are however known in several Alpine and South German contexts. (Gerloff, 1975, 200-5, pl 63; section C5.8).

C3.4 Bone Cylinder Beads

At Winterbourne St. Martin G5a (D.B59) a bone cylindrical bead accompanied the quoit and star shaped faience beads, four others 'of a pearly substance' and a cowrie shell. Plain cylindrical bone beads of this type are rare. Thurnam (1871, 440) illustrates an unassociated example from a barrow at Roughridge, Wilts. and another is recorded with a lost collared urn from a barrow at Woolmer, Hants. (Skinner, 1830, BM. Add. Mss. 33718, F56).

C3.5 Gold-cased biconical and spherical beads

A 'copper pin' (awl?) and 'some six or seven beads of gold . . . made of some sort of wood or some other substance . . . covered with thin gold plate' were recovered with biconical urn N.B1 from a secondary cremation burial in a barrow at Bircham, Norfolk in 1842. (Lukis, 1843). All items are now lost.

Lukis provided drawings of three beads in a privately printed octavo monograph which seems to present the beads at full size. The spherical bead illustrated appears to be an exact copy of the gold-cased shale bead from Wilsford G7 (Taylor, 1980, pl. 26f). The biconical bead illustrated by Lukis resembles the second gold bead found in the Wilsford series grave at G7 but is more elongate.

A further bead find is also relevant. At Ogof yr Esgyrn, Breckonshire a gold cased bead was recovered from the cave in 1948 by the Cave Research Group. The context seems broadly relevant to the biconical domestic urn assemblage (Br.B1) and bronze razor recovered from the same site (Mason, 1968; Taylor, 1980, 95).

At Wilsford G7 Taylor has attributed the gold beads to the same workshop responsible for the halberd pendants from Wilsford G8 and Manton, the Manton and Upton Lovell beads and the box plates from Upton Lovell and Little Cressingham. (Taylor, 1980, 47). The last site is of particular interest for it brings into the sphere of the Wessex goldsmiths a Norfolk artifact which may complement Bircham.

Although the Bircham urn is now lost, the presence of the horseshoe handles and the general exclusion of flint temper from urns in this region suggests that it was most probably an early example of the East Anglian response. At Ogof yr Esgyrn a moulding scar (omitted from the published illustration) suggests a detached horseshoe handle on one urn. The use of 5 - 10% sandstone temper in these Welsh sherds suggests the presence of Inception Series potters but localised use of stone filler by some food vessel urn communities in Wales may invalidate temper as a distinguishing characteristic in this region.

C3.6 Translucent pendants

Interest in translucent minerals for personal adornment is inferred in two instances. At Bere Regis G46a urn D.B28 contained two perforated 'amulets' described by Payne (1892, 12) as discs of quartz with central hole, one broken. Payne's catalogue also assigned these items to another biconical urn (D.B24) from the same barrow but this error has been traced by Calkin (1966, 130-2) to the juxtaposition of illustrations used by William Shipp when preparing his account for Charles Warne between 1844 and 1849. In his first manuscript account Shipp described the amulets as 'crystalline marble' but this description was changed in his manuscript notes for his third edition of Hutchins History of Dorset (1861-70) where he describes the items incongruously as 'siliceous feldspar' (Shipp, Dorset Cuttings).

Calkin, summarising the chameleon characteristics of these missing pendants, has described their true composition as 'anybody's guess' but favour

should perhaps be given to the British Museum's catalogue entry which describes these items as gypsum discs, very soft, worn and decayed.

A further object found with the segmented faience bead in the Idmiston urn W.B23 may also have served as a pendant. This item, which was described as a semi-translucent pebble, is now also lost. (Beck & Stone, 1936, 240, S23).

C3.7 Bronze Awls

Bronze awls are confirmed in just two associations, Winterslow W.C2 and Chard Sm.B1. Both urns are equated with the form 3 response. These two finds also present further similarities in the form of amber beads and horizontally perforated handles. The Chard urn was found in 1885 on flat land in a valley bottom. No mention of a burial was made in the brief account of the discovery nor the contemporary MS notes of the recorder Arthur Hull. (C.W. Hoskins, pers. comm.). Awls may also have been present in Afton Down IW.B3 and Bircham N.B1 (see pins below).

C3.8 Pins

A bone ring-headed pin (BM 92.9-1.224) was associated with the handled urn with Cornish affinities (D.B30) from Bere Regis G46b. The pin is highly polished and closely resembles that found with the form 2A food vessel urn from Milbourne St. Andrew (D.43). A crude bone pin, distorted by burning, was also found with the cremated bone within the Drakenstein urn L.B34.1 at Oss, North Brabant. (Glasbergen, 1954, 101, 104 fig. 58, no.15). At Afton Down, Isle of Wight Skinner (1817) mentions 'a brazen pin' found in the upright urn IW.B3. A further ill-recorded example was noted by Lukis (1842) with the gold-cased beads at Bircham N.B1 (section C3.5). Neither of these two latter finds seems to have been of sufficient intrinsic merit to evoke the draughtsman's pen. The fact that artists such as Skinner and Lukis both chose to ignore these finds gives some grounds to suspect that both may have been small unprepossessing awls.

A further example of consistency in the custom of depositing pins in biconical urn burials comes from Vorstenbosch, North Brabant (L.B45). The bronze disc-headed pin found with the barbed-wire and FN decorated urn from this site has been compared by Butler (1969, 46) with the Elp Culture artifacts from the Weerdinge grave in Drenthe. The similar European Tumulus Culture pins noted by Gerloff at Shrewton G5L and Norton Bavant G1 could mean that the use of these items in north west Europe may have been established as early as

the opening of Wessex II.

An important group of three bronze pins of Picardy type were recovered with urn K.B1 from a domestic context in a pit at Ramsgate (Hawkes, 1942). These pins, which may be assigned to the latter part of Middle Bronze Age (O'Connor, 1980, 1.76) provide useful terminus post quem for the Drakenstein urn style in Britain. A Drakenstein urn (L.B38.5 or 38.7 or 38.8) from tumulus 3, 4 or 5 at Soest, Utrecht contained an incomplete bronze pin with a decorative serrated edge. The pin unfortunately lacks analogies.

C3.9 Daggers

Only at Avebury G17 (W.C1) and Bromham G1 (W.B40) are dagger associations recorded with British biconical urns. The Avebury association is dubious. Merewether described the item found with the handled urn W.C1 as 'a bronze spearhead', a misnomer which he apparently persisted in applying to all his dagger finds despite Hoare's much earlier re-appraisal of the subject. Merewether's illustration of the item concerned is far from helpful but the absence of a straight cutting edge, the ovate profile and the lack of rivets seems more compatible with a class 1B razor rather than a dagger or knife. (Merewether, 1851, fig. 23).

At Bromham G1 the handled and multi-cordoned biconical urn W.B41 was accompanied by a flat riveted knife-dagger (Gerloff, no. 255). The handled urn W.B41 inverted over this cremation is unique amongst British biconical urns and cannot be equated with the Cornish handled series.

C3.10 Wessex Shale Biconical Cups

The turned shale cups of the Wessex Bronze Age have been discussed on many occasions (Newall, 1929; Piggott, 1938; Ashbee, 1961; Gerloff, 1975). Gerloff in her excellent recent summary equates these cups with the amber versions found in the Clendon barrow (Winterbourne St. Martin G31) and Hove. Four illustrated shale cups are known and a fifth is most strongly implied in the account of the opening, in Dorset, of the Stowborough barrow in 1767. The surviving cups comprise two from primary cremations graves in the Farway barrow group in south Devon and two from unspecified contexts in the Amesbury region. One of the Farway cups was associated with a segmented bone toggle and a dagger of Camerton type (Gerloff no. 193).

Of particular interest is new evidence for a further shale cup which was found in association with a Dorset biconical urn. The pot concerned is D.B45, a form 3 biconical urn found upright and containing a cremation in the

multiperiod bowl barrow Frampton G4. An account of excavation was prepared on behalf of the excavators by Forde Johnston (1958) but the cremations were never examined. An examination of the biconical urn by the present writer in 1982 revealed that the urn differed a little from its published reconstruction (section C2.4 attribute 16). Concealed amongst the cremated bone was a single fragment of a convex turned shale receptacle (D.B45a). The vessel wall is 4.5mm thick and its curvature conforms to the mid body section of a Wessex cup. The fragment is well polished on its outer surface and shows fine diagonal tooling or finishing marks on the interior. The fragment has detached itself from the remainder of the vessel along unworn lines of horizontal cleavage. There is no suggestion of heat damage. In view of the fragmentary state of the biconical urn it seems likely that the remainder of the cup was lost in the soil collapse recorded during its excavation. Three small accessory vessels enclosed one within another and comprising a miniature collared urn, a miniature form 3 urn and an even smaller thumb pot accompanied the biconical urn. A fragment of a fourth (unpublished) miniature vessel from this context is also housed with the finds.

C3.11 Flat axe

A bent and fragmentary flat axe is included amongst the material recovered from the domestic assemblage at Mildenhall Fen (C.M.A.A. acc. 38, 466). This item appears to have been a later find for the absence of metals is specifically noted in the excavation report (Clarke, 1936, 47). The cross section of the axe reveals that it is an open-mould type. The weak S profile suggests an original appearance perhaps similar to some Irish copper flat axes. (e.g. Allen, Britton & Coghlan, 1970, figs. 10, 11). The composition is unknown. The absence of even a slight flange suggests that this axe may well be a copper piece pre-dating the hammered flanges which have been equated with Wessex I. The ancient fractures reveal that the item was apparently scrap. In the absence of metallurgical assay and stratigraphical details nothing further can be said.

C3.12 Tubular beads of bronze

Fine tubes composed of rolled bronze sheet were recovered from the Inception Series urns from Bere Regis G8b (D.B4) and G46b (D.B31). Payne's catalogue of the Durden collection (1892, 15, 20) describes these items as resembling a lace tag with a corrugated surface. The D.B31 specimen was further described as hollow, one inch long and possibly worn as a bead. The

other was described as being similar. Calkin, (1966, 132, n.1) recorded these items as missing since 1940 but in 1982 one example was available for study. The description sounds suspiciously like rolled bronze copies of segmented faience beads but once examined this possibility is soon dispelled. The surviving tube is very fine indeed and seems unsuitable for stringing as a freely moving bead. The patina is also very thin and fresh and seems not altogether compatible with extreme antiquity. These corrugated tubes lack Bronze Age analogies and we should perhaps take Henry Durden's comparison with lace tags very seriously indeed. The surviving tube presents such a striking resemblance to a modern crimped shoe-lace tag that the possibility of Victorian contamination should be considered.

C4 CERAMIC ASSOCIATIONS

Ceramic associations occur in three categories. Those in category 1 are of the highest chronological value.

C4.1 First degree associations in funerary contexts

Accessory vessels occur in only three British graves. All belong to the form 3 response. At Nottage (Glam.) the small biconical urn G1.B1 accompanied a disturbed cremation in the primary position in the barrow (Savory, 1956). The size of this pot led the excavator to propose that a larger urn containing most of the cremation had previously been removed or destroyed. Two other urn fragments recovered from posthole C and the mound make-up appear to attest contemporary use of the form 3 food vessel urn style. A secondary satellite cremation burial (termed on typological grounds by the excavator the primary burial) was interred in an inverted form 3 food vessel urn bearing 'cord maggot' impressions arranged on the shoulder in a manner suggestive of pseudo groove skeuomorphy.

At Ringwoud, Kent, Woodruff, excavating in 1872, uncovered four inverted urns in chalk cut pits beneath a bowl barrow. (Woodruff, 1874; 1876). Woodruff considered all four urns to be primary burials, a relationship which appears to be corroborated by his published sections. All burials were backfilled with clean chalk. Woodruff's first urn was destroyed during uncovering but he observed that it was cord decorated in chevron style and that its size resembled the collared urn recovered from the second pit. It was also apparently devoid of any trace of bone.

In pit 2 Woodruff recovered an urn with a motif G cord decoration and a shoulder moulding which provides a collared urn profile. In the third pit, urn K.B8 was badly crushed but Woodruff noted the presence of 'handles' and cord decoration resembling the collared urn from pit 2. (Fragments of this crushed biconical urn survive at Maidstone Museum. The cord decoration on this urn closely resembles motif G on the fourth urn). Urn K.B8 contained with its cremated contents a miniature biconical vessel K.B8a. This vessel is marked with random FN decoration and despite its biconical profile it has indirect links via another Kent find (Hollingbourne) with lidded Alpine deckeldosen (section C2.2, attribute 8).

In the fourth pit Woodruff encountered two accessory vessels (K.B9a & K.B9b) associated with a large urn displaying the unusual combination of a collared urn and four horseshoe handles (K.B9). Accessory vessel K.B9a comprised a

biconical pygmy cup bearing cord motif on its broad neck and two perforations near the base. The form resembles the stray find recovered from Wilsford G40 (Dev. Cat. 449). The second vessel (K.B9b) comprised a small well made biconical urn 9cm high bearing cord motif A on the rim. The shoulder was decorated with a flattened version of motif F.

The contexts of these four urn burials at Ringwould suggest that the entire ceramic assemblage is broadly contemporary although we must allow in our estimations the possibility that the four urns represent a primary burial sequence which may have lasted some years before the barrow was built. Textural analyses confirm the general homogeneity of the pots concerned and indicate that all may be assigned to the form 3 transition. The combination of weak collared profiles and horseshoe handles at Ringwould is probably unique and appears to represent the moment of transition when food vessel urn potters were developing the functional collar while at the same time expressing through skeuomorphy their newly adopted interest in cord handles. The conventional collared urn from pit 2 was no doubt equipped with functional rope handles.

The complex of contemporary burials at Ringwould should be compared with another example of multiple burial with biconical urns also encountered in East Kent. This analogy was drawn over a century ago by Woodruff who cited the five inverted urns (K.B3-7) uncovered at ground level in a barrow at Iffins Wood, Nackington. A contemporary illustration provided by Bell (1844) reveals these lost vessels to be biconical urns bearing FT shoulder cordons. Four of the urns seem to have been decorated with FT rims. Their validity as a contemporaneous group is of course unconfirmed.

A group of grave goods of considerable importance is that recovered in 1938 with the secondary urn D.B45 at Frampton. The contents of the grave may be summarised as follows:-

- T93 Form 3 biconical urn with impressed (swag?) decoration
- T93-1 Miniature collared urn 8.6cm high containing:-
- T93-2 Miniature form 3 food vessel 7cm high containing:-
- T93-3 Round bottomed thumb pot 1.6cm high.
- T93-4 Rim sherd of a miniature vessel found near pot 3
- T93-5 Fragment of Wessex shale cup.

The miniature collared urn D.B45a is of particular interest for it carries a collar of mature type which is decorated with motif K cord lattice confused with some traditional food vessel/urn jabbed decoration. The shoulder also carries jabbed impressions which appear to be a substitute for FT decoration in biconical urn style (see section B4.8). The presence of this latter motif

makes this particular collared urn a very appropriate companion for a form 3 biconical urn. The miniature vessel D.B45b is also an appropriate companion. It comprises a miniature form 3 biconical urn bearing vertical incised lines on the neck and incised segments on the rim. The neck decoration is not characteristic of the biconical series although the rim incisions are certainly known. The thumb pot D.B45c is exceedingly small being only 2.8cm in diameter. At such a scale it would be difficult to reproduce any traditional form.

Similar grog tempered fabric and the fitting of the three urns one inside another suggests that the group comprises a set of vessels intended for some particular purpose. That a functional set should comprise both collared and form 3 biconical types is of particular interest for it suggests that both were familiar and acceptable forms which might be reproduced by the same potter.

A further notable association occurs in the Dorset barrow Bincombe G4 where the atypical Inception Series urn D.B22 was accompanied by a plain form 3 food vessel urn with type C collared rim. Warne (1866, 52-3) describes both urns as being 'placed in juxtaposition with their mouths uppermost in a slight scooping of earth on the southeast side'. Both urns were protected by a carefully arched arrangement of flints. Warne omits any mention of cremations in this part of his account although he later mentions that the 'third' urn was devoid of bones and ashes. Urn D.B22 and the description of the 'scooping' given by Warne certainly suggest that this urn served as an accessory vessel to its larger companion but this relationship cannot be confirmed.

C4.2 Urns related in sequential burial contexts

Details of all relevant contexts are given in the corpus. Those of particular note are given here.

At Dewlish G6 the Supplementary Series urn D.B2 had been superimposed on the site of the inverted Cornish style urn D.C4 and had partially destroyed its upturned base (Warne, 1866, pl. 4, nos. 13, 14). This association demonstrates only that the Cornish style had been established in Dorset before the end of the Supplementary Series. Confirmatory evidence comes from Winterslow where the Cornish import W.C2 was accompanied by the Supplementary Series urn W.B49. According to the excavator both urns were placed side by side under a single secondary 'archwork' of flints (Hutchins, 1846; Stevens & Stone, 1938). At Bulford G47 Supplementary urns W.B12 and W.B13 were buried side by side on individual chalk platforms in a primary context.

At Nether Swell, Gloucestershire, Greenwell (1877, 446-7) encountered two secondary urns superimposed in much the same manner as those recorded by Warne

at Dewlish G6. The lower burial in Greenwell's barrow comprised a cremation and a type 1B razor enclosed within urn G.B1. This urn, which was decorated with two-tier cordons and arc handles, was inverted on a stone slab. The upper cremation urn G.B2 was also inverted on a stone slab and Greenwell considered that sufficient time must have elapsed to allow the lower urn to collapse before the second urn was interred. Unlike its predecessor, urn G.B2 presents a more 'straightened' or sub-biconical profile and it lacks applied decoration. Both urns nevertheless belong to the same local tempering tradition and contain similar quantities of comminuted fossil shell. These two cremation burials at Nether Swell post-dated an unaccompanied contracted primary inhumation.

At Bincombe G4 the Inception Series urn D.B22 and its associated collared food urn were bracketed chronologically by further collared food urns. According to Warne's stratigraphy two collared food urns were deposited at a higher level in the mound and four more were interred, apparently at ground level, near the centre. These latter cremations Warne considered contemporary or successive primaries. From this early context he succeeded in preserving two primary series collared urns (BAP, 2, nos. 5 & 5a). The levels of burials encountered by nineteenth century excavators are a notoriously unreliable guide to the relative chronology of the burial sequence for accounts like that given at Bincombe fail to differentiate between secondary and high level satellite burials. Although the depths recorded by Warne are of little value one helpful indicator remains: the urn found with vessel D.B22 displays the same form and textural characteristics as the smaller version (BAP, 2, 5a) which was found at the 'primary' level of the mound. The two urns are most likely to be the work of the same potter or potting group and there is consequently a natural inference that D.B22 was interred not too long after the primary series of burials were deposited at the base level of the mound.

A notable burial sequence relevant to the development of form 3 biconical urns is that revealed by excavation of bowl barrow 248b at Upton Pyne near Exeter (Pollard & Russell, 1969). The primary burial comprised a cremation in an inverted form 3 biconical urn (Dv.82) which was decorated with cord motifs A and M and bearing four applied tongue lugs. The temper has been described by ApSimon (1969) as abundant coarse grog. The four tongue lugs and motif A cord decoration has suggested to ApSimon (ibid.) an appropriate analogy with the Upwey urn D.B61 which we have also identified as a form 3 biconical urn. A further analogy is the poorly illustrated form 3 biconical pot found amongst a series of collared urn burials at Rancombe Down, Shorwell,

Isle of Wight (Crawford, 1922). The design of this urn suggests the same indigenous response to the biconical form and a similar regard for motif M decoration on the shoulder.

The primary cremation at Upton Pyne was accompanied by three further urn burials which the excavators numbered in order of deposition. Urn 2 comprised a Primary Series collared urn inverted in a stone lined pit or cist. Immediately to the east were placed urns 3 and 4 which respectively comprised a Trevisker urn (composed of gabbroic clay) and a biconical urn with strong Trevisker affinities. These latter urns were undoubtedly deposited as a pair and such is the closeness of urn 3 to one of the capstones of the urn 2 cist that it must have been abutted to the slab after the completion of the cist burial. No trace of a pit filling could be found above any of these urn burials and the excavators concluded that urns 2, 3 and 4 had been deposited as a specific group before the raising of the mound. The excavators also considered urns 3 and 4 to be deposited on the old ground surface adjoining the cist but in the published photographs of the group there is a marked indication that these two urns were sited in a slight circular hollow dug beside the cist. Such evidence would imply that slightly more time had elapsed between the completion of the cist and the re-clearing or scooping of the old ground surface to prepare for the deposition of urns 3 and 4. An unenclosed cremation (burial 5) was also deposited in a discernable scoop before the raising of the mound.

The collective evidence from Upton Pyne suggests that all four urns belong to a succession of pre-barrow interments which seems unlikely to have lasted, at most, more than two or three years. The primary urn was buried under a very shallow deposit of compacted sand which, in the excavators' view, had provided temporary protection intended to suffice during the pre-mound period. This deposit clears the upturned base of urn 1 by about 5cms and is consequently unlikely to have protected the primary burial for any length of time. Charcoal from urn 4 has been dated 1386 ± 58 bc (BM-402).

The value of the Upton Pyne assemblage lies in the variation it reveals amongst a contemporary group of ceramics which include form 3 types. ApSimon (1969) has noted that the collared urn (2) exhibits only two or three primary traits and might belong to the later part of the primary series. The presence of the Cornish import (urn 3) indicates that Trevisker style 1 is contemporary with some part of the primary phase of collared urn production. The form 3 urn (4) carries lugs that may be attributed to Trevisker influence but the piercings are incomplete and inadequate. It is entirely appropriate

that the fabric of this pot should be devoid of the gabbroic temper which accompanies the accomplished pierced lug handles on urn 3. Finally the primary form 3 urn (1) displays four tongue lugs which ApSimon (ibid 65-6) has suggested might be derived from the Trevisker series but due to their similarity with vertically perforated tongue lugs such as those found at Shrewton W.B52 and Radley Bk.B1 a Wessex origin based on deckeldosen prototypes must also be considered (see section C2.2 attribute i; C2.4 attribute 17a).

The final funerary sequence worthy of note concerns the five secondary burials and associated sherds recovered in 1964 at Bevan's Quarry Round Barrow at Temple Guiting, Gloucs. (O'Neil, 1967). (The numbering of the urns in this study uses the excavator's original figure numbers suffixed to the corpus reference G.B3). The primary burial at this site comprised an unenclosed cremation deposited in a small pit which was covered by a small turf mound. In the second phase of the monument the primary mound was surrounded by a clay bank in a manner analogous with a cairn ring. In the final phase the primary mound and encircling bank were encased within a limestone cairn some 15 metres in diameter and revetted with a dry stone wall. The limestone was apparently won from an encircling quarry ditch. A detailed re-appraisal of the barrow construction and the burial sequence is **in preparation by the writer.**

Within the stone cairn five secondary burial pits contained upright biconical urns. Sherds of similar cordoned biconical urns were also included in the primary turf mound so there can be no doubt that the community which was responsible for the initial construction and the subsequent use and embellishment of the monument adhered to the same ceramic tradition throughout its activities on the site.

The biconical urns and the stray sherds left by the Temple Guiting community comprise an homogenous group in which all vessels display the same shell tempered fabric which was fired in a reducing atmosphere to a consistent dull grey. Vessel G.B3.6 comprises an Inception Series urn identified by the presence of an FT cordon applied above maximum girth (attribute 9a). The remains of this vessel were found, appropriately, in the primary turf mound. Both this pot, and the urn sherd G.B3.7 which was recovered from the same context, display cordon grooves drawn with a fingertip above the cordon. This feature is found on a number of form 3, Dutch and Anglo-Dutch urns. (section C2.4 attribute no. 15). At Charmandean, Sussex it is also employed, in the upper position, on the Inception Series urn Sx.B5.

Following the deposition of the primary cremation and the incidental loss of sherds G.B3.6 and G.B3.7 the five biconical urns may be seen as part

of a contiguous sequence of burials which were arranged in a well ordered arc in the south-east quadrant of the mound. A further series of unenclosed cremations inserted at a slightly deeper level might represent subsequent burials added after the formal arc arrangement had been abandoned.

At the outset of barrow construction, bevelled rims of types BB, BC and B0 were in use and were incorporated into the primary mound. In the ensuing urn burial sequence bevelled rims continued to be employed and comprised types BA, BC and BG. The sparse fragments of urn G.B3.2 are of particular interest. Its neck and rim are represented by a single sherd (G.B3.2b) which bears a weakly bevelled rim and a portion of a horseshoe or arc lug handle. (The sherd is incorrectly shown as a foot-ring in the excavation report; O'Neil, 1967, fig. 3.2b). Sherd G.B3.2a suggests that the same urn was equipped with very prominent tongue lugs (not a rim as shown; *ibid*). A further loose sherd suggests a simple FT shoulder. None of the sherds recovered from this extensively damaged burial may be fitted together but the fabric provides no evidence to suggest that they belong to anything other than a single urn which may be tentatively reconstructed as shown. Sherd G.B3.2c recovered from this burial indicates that this urn was fitted with a lid which contained a drilled hole which probably accommodated a lifting thong.

A distinctive decorative characteristic re-occurring on several of the Temple Guiting pots is paired or nipped FN decoration. On urn G.B3.3 this technique is employed in vertical 'crow's foot' columns on the neck and it is combined with crude vertical FT zones on the body. On urns G.B3.4 and G.B3.4a, carefully opposed FN impressions are employed on the shoulder cordon. These bevelled-rimmed urns with their plastic lugs and cordons and their paired FN decoration provide notable analogies with East British and Dutch urns such as those from Mildenhall (Sf.B7.35), Stainsby (unpub.), Wijchen L.B48, Lisse L.B28, Vogelenzang L.B44 and Vorstenbosch L.B45.

In secondary burial no. 4 cremated remains of at least three individuals were recovered together with sherds which the excavator has attributed to four pots. (O'Neil, fig. 3, no.4, 4a, 4b, 4c, 4d). A re-examination of these sherds reveals that a further small sub-biconical vessel was also present. This pot (numbered here G.B3.4d) is the only vessel devoid of shell temper. The cremation pathology suggests that this context represents the multiple burial of three persons and it is important to note that the re-examination of the sherds reveals the presence of three medium sized biconical urns suitable for cremation receptacles (G.B3.4, G.B3.4a, G.B3.4b) and two small sub-biconical vessels which probably served as accessories. The third cremation urn comprises a new reconstruction of G.B3.4b. The rim diameter of this pot cannot justify the squat reconstruction figured by O'Neil.

C4.3 The Domestic Assemblages

For the student of Bronze Age ceramics the domestic assemblages offer an invaluable opportunity to observe the full range of the potters products and to examine patterns of ceramic consumption on settlement sites. Before these opportunities can be grasped however the effects of certain impediments must also be considered.

In Britain the most informative domestic biconical urn assemblages are those from the Fenland sites at Mildenhall and Hockwold. At both sites the sherds represent scattered assemblages in which no stratigraphical differentiation could be observed. The duration of the occupation on both sites is unknown and without stratification there can be no empirical means by which formal and stylistic variations based on the community's contemporary requirements can be distinguished from variations based upon the community's changing needs experienced through the passage of time. The second impediment concerns the fragmentary nature of all assemblages discovered to date. Each assemblage has produced a sufficient sample of the textural varieties employed on site but all have denied sufficient opportunity to reconstruct the vessels concerned.

The most striking feature of the East Anglian domestic assemblages is the evidence it affords of the almost exclusive use of biconical urns. The urns themselves show considerable size variation which seems to have enabled the same form to be employed for a number of different purposes. At Mildenhall the mouth diameters of the urns range from 9 to 40cm (fig.14) while at Hockwold the range descends as low as 6cm to include a miniature biconical urn (N.B8.37) which still exhibits horseshoe or arc handles.

The smallest receptacles employed on the domestic sites appear to be plain straight-sided cups with mouth diameters ranging from 4.5 to 12cm. Those with mouths less than 6cm might be described as thumb pots. Similar cups, sometimes termed plain food vessels, have been recovered from some Wessex barrows. At Hockwold one such cup (N.B7.9) was equipped with a sausage-shaped functional handle.

The smaller biconical urns in the domestic range may be compared with some similar vessels found as accessory vessels in funerary contexts such as those at Ringwold (K.B9 & 9b) and Temple Guiting (G.B3.4c). These smaller urns may sometimes be fitted with lids like the deckeldose derivative at Hollingbourne. At Hockwold two well-made lids had been provided to serve vessels with mouth diameters of 13 and 14cm.

Despite the impediment concerning changes through time, the domestic

assemblages may be tentatively used as a control sample in which to examine the range of styles and fabrics employed by a single community. At Mildenhall a study of rims, cordons and bases, coupled with textural analyses indicates that 47% of the vessels accord with a prescribed tradition (section E4) This tradition involves the use of three types of grog temper (A, B and C) which are consistently associated with ten of the twenty-one rim forms present on the site. Decoration at Mildenhall could only be detected in 3% of the sherd population and all decoration could be attributed to the potter or potters responsible for fabric A. The use of decoration could furthermore be seen to be almost exclusively associated with urns with bevelled rims.

At Hockwold where a total of 226 biconical urn rim sherds was recovered, a predominance of applied and incised decoration could be observed in the bevelled rimmed urns. The Hockwold material is divided into four spatially distinct assemblages identified here by their find numbers, F49, F50, F66 and site A. In the same vicinity are two food vessel/urn scatters, F61-68 and F22. Both food vessel/urn sites also contained substantial quantities of beaker sherds (fig. 46).

At site F66 and site A the sherd scatters comprised 98% and 100% biconical urns. Site F66 lay within some 20 metres of the food vessel/urn site F61-68. The exclusion of food vessel/urn sherds from site F66 is therefore particularly interesting. At sites F49 and F50, 70% and 80% of the sherd scatter comprised biconical urns while the remainder comprised food vessel/urns, collared urns and beakers.

Due to the manner in which the sherd scatters were gathered and recorded it is impossible to determine their precise relationship. Sites F49 and F50 appear to have been located within some 20-30 metres of each other. The poorly provenanced assemblage provisionally termed site A was also located within the same 100 metres grid square. There is clearly a distinct possibility that these latter assemblages represent specific concentrations located by Curtiss within a single occupation site.

Two ceramic types in the Hockwold finds complex are of particular relevance to our assessment of associations.

1. Food vessel/urn associations

Food vessel/urn sherds comprised 18% of the material from site F49 and some 12% at site F50. Due to the proximity of the food vessel/urn occupation site F61-68 these sherds could be attributed to a residual scatter on the biconical urn site but due to their textural qualities a much closer relationship must be considered. The textural characteristics of the food

vessel urns and biconical urns at Hockwold were found to be completely indistinguishable. (In calculating percentages it was consequently necessary to apportion body sherds in accordance with the proportions indicated by the number of surviving food vessel/urn and biconical urn rims). Few helpful profiles survived in the two assemblages but the shoulder sherds revealed a predominance of form 3 food vessel/urns with only single examples of form 1 and 2B occurring. (Nos. N5.73, N8.93). On sherds N8.91 and N8.92 a carefully modelled cordon with bone tool incisions which had significantly been applied in imitation of biconical urn style. A second important feature of the food vessel/urns contingent was the high incidence of internally bevelled rims with incipient or type C collared profiles (N5.59, N5.63, N5.64, N5.66, N8.79, N8.81).

A case may certainly be argued at sites F49 and F50 for the contemporary use of both form 3 food vessel/urns and form 3 Inception variant biconical urns. As noted in section C2.5 the biconical urns all contain grog temper characteristic of the indigenous tradition but the improved hardness of these East Anglian urns and the presence of Inception attributes 3, 8 and 9 suggest a fundamental conversion to the precise reproduction of the intrusive style.

The food vessel/urn contingent of assemblages F49 and F50 require special attention for each reveals the nature of the form 3 response. Characteristic of the response are the form 3 profiles, false FN cordon decoration and the improved reduced fabric. The high incidence of plain forms in the small sample of rims may also be equated with the response. Characteristic of the indigenous tradition is the use of line cord, cord maggot, whipped cord, incised lines, jabbed and tubular impressions and the residual persistence of forms 1 and 2B. The frequent occurrence of incipiently collared rims with form 3 food vessel/urns suggests that the response took place within a community in which the need for mature collars was either unknown or ignored.

2. Associations within successive phase populations.

The chronological position of the Hockwold assemblages is fully discussed in section C5. It has been observed in the preceding account, however, that although four apparently distinct sherd scatters were recovered by Frank Curtiss the contemporaneous association of all sherds within each assemblage remained unproven. In two of the assemblages the possible presence of a contemporary and responsive food vessel urn contingent has been postulated. Such a contingent, if proven, seems likely to indicate an early date in the progression of the biconical urn style in this region. At this point it is necessary for us to compare the character of all four assemblages and to determine whether association with food vessel/urns or the presence or absence

of other attributes may accord with a set of variable populations which consistently alter over a postulated time trajectory.

Clarke (1978, 149-244) has lucidly demonstrated that almost all excavated assemblages represent a period of time (or time trajectory segment) in which time change is always the indeterminate factor. The four Hockwold assemblages must undoubtedly contain elements of time change and a comparison between the attribute population states for each of the sherd groups may provide some indication to show whether or not each group was responding to the same period of change. For purposes of comparison the attribute state for the neighbouring site at Mildenhall Fen Sf.B1 has also been included. The attributes selected from the sherd groups are not necessarily the most sensitive to time change but are simply those which may be observed in sufficient numbers to provide a statistically valid sample from badly fragmented material.

A comparison of the frequency of seven attributes recorded in the five assemblages is extremely informative (fig. 72). Although the four Hockwold assemblages lay in close proximity to each other the attribute populations show such variation that they are most unlikely to be contemporary. Coupled with the configuration for Mildenhall, the attribute scores for Hockwold may be arranged in a series of successive states in which a consistent, quantitative change can be observed in each attribute measured over a postulated period of time (fig. 59). The consistent trends revealing ontogenic growth in attributes A, B and C and archaic diminution in attributes D, E, F and G suggest that the five assemblages do indeed represent successive samples of occupation spaced along a time trajectory. It should be observed however that the variability and ontogenic development of four of the selected attributes are not entirely independent. The decrease in attribute B will assist the development of attribute E. Attributes C and D are similarly related although in all of these cases other optional rim and shoulder forms are also present.

An interpretation of the above succession lends some support to the proposal that form 3 food vessel/urn production was maintained during the time slices represented by assemblages F49 and F50. The diminution of strong shoulders, bevelled rims and FN decoration is matched by the quantitative decline in the food vessel/urn population in the succession represented by sites F49, F50 and Mildenhall Fen. At sites F66 and Hockwold A, rounded rims and FT decoration are in the ascendancy and the food vessel urn contingent is extinct.

The decline of FN decoration is of particular interest for it calls into question the role of a further suspect group of sherds recovered with the assemblage from F50. (Norwich Castle Museum accession 660.965). The Norwich

Castle Museum records and Frank Curtiss's MS plan record the finding of "rusticated and Windmill Hill pottery and arrowheads" at this site. (The term Windmill Hill is a mistaken identification of the biconical urn plain wares). Unfortunately a rogue element is also present in this assemblage and comprises a further unspecified quantity of beaker sherds. These sherds which belong to site F51 were accidentally mixed with F50 at Norwich Castle Museum. In the details of site F51 no mention is made of rusticated sherds which means that in an attempt to rectify this mistake we might simply apportion all FN rusticated beaker sherds to site F50 whilst restoring all other beaker fragments to F51. By this means 164 FN rusticated beaker sherds might be tentatively assigned to the F50 assemblage but the true nature of their relationship with food vessel/urn and biconical urn sherds found at this location cannot be ascertained.

The possible association of FN rusticated beaker pottery at Hockwold F50 should be compared with a similar situation at Mildenhall Fen, where a small quantity of FN rusticated beaker ware (1%) accompanied the biconical urn assemblage. At this site the grog temper recipe of the rusticated sherds was found to be similar to that employed in the manufacture of 21% of the urns. These beaker sherds at Mildenhall might perhaps be considered residual phenomena which are nevertheless ancestral members of the same grog tempering tradition. At Hockwold F49 and F50 contemporary use of rusticated beaker ware might be advocated at least during the opening stages of the 'time slice' represented by these two biconical urn assemblages. Such activities at Hockwold would accord with the common but declining use of FN decoration on biconical urns during this stage.

The association between FN biconical urns and FN rusticated beaker ware at Hockwold must be noted as possible but unproven. In other biconical urn communities however the evidence for contemporary contact is more reliably attested. In Holland the Vorstenbosch urn (L.B45) carries paired or 'nipped' FN columns which are similar to some pot beaker FN decorative schemes. (e.g. Butley, Suffolk. Clarke, 1970, fig. 1059). The same urn also carries further corroboration of contemporary Late Beaker influence in the form of barbed wire decoration applied to the body. At Vogelenzang (L.B44) barbed wire and FN decoration typical of Late Beaker styles occurred in the biconical urn settlement (Groenman-van Waateringe, 1966; Glasbergen, 1969; Louwe-Koojimans, 1974, 289 cf. 125) and at Molenaarsgraaf the inhabitants made extensive use of similar FN decoration at a stage which the excavator considers to have immediately pre-dated the introduction of Hilversum urns (Louwe-

Koojimans, 1974). At Wijchen L.B48 the biconical urn potters employed FN decorative schemes and neck and rim forms closely akin to the Vorstenbosch design.

In Britain a direct FN beaker contribution to the biconical urn series cannot be substantiated although a case for limited interaction between the producers of FN pot beakers and the food vessel/urn tradition might be advocated (see section E5). Only at Temple Guiting where Inception attributes 4 and 9 occur can any positive suggestion of FN beaker influence be cited. On urn G.B3.3 nipped FN impressions were extensively used on the neck and were apparently alternated with vertical FT zones on the body. On urn G.B3.4a similarly paired FT impressions were carefully employed on the shoulder cordon and on urn G.B3.4 FN/FT impressions presented a similar decorative effect.

The prolific use of rustication on urns of the Ardleigh type indicates that rustication was either long retained or revived by certain late urn using groups. At Ardleigh however, it is FT rather than FN decoration which is employed and no trace of the Late Beaker paired FN technique is discernable. In arranging their FT decoration Ardleigh potters show no regard for earlier FN conventions but are instead entirely motivated by the skeuomorphic imagery of the rope cordon, the arc handle and the carrying-net. (Erith & Longworth, 1960, figs. 2, 3). In south Wessex the FT decoration on the unpublished urn from Cranbury Common, Hants. shows similar concern with the handled carrying net. The sub biconical and bucket-like profiles suggests that such urns should be considered part of the Deverel-Rimbury succession from the biconical urn tradition. In the absence of adequate relative and absolute dates the point of departure cannot be precisely defined but the abandonment of traditional grog tempering, the development of improved reduction firing techniques, the use of intensified coarse siliceous temper, the adoption of sub-biconical or straightened profiles and the extinction of biconical urn attributes 1-8, 12-17b and 18 might be taken to be characteristic features of the Later Bronze Age successors of the British biconical urn.

C5.1 The relative chronology of the indigenous food vessel/urn tradition

In section B3.5 we have proposed that the form 3 food vessel/urn is generally contemporary with phase II of the Wessex Grave Series and its overlap with Wessex I. Due to the occurrence of pseudo-grooves on transitional forms it is possible to demonstrate that form 3 is primarily derived from form 2A (section B3.3).

Food vessel/urns of forms 2A and 2B both share exactly the same decorative motifs and their overall populations show that the preference or incidence of these motifs were also ranked in the same order. This evidence suggests that both forms were responding to exactly the same decorative preferences and are in all probability contemporary. Their pattern of joint response does not however correspond with form 3 and this suggests that their 'time slice' may belong to a different period of decorative change. Due to the common occurrence of 'stretched' stops in northern Britain form 2B may be seen to be a development of form 1 and due to its narrow shoulder groove or grooves form 2A can be confidently interpreted as a further derivative of the same form. The point of transition from form 1 to form 2A is conveniently vouchsafed for us by the skeuomorphic exercise performed by the potter at Luggacurran, Co. Leix. On the food vessel from this site the extinguished lugs are represented by appropriate plain panels.

In section B3.4 it has been argued that forms 1 and 2B both have close links with the Irish bowl food vessels which may be assigned to the early stages of food vessel production. There is also some negative evidence to suggest that the Irish bowl forms pre-date the emergence of the urn-sized sector of the food vessel/urn size range.

It follows from our earlier discussions, summarised here, that the development of the indigenous food vessel/urn ceramic tradition may be set out in the following evolutionary order (fig. 49).

form 1 -----
 ----- form 4 -----
 ----- form 2B -----
 ----- form 2A -----

----- form 3 -----
 (Basic hypothetical scheme for the earlier development of the British
 food vessel/urn series). fig. 55

This arrangement deals with the development of all major forms of British food vessel/urn but it does not explain their relative time trajectories as presented in fig. 11.

In theory there is no reason why all major forms should not have developed at an early stage in the time trajectory of form 1 and have remained in concurrent use. Abercromby believed this to be the case when he discussed the relative chronology of his British types 1, 2, 3, 4, 5 and 5a in 1912. The persistence of form 1 is readily established by a number of late associations. At Garton Slack barrow M153 Yorks. and Corrandrum, Co. Galway associations occurred with segmented bone beads which appear to be contemporary copies of faience ones (Simpson, 1968, 198). Such copies should occur subsequent to the faience bead horizon which Gerloff has equated with the Camerton-Snowhill phase. At Luggacurran, Co. Leix the form 2A food vessel which bore a skeuomorphic representation of form 1 stops was associated with 'two little links' of 'highly polished' bluish beads. This description Simpson has observed must undoubtedly refer to lost segmented faience beads (Simpson, 1968, 205). The persistence of stopped grooves and vestigial stopped grooves on two-trait primary series collared urns like those from Sheep Down, Hammersmith and Alton Parva (Longworth, 1961, inv. nos. 27, 63, 66) intimates similarly late survival which may probably be safely equated in general terms at least with the opening of Wessex II.

While form 1 may be demonstrated to have maintained an extended time trajectory, the point of emergence of forms 2A, 2B and 4 cannot be clearly ascertained. In section B3.2 we have demonstrated through the medium of the Dewlish food vessel/urn D.3 that form 4 may be derived directly from form 1 but the critical question so far omitted is 'when?'. In view of the frequent plainness of form 4 food vessels and their close general affinity with the profile of form 3 it seems highly likely that the emergence of both of these forms is generally contemporary. At Arbor Low (Der.22), Cross Low (Der.32) and Stanton Moor (Der.37) the form 4 food vessels were all accompanied by form 3 examples while at Towthorpe 1 (Yor.16), Aldro 87 (Yor.29) and Little Gonerby (Ln.5) the associations were with form 1 food vessels from which form 4 is known, at least in some cases, to be derived. At Towthorpe 1 the form 4 food vessel (Yor.16) carried two rows of FN impressions, the positioning of which strongly implies a stylistic contribution derived from the wide-spaced ridges of form 2B. Other associations with form 4 food vessels also accord with a late date. At Blanch C94 the form 4 food vessel Yor.127 accompanying a child cremation was contained within a secondary series collared urn. At

Riggs 17 the cord decorated food vessel Yor.83 was equipped with a lid similar to that found on the form 3 food vessel urn Fif.17 from Brackmont Mill, Leuchars, Fife (Childe & Waterson, 1942). Similar lids are also known at Hockwold, Hollingbourne, Temple Guiting, Shearplace Hill and Long Bennington where they may be linked with the arrival of the biconical urn ceramic tradition. At Acklam Wold 92 the food vessel (Yor.34) was accompanied by a V-perforated shale button of the type well known in British Late Beaker contexts and in Wilsford series Wessex graves. This burial seems unlikely to postdate the change to pinned dress fixings which Gerloff has equated with the Camerton-Snowhill phase (Gerloff, 1975, 112). This association, which is the earliest that can be found for form 4, need consequently be placed no earlier than the end of Wessex I.

C5.2 The Relative Chronology of the form 3 food vessel/urn series in southern England

Most critical to our interpretation of the biconical urn response is the opening date for the form 3 food vessel urns. Two apparently early contexts are those at Charmy Down Sm.6 and Hutton Buscel Yor.141. At Charmy Down barrow 1 a contracted inhumation, some Late Beaker sherds, a shale bead and a flat riveted knife-dagger were found in a disturbed hollow in an adjacent position to the form 3 food vessel cremation (Sm.6). The burials were enclosed within a small ring cairn (Williams, 1950). Both burials were considered by the excavator to be contemporary although it has since been observed that in ring cairns of this type the central burial area seems to have been left open for an indeterminate length of time during which further burials were usually added. At Charmy Down the proximity of the cremation to the centre of the barrow has been frequently cited as an unusual example of a food vessel burial being accorded 'preference' over the positioning of a beaker inhumation. In ring cairns however the burials in the central reservation are frequently distributed in a fairly irregular manner with preference, if any, being given perhaps to the sheltered position against the inner wall (e.g. Bedd Branwen (Lynch, 1971); Brenig 44 (Lynch et al, 1974); Brenig 51 (Lynch & Allen, 1975); Penmaenmawr burial circle 278 (Griffiths, 1960).). At Charmy Down the food vessel cremation cannot be reliably equated with the date of the inhumation neither can the order or relative importance of the two burials be ascertained. If general contemporaneity is however advocated the character of the flat riveted knife-dagger (Gerloff, no. 240A) and the barrel-shaped shale bead could certainly justify

the dating of the inhumation burial to a time equivalent to Manton and Wilsford G7 burials which are equated with the later part of the Armorico-British phase (Gerloff, 1975, 167-8).

At Hutton Buscel barrow 152 Simpson (1968, 202) has cited the Armorico-British B dagger (Gerloff, no. 128) as a terminus post quem for the form 3 food vessel (Yor. 141) and cist situated in the same mound. This interpretation seems to have been drawn from injudicious use of Greenwell's published excavation records which record the heights of various features, including the dagger and food vessel, above the old ground surfaces.

The food vessel cist is recorded as '3ft. above the natural surface' and the height of the dagger is recorded as '4ft. below the summit and 7ft. above the natural surface'. Although the dagger seemingly occupies a higher position in the mound the positions of both the dagger and the food vessel cist in relation to the estimated gradient of the mound profile means that both lay at relatively similar depths from the surface. In such positions their relationship is entirely unknown and no valid inference can be made between one and the other.

Reliable associations with form 3 food vessel/urns provide little evidence for an early beginning. At Gallibury Down the association (IW.5;IW.6) included the Armorican gloss-burnished handled vase which might perhaps be equated with the period of Armorico-British dagger contact. The worn and repaired condition of the vase however suggested that it was probably an heirloom when added to the grave (section D1.7). At Llanddyfnan (A.1; A.2) an association of forms 2A and 3 was also accompanied by a developed flat axe, a chisel and a dagger of Gerloff's Aylesford group (Gerloff, no. 107). The chiselled rain pattern on the midrib of the dagger has been tentatively equated by Gerloff with the pointille decoration of Camerton-Snowhill phase. The developed flat axe belongs to the 'Swinton Variant' of cast-flanged axes which Schmidt and Burgess (1981) have observed have been found with the Armorico-British A Series daggers in the cremation grave at Weymouth G8 and in the contracted 'Wessex' inhumation burial at West Overton G1. At Wilsford G58 however a further axe of this form was associated in a cremation grave with a dagger of the Snowhill type (Gerloff, no. 163). There is therefore no reason to assign the Llanddyfnan grave to a period earlier than Wessex II.

Further dagger associations with form 3 food vessel/urns provide evidence for their use during Wessex II and at least the overlap period with Wessex I.

At the Lawrence Barrow, Dorchester G4 a primary cremation within a

large form 3 food vessel/urn D.21 with transitional form C collar was accompanied by two daggers which have been recently examined by Gerloff. (Gerloff, 1975, nos. 145, 331). The Armorico-British C dagger and the grooved knife dagger both belong to the latter part of the Armorico-British phase. The known associations for both types suggest that they are unlikely to have been in use before the overlap period with Camerton-Snowhill production. At Bishops Waltham (H.1) and Penmaenmawr (Cn.11) the known terminus post quem for the midrib knife-daggers (Gerloff, nos. 210 & 315) seems similarly restricted.

The dagger grave excavated by Mortimer at Wetwang M294 is possibly contemporary with the Bishops Waltham burial although the floruit of ^{the} flat riveted knife-dagger (Gerloff, no. 300) spans both Wessex phases and cannot be closely defined. Like the Bishops Waltham grave the Wetwang burial comprised a combination of contracted inhumation and cremation interred in a single grave. At Sutton Veny (W.6), the 'sister' pot to the Bishops Waltham food vessel urn (H.15) was also accompanied by a contracted inhumation.

The use of the contracted burial mode in Wessex favours a date prior to the full development of the Camerton-Snowhill burial tradition which is essentially concerned with the rite of cremation. We should remember however that we cannot be sure of the progress of cremation practice outside the southern homeland of the Wessex grave series. Due to the mode of burial we might tentatively equate the form 3 food vessel/urn at Wetwang Yor. 139 with the Armorico-British phase but due to the location of this burial in northern England we may suspect that the pot may not have been made at least until the overlap with Camerton-Snowhill production in the south.

In her re-examination of the Wessex grave series Gerloff has re-affirmed ApSimon's (1954) division between the inhumation graves of Wessex I and the cremation graves of Wessex II but in doing so she has laid new stress on the process of progressive change which introduces cremation practice (ibid 92-9). During the Armorico-British phase inhumation practice occurs in 62% of the Armorico-British A dagger graves and in 86% of the Armorico-British B graves cited by Gerloff. Of the five inhumation graves with Armorico-British A daggers Gerloff has observed that three (Winterbourne Stoke G5; Wilsford G5; Towthorpe M139) were apparently in the extended position. This mode, Gerloff suggests, may represent an intrusive custom which may be compared with similar phenomena found in the northern Aunjetitz complex, the Rhone-Jura area, Alsace and Armorica. In the Armorico-British B dagger graves Gerloff has suggested that those recorded at Brough-by-Humber and in 'Dorset' (Douglas, 1793, 153) may also be extended inhumations but it should be observed that like the A

series graves the accounts concerned cannot be relied upon. If the early antiquarian accounts are accepted extended inhumation would certainly seem to be associated with Armorico-British A dagger graves and Gerloff is no doubt right in suggesting that both daggers and the burial rite may have arrived together as a Continental introduction.

While extended burial might be demonstrated to be a minor yet significant burial rite associated with Armorico-British A dagger burials it is quite clearly not associated with the form 3 food vessel/urn style. A sample of 100 form 3 food vessel/urns drawn from England, Scotland and Wales reveals that although 37% were accompanied by inhumations in 26% the posture was in some way contracted and in the remainder position was unspecified. In neither the unspecified inhumations nor in 36 further poorly recorded form 3 'burials' could any evidence of extended inhumation be observed. (At Portsdown Hill H.22 the robbed grave was however of suitable shape for such an interment).

It is appropriate at this stage that we should briefly examine the proportion of form 3 food vessel/urn inhumation burials discussed in section C6. Outwardly the number of form 3 inhumations seems too large to justify the suggestion that this particular type of food vessel/urn owes its origins to the wider effects of the form 3 biconical urn response which is essentially associated with cremation practice in lowland England. A closer examination of the distribution of form 3 food vessel/urns (fig. 51) and an analysis of burial modes reveals however that a clear spatial division exists between form 3 food vessel/urn cremation burials in southern Britain and the predomination of inhumation burials accompanied by the same ceramic form in northern Britain. Once north of the Dee-Wash divide the form 3 food vessel/urn style was embraced by the highland Early Bronze Age communities while the funerary practice associated with this ceramic type was only partially absorbed.

It may be argued from the spatial evidence summarised above that the notable proportion of inhumation burials associated with the form 3 food vessel/urn style provides no impediment to the proposal that the style is primarily associated with cremating groups in southern lowland England. In Wessex where the form 3 food vessel/urn population is notably concentrated (fig. 51) the incidence of associated inhumations concerns only four burials. At Sutton Veny (W.6) and Bishops Waltham (H.1) the contracted inhumations and their 'sister' pots may, on the strength of the Bishops Waltham knife-dagger (Gerloff, no. 310), be assigned to the later part of the Armorico-British phase when inhumation burial, perhaps promoted by the Armorico-

British A & B dagger cult was still flourishing. At the Badbury Barrow, (Shapwick G6a) the two inhumations seemed to have both concerned child burials which may have warranted special treatment. The primary burial in this barrow comprised a further form 3 food vessel/urn inverted over an adult cremation.

Whilst form 3 food vessel/urns may be seen to be essentially associated with cremation practice in Wessex their relative chronological position is yet to be confirmed. Fortunately the scheme determined by Dr. Gerloff for the dating of the Wessex dagger grave series is particularly apposite for this purpose for it reveals quite clearly that widespread cremation practice cannot be readily accommodated amongst the male elements of the Wessex Early Bronze Age funerary culture until the emergence of Armorico-British C daggers towards the end of Wessex I.

In the chronologically distinct group of Wessex graves termed by Dr. Gerloff the 'female series' other factors concerning the relative dating of a general cremating custom must be considered. In the Wilsford grave series both inhumation and cremation practice was employed. These graves of female character have been equated with the overlap period of Wessex I and II. The grave goods themselves show well established affinities with the Armorico-British male burials and minor links of chronological value only with the Camerton-Snowhill and Aldbourne graves series of Wessex II. (Gerloff, 1975, 212-214). The point of commencement for both the overlap period and the Wilsford grave series within the duration of the Armorico-British phase has never been precisely ascertained but Gerloff (*ibid*) has proposed a point at least co-eval with the circulation of Armorico-British B daggers (fig. 52). Such a date is certainly best suited to the notable number of Wilsford series inhumation burials which would be difficult to equate with the cremation graves exclusively associated with Armorico-British C daggers.

Although the emergence of form 3 food vessel/urn cremation burials may be chronologically equated with both Armorico-British dagger graves and Wilsford burials of the overlap period they cannot be consistently associated with either burial series.

In the male group of Wessex graves ceramics were only infrequently incorporated in the burials. At Penton Mewsey and the Clandon Barrow (Winterbourne Monkton G31) the pots which have been associated with the dagger graves were collared urns. At Winterbourne Stoke G5 an Armorican handled vase was employed. Only two burials may be used to demonstrate direct association between form 3 and the Wessex I male burials. At the

Lawrence Barrow (Dorchester G4) the form 3 food vessel urn with transitional collared rim (D.21) was associated with a cremation burial with an Armorico-British C dagger. At Frampton G4 a cremation burial devoid of dagger but accompanied by at least part of a Wessex shale cup was associated with the form 3 biconical urn D.B45. (At Bere Regis G46e the lost 'plain urn' found with an Armorico-British C dagger and cremation may perhaps have been of similar character). It would appear from this evidence that form 3 food vessel/urns and related form 3 biconical urns may be associated with at least the Armorico-British C dagger graves although the evidence is insufficient to suggest a firmly wedded relationship between urn and dagger.

Ceramic associations within the Wilsford grave series are equally mixed in the evidence they provide for the inception of the form 3 food vessel/urn. In the eponymous graves G7 and G50a collared urns were included in the grave goods and similar urns were also employed at Upton Lovell G2e and Hengistbury Head barrow 1. Although in section B6.5 we have argued that the collared rim itself might be a further manifestation of biconical urn response it cannot be directly associated with the introduction of the form 3 profile. In the Wilsford series grave at Hengistbury Head the collared urn did however carry a pseudo groove in jabbed technique which enabled the potter to present a form 3 shoulder whilst still acknowledging the form 2A tradition. Other ceramic associations in the Wilsford series comprise incense cups, grape cups and 'Stonehenge' cups but none of these vessels show any indication of form 3 influence.

An apparent exception to the dearth of form 3 ceramics in the Wilsford grave series is the biconical urn cremation burial from Bircham, Norfolk (N.B1). The gold-cased beads found with this burial and discussed in section C5.5 certainly suggest that the biconical urn form, either in its Inception Series format or form 3 mode, was employed on occasion with articles of the Wilsford grave series. Taylor (1980, 47) has advocated a short lifespan for the use of Wilsford goldwork but due to the loss of the Bircham beads the relative wear on these particular artifacts cannot be assessed.

From the evidence provided by the Armorico-British and Wilsford series graves we may conclude that although the form 3 food vessel/urn may be demonstrated to have been in use during the latter end of these series it was largely excluded from these particular burials.

Whilst the form 3 food vessel urns are only poorly represented in the Wessex I graves, associations with faience beads at Frampton D.7 and Llangwm Db.9-10 demonstrate that the style was clearly employed after the

faience bead horizon which has been equated by Gerloff with the onset of the Aldbourne series of female cremation burials during Wessex II. The extensive use of cremation burial during Wessex II provides the appropriate context for the deposition of form 3 food vessel/urns. The same milieu might also explain the significant but limited occurrence of the form 3 style in the Wessex I graves which we have equated with the overlap period.

Before the social groups associated with the Wessex II grave series can be linked with the form 3 style two impediments must be considered. The first impediment concerns the number of lost and poorly recorded vessels found in association with faience beads and other artifacts at Amesbury G44, Wimborne St. Giles G33a, Winterbourne Stoke G67 and G68 and Rillaton (Gerloff, *ibid* 206-7). These losses mean that a significant proportion of ceramic associations in the known sample of Wessex II graves must remain in doubt.

Impediment number two concerns our comprehension of the term 'Wessex Culture' and the means by which, in current discussions, its nature is determined by the contents of a limited number of well-furnished graves. In burials like those at Bircham N.B1, Wimborne St. Giles G6 and Winterslow G2 the addition of a very small number of beads has promoted simple cremation burials in various types of cinerary urn to significant members of the Wessex grave series. When both of these impediments are borne in mind it becomes evident that an analysis of ceramic associations in the Camerton-Snowhill and the Aldbourne series of Wessex II graves can only provide a very general indication of the actual ceramic array employed by the grave users. Such as it is the Wessex II ceramic sample indicates that both form 3 food vessel/urns and form 3 biconical urns were certainly employed in the cremation graves of the Aldbourne series. If the association and status bar comprising impediment number two were removed from the Wessex funerary 'culture' the notable body of form 3 food vessel/urn cremation burials which are known on the southern chalklands might all be appropriately attributed to barrow-building communities operating within the timespan of Wessex II.

C5.3 The relative chronology of the form 3 food vessel urn series in northern Britain

In the preceding section we observed a predomination of form 3 food vessel/urn inhumation burials north of the Dee/Wash divide. In this region 53% of the population drawn from known contexts comprised inhumation burials while the remainder concerned cremation. Of the 29 inhumation burials in the sample 23 were in some way contracted whilst 6 others were inadequately

recorded. The reference to a lengthy skeleton found with the form 3 food vessel (Der.7) at Galley Low, Brassington cannot be arguably equated with an extended burial for Bateman's (1848, 39) measurements of the femur indicate that his comments were intended to convey an indication of stature rather than posture.

In the northern region there is no evidence to suggest that contracted inhumation was widely discontinued in the manner signified by the transition to cremation practice evident in the later Wessex burials of the south. On the other hand the persistence of contracted inhumation practice alongside cremation is not readily demonstrated. At the Peakland barrow of Thirkel Low, Buxton (Der.64; Beck & Stone, 1936, no. S68) the unconfirmed association of a child burial, a plain food vessel and 'a small, plain blue glass bead' provides some evidence for the survival of inhumation practice beyond the faience horizon. At Painsthorpe barrow 118 the small form 4 vessel found by Mortimer with a child inhumation has been equated on textural grounds by Manby (1980, 353) with the Later Bronze Age ceramics of the region.

Associations with northern form 3 food vessel/urns provide a little further suggestion of late date. At Wetwang 294 (Yor.139), Rudstone E, Garrowby Wold 101 (Yor.58) and Garton Slack 75 (Yor.100) the associated bronze awls might perhaps be equated with those identified by Dr. Gerloff as a consistent feature of the Aldbourne grave series (Gerloff, ibid, 214). It should be recalled however that Simpson (1968) has indicated that the various forms of this tool can also be traced to beaker associations equivalent to Wessex I. A further association with a form 3 food vessel/urn inhumation burial is the bone dagger pommel of Hardaker group II found at Galley, Low Brassington (Der.7). Due to the inhumation association in the Manton Barrow the inception of this dagger type must be placed in the Wilsford grave series although in five further instances the group II pommel has been associated with cremation burials which might best be equated with Wessex II.

C5.4 The relative chronology of the form 3 skeuomorphic response

In our earlier review of encrusted or relief decoration in section B5.1 we observed that this phenomenon was primarily an exercise in skeuomorphic modelling performed by potters who were committed to the form 3 food vessel/urn style. The relief designs we have attributed to a skeuomorphic model comprising three types of pot-carrying device. In two varieties of the device, the ribbed cage and the hooped basket, we have proposed the use of semi-rigid basketry employing withies. The first variety appears to be a long established

British form attested in grooved ware decoration and one which may perhaps have been resurrected by renewed interest in skeuomorphy promoted by form 3 potters. Of the two remaining types the hooped basket apparently employed a combination of ropes and rigid hoops while the lattice net appears to have been composed almost entirely of ropework. The origin of the handled ropework containers we have attributed to the biconical urn community who within the Tilia-Linum regions of southern Britain were readily able to exploit their craft.

Beyond the Tilia-Linum zone the ropework devices appear to have made a notable impact on Irish and highland potters during the adoption of the form 3 style (fig. 29). The skeuomorphic response may be traced to a core area of production covering northern and eastern Ireland and the Central Scottish Lowlands. Beyond these areas a derived or secondary response may be detected amongst a few form 2A and 2B potters on the periphery of the core zone (fig. 28).

Due to the scale of the skeuomorphic response and its primary association with the form 3 food vessel/urn style it is most desirable that we should seek at least a terminus ante quem for the major northern advance.

Encrusted urn associations have been conveniently reviewed by Kavanagh (1973) who has noted a predictable but disappointing dearth of datable material. At Edmondstown, Co. Dublin a bone tube found with a form 3/4 encrusted urn has been compared by Kavanagh with a similar item found by Mortimer (1905, fig. 126) with a cremation burial at Aldro 52. The Aldro tube, which Mortimer considered might be a whistle or flute, post-dated a form 3 inhumation burial.

At Kilellan Farm, Islay (Arg.1) the associated ceramics in the domestic assemblage comprised food vessel/urns of forms 2A, 2B and 3 and a pygmy vessel which might be equated with those of the Wilsford and Aldbourne series. Six further associations with pygmy cups noted by Kavanagh (ibid) imply a significant relationship with British communities contemporary with Wessex II.

With the exception of the Kilellan find and some uncertain sand dune contexts at White Park Bay, Co. Antrim and Portstewart, Co. Derry, encrusted urns are exclusively associated either with confirmed cremation burials or with contexts in which cremation can be confidently suspected. With such consistent funerary associations these urns provide an appropriate complement to the form 3 food vessel/urn cremation burials of southern England.

Whilst encrusted urns in Ireland may be poorly endowed with helpful associations there remains, for our consideration, the relative dating potential of the parent ceramic tradition in which skeuomorphic relief decoration was

on occasion evoked. A most helpful review of Irish Early Bronze Age ceramics by Waddell (1976) has identified five varieties of encrusted urn which mostly display a notable similarity in profile to the slightly smaller and relief-free food vessel urns which in Ireland have been termed vase-urns. The vase tradition of Ireland embraces vessels of ascending size groups comprising vases, vase-urns and encrusted urns. Almost all examples of these groups have been obtained from graves and ApSimon (1969) has proposed that the range of pots available for study has been consequently skewed by a changing bias in the selection of funerary furniture exercised over a period of time.

While vases were included in burials a number of early features were preserved in the archaeological record. The shouldered traditional 'Irish vase' termed by Waddell type 1 frequently carries unambiguous late Beaker motifs which proclaim close affinities with the Irish bowl tradition. During the vase burial period, cist graves were still constructed in the custom associated with earlier inhumation burials of the Irish bowl and beaker cultures. Inhumation burial also persisted in some vase graves.

A predominant number of Irish vases comprise 'slack' rounded profiled vessels termed by Waddell type 3. Their form is somewhat reminiscent of British food vessel/urns of our form 4 but their distinctive incised herring-bone decoration distinguishes them as a specific Irish type. Waddell has proposed that these vases may represent a development of type 1. Due to their relationship to the vase-urns discussed in this section we may refer to them as form 4 vases.

When the larger members of the vase tradition, the vase-urns, were included in graves the burial mode was entirely cremation. By this time the urn was generally inverted over the cremation rather than placed alongside in the manner of the vase burials. Some vase-urn cists still adhered to the traditional rectangular plan but larger numbers seem to have devolved to polygonal types. This latter type may perhaps have been a compromise with the adoption of pit burial. Kavanagh (1973, 515) has suggested a progressing economy in cist size.

It is during the period of vase-urn burial that the effects of the British form 3 ceramic tradition must be ascertained. Unfortunately the shouldered profile characteristic of British form 3 cannot be used as an identifying trait in the Irish ceramic series because the shape of the indigenous type 1 vase had already pre-empted such a contribution.

Whereas, through such associations as pygmy cups and collared urns, the ubiquitous use of cremation in Ireland might be arguably equated with the

similar funerary practices of Wessex II, it cannot be directly attributed to British inspiration. In her recent review of Irish cremation practice Brindley (1980) has lucidly dismissed such an hypothesis by demonstrating the presence of an evolving Irish insular tradition in which cremation with Irish bowls and possibly in inverted pot beakers such as the Cluntaganny find provide appropriate precursors.

There remain two elements within the Irish funerary record which may accord some measure of the extent of the form 3 response. Relief decoration in the encrusted urns generally shows the closest knowledge of the skeuomorphic model on the shouldered and necked urns of Waddell's types 1 and 3c. The type 1 Irish encrusted urn embraces the relief-decorated members of ApSimon's Drumnakilly series. These latter urns show a greater tendency towards plainness, a feature which is notably compatible with the British form 3 food vessel/urn style (e.g. Magheraboy, Co. Antrim (ApSimon, 1969, fig. 6.2)). Such FT relief owes its closest affinities to the biconical urn tradition.

On the evidence currently available to us we may tentatively propose that the form 3 response in Ireland was very much an eclectic phenomenon in which a few minor features were adopted by a well established indigenous ceramic tradition operating outside the biconical urn sphere. In proposing a terminus post quem for this event we must consider ApSimon's (1969, 54) analogy with the form 2A food vessel urn (A.2) from Llanddyfnan, Anglesey which carries a neck profile and deep internal decoration which unites it with the Drumnakilly series. The Irish axe and dagger associations at Llanddyfnan (cited in section C5.2) suggest that the Drumnakilly style was in being during the overlap stage of Wessex I and II. The adoption of skeuomorphic relief probably took place about this time when form 2A was also transferred to Ireland to survive briefly in the Drumnakilly series (e.g. Tullywiggan, Co. Tyrone, Kavanagh, 1973, no. 75). Detailed knowledge of the skeuomorphic model was best retained during the production of shouldered and necked vase-urns. The transition to devolved skeuomorphy and innovative relief is best observed in the 'slack' shouldered vase-urns which Waddell has termed types 2, 3a and 3b. These we may term form 4 vase-urns and we may tentatively equate their development with the form 4 vases which appear to be their smaller counterparts in the hypothetical domestic array.

A second element which seems to feature in the restrained Irish response is the convention of pit burial. Brindley (1980) has observed the notable association of this custom with vase-urns and its particular preponderance in graves with encrusted urns. In 16 well-recorded pit burials associated

with encrusted urns, 9 (56%) contain form 3 examples while the remainder comprise form 4 (fig. 53). In 6 (38%) of the same sample the skeuomorphic detail appears very good whilst in a further 8 (50%) the detail shows average knowledge of container shape. Only 2 (12%) show poor detail.

By contrast in the sample of 19 well-recorded cist graves with encrusted urns the incidence of form 3 comprises only 7 (37%) while form 4 urns rise to 11 (58%). Good skeuomorphic detail amounts to only 2 (10%) while average detail amounts to 9 (47%). In the poor detail category the incidence rises from 2 (12%) in the pit burial group to 8 (42%) for cist contexts. In this category 26% in fact show no suggestion of skeuomorphic detail at all but display other innovative relief patterns.

Although the concordance between pit burial and good skeuomorphic detail on form 3 encrusted urns is by no means absolute, the contrast with traditional cist burials and form 4 urns does suggest that the two may perhaps have arrived together as an intrusive practice. Of particular interest is the most helpful survey of Irish collared urn burials compiled by Kavanagh (1976). Of the 27 cases in which the character of the collared urn graves can be established 21 (78%) were contained in simple pits while only 6 (22%) occupied cists. This notable preference provides some grounds to suspect that the inspiration for form 3 skeuomorphic relief, the consistent use of inverted cremation urns in simple pits and the use of pygmy vessels and collared urns were all introduced together into Ireland during a specific stage of cultural contact. The relatively low trait score for Irish collared urns in Longworth's scheme (ApSimon, 1969) suggests a certain degree of retardation before the necessary potters made the North Channel crossing. ApSimon (*ibid*) has observed a marked fall-off in primary traits outside Co. Antrim; a phenomenon which seems consistent with ephemeral contact.

Pygmy vessels have not actually been found in association with collared urns in Ireland but they occur with Irish encrusted urns and vase-urns in 12 instances (Brindley, 1980). ApSimon (1969) has also observed that their distribution conforms closely to that of the Irish collared urns. In British contexts the two are very commonly associated and it therefore seems most likely that their absence from the present sample of Irish collared urn graves is merely fortuitous.

The pygmy vessel horizon in Ireland is at present our most reliable guide to the date of the Irish response. In Wessex these vessels are rarely found in Wilsford series graves and they become notable only in the Aldbourne series. In Ireland they seem unlikely to have arrived via the North Channel route

until at least the opening of the later Wessex grave series. On the evidence of the pygmy cups the Irish response should be equated with the progression of the Aldbourne graves series in southern England. This date seems consistent with the modest trait scores of the Irish collared urns which may be chronologically equated with the same response.

C5.5 The relative chronological position of the Inception Series of British Biconical Urns and the form 3 response

The four known instances of associated artifacts afford very little assistance in the problem of dating the Inception Series urns. At Bere Regis barrows G81 and G46b the finely rolled corrugated bronze tubes lack Bronze Age analogies and at present their authenticity as contemporary finds seems worthy of doubt. (C3.4)

At Ramsgate (K.B1) the fine group of three bronze Picardy pins provides a useful terminus post quem in Britain for the Drakenstein urn style which clearly persists during the British Later Bronze Age. The time trajectory of this form is particularly long for the absolute dates obtained at Toterfout and Eersel also allow this style of urn to be equated with the production of biconical urns in southern England (section C5.12).

The type 1B bronze razor found with the Inception Series urn Bk.B1 at Radley may be more indicative of the upper horizon of the Inception Series. Gerloff (1975, 208) has suggested a date within the later part of the Wessex grave series for the appearance of razors. She has also noted their absence from the dagger graves, commenting that the significance of this consistent omission may be social or cultural rather than chronological.

To construct a relative chronology for the Inception Series of British biconical urns it is necessary to consider both the Supplementary urns, which we may suspect to be contemporary, and also the form 3 urns which appear to have emerged as an immediate response.

The earliest evidence for the arrival of the biconical urn tradition in Britain comes from two sources. Within the sample of known urns, the associated gold beads at Bircham, Norfolk N.B1 provide the earliest indication of date. Whether this lost urn was an Inception or Supplementary type can no longer be determined.

The spherical gold beads from Bircham have a precise analogy in the early Wessex female grave at Wilsford G7. The biconical gold-cased beads accompanying the spherical examples at Bircham also show a close affinity with further gold beads from G7. Taylor (1980, 47) has grouped the G7 beads

with goldwork from Wilsford G8, the Manton Barrow, Upton Lovell and Little Cressingham (C3.5). These Wessex and Norfolk finds she has attributed to the workshop of a master craftsman whose products seem to have been assigned to the rich Wessex graves after only a relatively short period of use. Due to the precise analogy of the Wilsford spherical bead, the Bircham biconical urn burial may be equated with the goldwork of the Wilsford series of Wessex graves. In view of the postulated overlap period however, this burial may nevertheless be no earlier than the beginning of Wessex II and we must recall that in this particular case we are unable to estimate how long the beads may have remained in use. A similar caveat applies to the form 3 biconical urn cremation burial at Frampton G4 (D.B45). The shale cup in this burial has analogies in both phases of the Wessex graves series.

The second source of early dating evidence is of inferential value only. In section B4.9 we observed that the most detailed skeuomorphs of functional horseshoe handles were to be found on a restricted series of food vessel/urns found mostly in the coastal regions of Cornwall, Devon and Dorset. These urns, we have proposed, represent a primary impact horizon when the indigenous population first responded to handled pot-carrying devices. The fact that these are form 2A urns (or at Morvah Hill a form 2A derivative) is highly significant for these appear to record an ephemeral handle response by the British population at a moment preceding the adoption of the form 3 profile. The process by which this form 2A response was eclipsed is clearly demonstrated at Morvah Hill (C.13) where groove substitution betrays the transitional effect of the form 3 biconical urn style.

The presence of incipient collared rims at Duloe (C.12), South Afflington (D.45) and Wareham (D.44) reveals the predictably immature state of the collared rim form prior to the response process discussed in section B6.1-2. The lack of associations precludes further discussion on the date of ^{the} 2A response. The consistent use of cremation with all of the impact horizon urns nevertheless suggests that this event most probably took place after the floruit of the Armorico-British daggers A and B. In this respect no evidence can be found to place this event any earlier than the known emergence of form 3 biconical urns, at a time equivalent to the opening of Wessex II.

To establish a provisional time trajectory for urns of the Inception Series it is necessary to reinforce their number with the Supplementary Series of urns. The urns of the Supplementary Series are notably biconical in profile and collectively they display a remarkably consistent incidence of horseshoe handles. The temper of Supplementary urns repeatedly exhibit

similar siliceous or shell ingredients and it is indeed the coincidence of horseshoe handles and tempering method that determines the key traits of the series.

Whilst the general characteristics of the Supplementary Series of urns provide an appropriate complement to the Inception Series the lack of residual Continental traits makes their contemporaneous dating largely a matter of presumption. The evidence provided by the burial sequence at Temple Guiting nevertheless suggests that urns both with and without the residual Continental traits were in fact in contemporary use.

C5.6 Class 1 razors

The amalgamation of the Inception and Supplementary urns may be described as the Combined Series, a term which distinguishes the intrusive biconical urn tradition from the indigenous form 3 response. The most notable association within the Combined Series is the class 1 razor. Of the six known associations with biconical urns five instances concern this series and only one instance (Stainsby Ln.B8) shows an association with an urn with form 3 characteristics. At Avebury G17 Merewether's urn (W.C1) probably denotes a further razor association within the Combined Series (section C3.1).

The occurrence of razors in southern Britain has been briefly noted by Gerloff (1975, 208) who has suggested a date within the later part of the Wessex grave series presumably for their arrival. Their absence from the male graves of Wessex I and II is undoubtedly significant for it suggests that the custom is primarily associated with a separate funerary practice. Their marked association with biconical and cordoned urns contemporary with some part of the Wessex II period has recently been confirmed by the recent exhaustive survey of Jockenhovel (1980).

As a harbinger of the razor the Combined Series biconical urn presents a very strong case. Known associations are well attested and the urns themselves may be seen to be contemporary yet separate counterparts to the collared food urns which have been associated with Wessex II graves. Surveys of British razors by Mrs Piggott (1946), Butler and Smith (1956) and Jockenhovel (1980) reveal that, with the exception of the battle axe inhumation grave at Rudston 68, the class 1 razor can be accommodated within and probably after the Wessex II period but not readily before. The exception at Rudston requires comment. The battle axe of Roe's intermediate type found with this razor may well have been an heirloom when added to the grave. Greenwell's

description of this barrow strongly suggests that this grave was the last in a series of three contracted inhumations each deposited in progressively shallower pits which were cut one into another (Greenwell, 1877, 262-6). Grave goods in the earliest grave included a flat riveted blade of the Butterwick type (Gerloff, no. 38) and a mica-schist artifact which seems to have resembled a sceptre. Gerloff (1975, 48) has observed that both of these items are well at home in Armorico-British contexts and that the dagger type may be shown to have survived for at least part of Wessex II. This dagger grave provides a terminus ante quem for the razor burial and although it does not necessarily preclude a pre-Wessex or Wessex I date it provides an indication that the third inhumation may not be as old as the battle axe type suggests and could be contemporary with Wessex II. At Ogof-yr-Esgyrn (Br.B1) a tanged razor was recovered from the cave earth bearing the biconical urn sherds and the Wilsford type gold-cased bead but the precise stratigraphic relationship of these finds is unknown.

Ceramic association with class 1 razors outside the Wessex region provides substantial support for the embodiment of razors and urns in a specific funerary culture pervading the highland zone. The ceramics concerned are cordoned urns which ApSimon (1972) has observed show close formal and decorative affinities with the biconical urns of the south (section B5 and C1.4). The association between cordoned urns and class 1 razors is well demonstrated in Scotland and Ireland by Jockenhovel's corpus which reveals 21 confirmed examples in funerary contexts. The razor types favoured in these contexts are principally those of Jockenhovel's HP and BPT groups.

In Ireland Binchy (1967) and Kavanagh (1976) have indicated that the ceramic associations of the razors are indeed exclusive to cordoned urns and are well attested in nine cases. A further instance is noted by Clarke (1935) and Piggott (1946) in the Isle of Man.

Of particular interest in Ireland is the marked association between cordoned urns and the custom of pit burial which shows consistency in 86% of the graves. Kavanagh (1976, 321) may well be right in suggesting that the high proportion of pit graves may signify the demise of cist burial during the cordoned urn period but the evidence from encrusted urn burials (discussed in section C5.4) suggests that this particular burial custom may already have arrived in Ireland along with some other characteristics of British cremating groups prior to the use of the cordoned urn. These other characteristics, (which comprise collared urns, pygmy cups, form 3 skeuomorphic relief and faience beads) all appear to have crossed the North Channel at a time co-eval

with at least part of the Aldbourne graves series (section C5.3).

The absolute dates obtained for the cordoned urn domestic assemblages at Downpatrick (Pollock & Waterman, 1964) and Stackpole Warren, Pembrokeshire (Selkirk, 1982; Darvill pers. comm.) corroborate the observations by ApSimon (1969), Kavanagh (1976) and Brindley (1980) that the use of cordoned urns must generally post-date the Primary Series of collared urns. Whilst the persistence of the Primary Series cannot be accurately ascertained the present evidence drawn from the ontogeny diagrams (figs. 9 & 12) and the radiometric dates suggests that Longworth's Series motifs G, H, K and L which form the principal elements of the cordoned urn style seem unlikely to have come into widespread use on these urns much before the close of the 15th century bc. If this evidence is accepted it is necessary to envisage a notable time lapse between the arrival of the first biconical urns in southern Britain and the use of cordoned urns and razors in northern Britain and Ireland.

From the evidence provided by the Combined Series of biconical urns in the Wessex region and the cordoned urns in northern Britain and Ireland we may propose a razor horizon in Britain which may be placed somewhere within the timespan of Wessex II but post-dating its opening stages. In southern Britain the association with an awl, amber beads and V perforated buttons at Winterslow W.C2 suggests the use of razors during the Aldbourne series of Wessex graves. In Ireland the arrival of cordoned urns and razors was achieved in sufficient time to be embodied in single-grave barrow building customs in the western counties at Pollacorragune, Co. Galway and at Carrowjames, Co. Mayo (Kavanagh, 1976, 321) yet sufficiently late to exclude Primary Series motifs from the principal elements of cordoned urn decoration. The associations with a ring-headed bone pin at Killicreen, Co. Antrim and a quoit-shaped faience bead at Harristown, Co. Waterford provide further evidence for an Irish response co-eval with some part of Wessex II. At Inchnagree, Co. Cork the combination of matrices for a razor and Wessex II style daggers on a bronze-smith's mould provide further corroboration.

The final observations on the British razor horizon concern the origins of the instrument itself. Whilst the present evidence provides some grounds to suspect that the use of the razor in Britain may perhaps have post-dated the arrival of the earliest of the Inception Series urns, the chronological scheme devised by Jockenhovel (1980) still presents the British tanged razor as the earliest in the European series. When reviewing the razor problem in 1956 Butler and Smith significantly observed that the incised geometric

panels and pointille decoration found both on Hiberno-Scottish razors and the Early Tumulus Culture razors of north Germany and Holland presented a similarity which could 'hardly be pure coincidence'.

Implicit in these observations is now the possibility that a common continental progenitor to British and Tumulus Culture razors is yet to be found. In his chronological scheme Jockenhovel places the Rudston handle-plate (HP) razor at the head of British series but in view of the reservations which have been expressed earlier in this section new emphasis should perhaps be laid upon the tanged long oval razor (TLO.1) from Winterslow G3. The associated Cornish form 3 urn (W.C2) with its deep cord-decorated internal rim bevel would appear to lie close to the transition between Cornish food vessel/urns and the earlier stages of the distinctive regional series termed Trevisker style I (ApSimon, 1972; Section C2.4). The macroscopic analysis carried out by the writer on this urn demonstrates that this very large and heavy Wiltshire find was almost undoubtedly made in Cornwall and was in all probability transported to the Wessex coast by sea (sections C2.4, C6.9).

The Winterslow urn (W.C2) is demonstrably an exceptional type of funerary receptacle and it may be argued that its contents including the razor were also atypical choices of funerary equipment. If the typological dating of this urn is accepted, the atypical choice of the Winterslow grave goods may have vouchsafed for the archaeological record an example of earliest razors some considerable time before the establishment of razor burials amongst the later urns of the cordoned type.

C5.7 The Faience Bead Horizon

A further artifact of chronological significance is the faience bead. Unlike the razor however this item cannot be essentially linked with the Combined Series. At Idmiston G1-3 the lost urn with 'horseshoe and other applied bands' (W.B23) was probably a member of this series but all other biconical urns found with faience beads are form 3 types.

The association of faience beads with form 3 biconical urns may be seen to be part of a more widespread phenomenon in which similar beads were widely dispersed amongst the food vessel/urn community. Butler and Smith (1956, 36) have convincingly argued that these beads are unlikely to have sustained an appreciable lifespan in Britain and were probably largely extinct within two or three generations.

This argument advanced in its original form more than twenty years ago was based on the premise that all faience beads found in Britain represented

a spate of bead dissemination emanating from southern and eastern Europe and primarily based upon Egyptian and east Mediterranean sources. The introduction of beads into Britain was consequently attributed to a limited number of 'shipments'.

Since the protracted and inconclusive re-appraisal of British faience beads by Stone and Thomas (1956); Newton and Renfrew (1970); McKerrell (1972) and Aspinall and Warren (1973) and due to the observations of Peek and Warren (1978), a case for disparate sources of manufacture now seems probable.

Whilst current analyses of faience beads have failed to produce cohesive conclusions three points of significance apply to the British beads.

1. The ten absolute dates for the Hungarian-Slovakian and Polish cemeteries of the Nitra-Mierzanowice Group dated at Iwanowice to 1750-1600 bc attest the production of faience beads at a period substantially earlier than the traditional dates proposed for the Egyptian 'contact'. (Coles and Harding, 1979, 101). This early east European production provides an appropriate prelude to the faience beads found in the later Unetician graves. Knowledge of faience manufacture might consequently have reached Britain with certain Unetician bronze technology.

2. Gerloff's observations on the British faience horizon remains good whatever sources of faience or faience technology are advocated. The short British time trajectory first advocated by Butler and Smith also seems applicable for in only one instance (the Simons Ground bucket urn F32) has a faience bead been recovered from a Later Bronze Age cremation context in southern England despite the plethora of excavated urns.

3. A consensus of current spectrographic analyses has identified distinct regional groups including the Scottish segmented beads which may also be distinguished by their widely spaced segments. The absence of Scottish types outside Britain and their contrast with the chemical and physical properties of the Wessex beads argues very strongly in favour of local manufacture. This case is strongly reinforced by the compatibility recently observed between the Shaugh Moor segmented beads and the zinc-bearing qualities of local china clays (Peek & Warren, 1978).

When considering the above criteria it becomes apparent that the appearance and dissemination of faience beads in Great Britain is most economically explained by the arrival of a very small number of bead artisans. The high incidence of associations between faience beads and urns of the form 3 food vessel/urn, form 3 biconical urn and Combined Series types leaves little doubt that bead wearing and bead transactions were primarily carried

out by those responsible for the establishment of the biconical urn ceramic tradition.

In viewing the restricted morphology of the British faience beads and the general dearth of evidence for their sustained manufacture we are reminded of the similarly short-lived flourish of another technical product of the Wessex Early Bronze Age. In reviewing the work of the Wessex master goldsmiths Taylor (1980) has revealed the indelible stamp left upon the archaeological record by a few individuals whose technical skills were not inherited by their successors. In the case of the faience bead horizon, the consistent ceramic evidence suggests that the dissemination of both the beads and the form 3 style was established throughout the major settled areas of both lowland and highland zones by the end of the working lifespan of the faience artisans.

C5.8 Amber

Amber is known in both Wessex I and II contexts but there is no evidence to place its exploitation during Wessex I any earlier than the overlap period with Wessex II. Amber was rarely employed in Armorico-British male graves although Gerloff records its presence at Little Cressingham where it was associated with sheet goldwork resembling the products of Dr. Taylor's Wessex mastercraftsman. In the Wilsford Series, amber is well known in various elaborate decorative modes comprising crescentic spacer-plate necklaces, gold-bound discs and V perforated buttons.

The emergence of crescentic necklaces may be equated with the Wilsford Series of graves but the persistence of the spacer-plate components in graves of the Aldbourne Series indicates that the continued use of these components may have been protracted. In the Camerton-Snowhill graves the presence of such masterpieces as the Hove and Clandon amber cups and the Hammeldon pommel attest a period of detailed technical interest in the utilisation of this material.

Problems concerning the origins, distribution and dating of Bronze Age amber products have been admirably summarised by Dr. Gerloff (1975, 214-223) who has reviewed the work of all previous researchers. "In her review Dr. Gerloff has pursued Hachmann's (1957) survey of Tumulus Culture amber products, drawing particular attention to the dating of spacer-plate beads. Hachmann revealed that the south German and Alpine spacer-plates were not generally arranged in crescentic form but were employed in collier type necklaces. At Württemberg, Oderding, and Koblach-Kadel, Gerloff observed

that the spacer-plates were bored according to the system known as 'basic pattern', an arrangement which is identical to the beads found at Wilsford G50a, Wimbourne St. Giles Q8, Beaulieu 4 and the Clanton Barrow. Comparing the Wessex spacer-plate beads with those found in Mycenaean contexts (Piggott, 1965, 137-8) Gerloff also found a further 'striking similarity'.

From her re-appraisal of Hachmann's survey Gerloff concluded that the Wessex spacer-plate beads were the ancestral European form and it was upon these that other complex-bored amber beads of the Central European Tumulus Culture were based. Gerloff tentatively proposed that the transfer of the Wessex prototypes might be assigned to the Camerton-Snowhill phase when a Swiss-Wessex connection seems well attested by the evidence of pins and ceramics (section C1.7). The Mycenaean beads of 'basic pattern' would also have been acquired as Wessex exports.

Whilst Gerloff's case for the southward passage of Wessex amber beads is entirely convincing the manner in which this movement was accomplished requires further comment. At Winterslow W.C2 and Chard Sm.B1 the notable quantities of amber beads lacked the necessary spacer-plates to complete a crescentic necklace. There is moreover no evidence to show that complete necklaces of this type were ever accessible to the users of biconical urns. Gerloff (1975, 215) has observed similar difficulties for the common but invariably incomplete collections of spacer beads which are found in graves of the Aldbourne Series. The awl associations at Winterslow and Chard suggest that both of these graves are co-eval with this series. Subsequent to the artistic climax of the Wilsford burial period it is therefore impossible to demonstrate the effective production and use of the crescentic form of necklace.

The contexts of basic pattern amber spacer beads found in the south German and Alpine region confirm the difficulties in assembling complete crescentic arrays. In the Munsingen barrow burial at Mehrstetten 6, Wurttemberg and at Oderding barrow 8, Bavaria, odd and inappropriate combinations of basic pattern spacer-beads were employed. (Hachmann, 1957; Gerloff, 1975, app. 8). The Padnal hoard (Rageth, 1976) shows a similarly ill-matched assemblage of basic spacers which collectively seem to offer more appeal as currency or status symbols rather than an artistically conceived method of adornment.

From the evidence currently available to us we may conclude that although Wessex amber beads were on two occasions included in form 3 biconical urn burials there is some reason to suspect that these were already incomplete arrays when buried. At Chard the assembling or hoarding of beads had been

carried by the users of a form 3 biconical urn at a time co-eval with or subsequent to the faience horizon. The general absence of amber beads from northerly form 3 contexts suggests that the manufacture of Wilsford type necklace components was already extinct by the time faience and the form 3 urn was introduced into the highland zone.

The spacer-beads found at the Swiss site of Padnal confirm Gerloff's earlier proposal for the southward passage of amber by means of the biconical urn community. The random nature of this Swiss bead collection and the worn condition of the spacer-plates suggests however that several generations may separate the departure of amber components from Britain and the eventual burial on a Swiss mountainside.

C5.9 The upper limit of the biconical urn style

The terminal point for the biconical urn style is a matter of current chronological and taxonomic contention. It is the question of taxonomy which is critical to this discussion and consequently it must be resolved first.

Whilst discussing the cordon position in the Inception Series of British biconical urns (section C2.2) we have observed that the British, Dutch and northern French biconical urns are consistently characterised by the high position of their shoulders. Above and below this essential element the pot profiles may vary between very broad limits whilst all conveying the same bipartite form.

During the development of the biconical urn in southern Britain a gradual change in the formal tradition enabled wider mouths to be introduced by reducing the inturned angle of the neck. This process of 'straightening' the biconical until a bucket urn of the Deverel-Rimbury ceramic complex is achieved has long been recognised by a number of writers (ApSimon, 1962; Calkin, 1964; Ellison, 1975).

In her survey of Later Bronze Age ceramics Ellison (1975) identified in Sussex; the Upper and the Lower Thames valley; Central Wessex; Dorset and the Avon/Stour area six style zones in which the Deverel-Rimbury ceramic array developed along regionally determined lines. Ellison introduced an independent classification for each region which revealed in every case the presence of some sub-biconical forms which were reminiscent of the biconical urn series. In five regions all urns concerned were tempered almost exclusively with flint filler but in Dorset 65% of the bucket urns contained either exclusive grog or flint/grog mixtures (Ellison, 1975, 211-213). Outside this region the

sub-biconical shaped urns at Echinswell, Hants. (H.B8) and at Hanborough, Oxon. (Ox.B2) also contained grog temper. These urns do not however come from cemetery contexts which are characteristic of the Deverel-Rimbury complex, and consequently they may belong to the earlier form 3 biconical tradition. When the sub-biconical forms of the six style zones are considered it would appear that the Deverel-Rimbury ceramic complex offers a natural course of progression from the flint tempered biconical urns of the Combined Series. The grog tempered bucket urns of Dorset also offer an extended range for the time trajectory of the form 3 biconical urns.

Whilst Deverel-Rimbury ceramics may be seen to embody a continuation of the biconical urn tradition other contributory styles may also be detected. The small number of bucket urns termed by Calkin (1964, 65) the 'Shoulder-Grooved Group' and by Ellison (1975) the 'Dorset type (e) bucket urn' are all tempered in the manner of the indigenous tradition. These urns intimate the final surviving stage of the form 2A food vessel/urn which is well represented in Dorset (fig. 18) where it appears to have enjoyed a protracted time trajectory.

The continuation of form 3 and Combined Series features in the Later Bronze Age ceramic repertoire raises the question of a lower limit and definition for Deverel-Rimbury complex. Barrett (1976) has argued for the emergence of Deverel-Rimbury ceramics during the thirteenth century bc whilst the graves of the Wessex II series may be seen at Earls Barton, Hove and Edmondsham to have persisted until the 12th century bc. Recently published absolute dates from cemeteries of the Deverel-Rimbury complex at Bromfield, Salop. and Kimpton, Hants. appear to reinforce Barrett's case but we should bear in mind that the number of radiocarbon dates obtained at each cemetery is proportionately small compared with the number of graves. The accuracy of the earlier dates is also generally impeded by notably high standard errors. Despite the suggestion of an overlap between Wessex II and Deverel-Rimbury there remains no convincing evidence to demonstrate direct association between these two ceramic and funeral traditions.

At South Lodge Camp the class 1 razor and barrel urn found in the lower fill of the enclosure ditch have been used by Barrett (1973, 129), Ellison (1975, 126) and Burgess (1980, 134-5) to advocate an Early Bronze Age beginning for the Deverel-Rimbury complex in the sense that the presence of the razor may signify contemporaneity with the razor burials of the biconical urns of our Combined Series. The published account of this site shows however that the locations of the razor and urn shown together in the

averaged or composite cross-section were in fact separated horizontally by some 17 metres of ditch. Like the Chalton whetstone (Barrett 1976, 309) this razor demonstrates no more than the fact that certain Wessex II artifacts survived in use until at least the early stages of Deverel-Rimbury activity. Neither this find nor the star faience bead in cremation urn F32 in the Simons Ground cemetery (Burgess, 1980, 134; White, 1982, 26-7) may be used to advance the use of Deverel-Rimbury ceramics to the point where they are actually employed in the burial tradition of the Wessex funerary culture.

When considering the time trajectory of the biconical urn series in southern Britain we are immediately obliged to consider the taxonomic distinction between these urns and those of the Deverel-Rimbury complex. The continued use of the sub-biconical form in all of Dr. Ellison's Later Bronze Age Southern British type-zones raises the option of back-dating the opening of the Deverel-Rimbury complex to include the arrival of the Inception Series urns. This proposal is not entirely new for Stanford (1982, 314, 317) has recently cited the sub-biconical shaped accessory vessel in the Crig-a-Mennis burial as possible corroborative evidence that his cremation urn P39 and its associated C14 date of 1556 ± 178 bc (BIRM 64) does indeed place the beginning of the long-lived Bromfield cemetery in the 16th century bc. Although distorted, this urn presents a profile quite acceptable to the biconical series. It is important to observe that Stanford also cites a linear arrangement of thirteen further potentially early graves in this cemetery which include one biconical urn with horseshoe handles (P15) and a sub-biconical urn (P44) with similar relief handles.

Whilst the recent excavations at Bromfield reveal that in the highland zone biconical urns may well have become the founding element in certain early flat cemeteries the evidence from Deverel-Rimbury cemeteries in southern Britain suggests that in the lowland region this was not generally the case. None of the urns of the Inception Series have been recovered from the southern flat cemeteries and with the exception of Shearplace Hill the domestic sites of the Deverel-Rimbury complex are similarly devoid of biconical urns.

In lowland Britain the context of the biconical urn is essentially linked with primary and secondary burials in round barrows, a custom which may be equated with the wider concept of the Wessex II funerary culture. On the occupation sites at Hockwold and Mildenhall Fen there is a similar lack of continuity between the grog tempered biconical urns of the Early Bronze Age and their flint tempered successors of the Later Bronze Age.

In outlining a definition for the consistent pattern of Later Bronze Age ceramic funerary and settlement organization in southern England, Barrett (1976; 1980) has advocated the use of the term 'Deverel-Rimbury complex'. This 'complex' embraces flat cemeteries which comprise a definitive element and it conveniently excludes the burial mode of the biconical urns.

In fixing the upper limit of the biconical urn series we may equate the time trajectory of these urns with their general yet infrequent persistence in the barrows of Wessex II. Subsequent to the termination of the Wessex barrow culture the life of the tradition may be traced in modified form in the sub biconical and bucket-shaped urns which Dr. Ellison has identified in her various Deverel-Rimbury style-zones of the south.

The 'straightening' of the biconical urn in accordance to the Deverel-Rimbury preference seems to be an appropriate point at which to draw the taxonomic conclusion for the series. Such straightening coincides in general with the commencement of the Deverel-Rimbury cemeteries although a few persistent biconical-shaped exceptions are known to survive. (e.g. Kimpton G8). In practice however the process of 'straightening' is most likely to have been an unperceived change in which the progress of individual potters or communities would be unco-ordinated and very probably imperceptible. Under these circumstances a terminal point based upon such criteria as degrees of shoulder angle would be most inappropriate. Such a classification would undoubtedly create an arbitrary division within a process which was no doubt viewed in stylistic terms by contemporary potters as a conservative continuum.

In defining the terminal point for the biconical urn classification we are however most fortunately assisted by a major technological change which is generally co-incident with the 'straightening' process and the beginning of the southern flat cemeteries. This change comprises the widespread adoption of flint temper, a technique otherwise restricted to the minority of urns which comprise the Combined Series. The progress of this technological change can be readily detected at Shearplace Hill where widespread adoption seems to have been achieved during the lifespan of a single round house; a process which might occupy something in the region of 30^{±1} years. (section E⁶)

In fixing the upper limit of the biconical urn some general assessment must be made of the changes in the formal and textural characteristics which were affected throughout its time trajectory. Concurrent with the establishment of the Combined Series in southern Britain there emerged a powerful

indigenous response which resulted in the production of form 3 biconical urns which were based upon traditional methods of grog-tempering and oxidised firing. At sites like Blackdyke Farm, Hockwold and Mildenhall Fen traditional tempering was virtually exclusive while in Wessex flint tempered vessels were also outnumbered by the grog-tempered urns. During this period siliceous and stone-based tempering recipes were perhaps maintained in the highland zone where this technique is well represented at domestic sites such as Shaugh Moor, and Ogof-yr-Esgyrn and in the flat cemetery at Bromfield.

With the demise of the Wessex II funerary culture the flint tempering tradition was markedly imposed in lowland Britain at a time when flat cemeteries and the Deverel-Rimbury settlement pattern was adopted. By this time horseshoe handles remained in random use but the urns concerned were generally 'straightened', harder fired, and frequently poorly finished. The handles by this time were usually fused to the shoulder cordon.

The upper limit of the biconical urn style may be equated with the adoption of Deverel-Rimbury flat cemeteries in Wessex. An event which despite the Kimpton (HAR 4316/4320) and Wilsford Shaft (NPL 74) dates cannot, with confidence, be placed before thirteenth century bc. In assigning this date we should be aware however that the biconical urn assemblage at Shaugh Moor was already showing a discernible response to the 'straightening' process when vessels P12, P13, and P14 were deposited with HAR 3358 dated 1330[±]90 bc.

C5.10 The absolute chronology of British biconical urns

Like the Wessex grave series the absolute dates for British biconical urns are lamentably sparse. The earliest dates at present available for the presence of the biconical urn tradition in Britain are largely those intimated by the form 3 food vessel/urn response. The date of 1556 [±] 178 bc (BIRM 64) for the Combined Series urn P39 at Bromfield offers notably early evidence for the commencement of a flat cemetery but its value is seriously weakened by its high standard error (Stanford, 1982). The presence of two form 3 food vessel urn cremations P52 and P53 in unmarked pits north west of the linear flat cemetery provides an intimation of a possible form 3 prelude to the main burial sequence.

Confirmatory evidence for a form 3 response during the 16th century bc is attested by urn P21 (Mt.7) from barrow 1 burial 3 at Trelystan, Powys. (Britnell, 1982). The cord arc decoration on the neck of this form 3 food vessel urn (noted in sections B4.9 and C2.4 attribute 14) attests familiarity with multiple cord handles of the style present at Thickthorn Down D.B39

The dates currently proposed for this urn are CAR 280 and CAR 281 which are derived from oak posts and burnt timber surrounding the burial. These dates, which would place urn P21 at the beginning of the 18th century bc, are stratigraphically contradicted and consequently are best attributed to the use of old timber. The P21 burial is known to post-date the primary turf mound which is dated 1590 ± 65 bc (CAR 285). The burial pit of urn P21 also cuts the upper fill of the ring-ditch which is dated by a charcoal scatter across its lip and middle fill to 1550 ± 60 bc (CAR 278). The urn was nevertheless in position before the second phase of barrow construction dated 1505 ± 70 bc (CAR 277), which, in the excavator's view, it closely anticipates. This latter date therefore provides the safest approximation to the burial of P21 which cannot be placed much earlier than the close of the 16th century bc.

The FT impressions on the shoulder of a further food vessel/urn P22 (Mt.8) found in the adjoining barrow at Trelystan could also be relevant to the form 3 response. The possibility that the FT dimples may represent close-spaced vestigial grooves and stops like those at Bedd Branwen burials C, F and J must however preclude this urn from further consideration.

A further form 3 food vessel/urn dated within the 16th century bc is that from Brenig 51. This urn (Db.13) dated 1560 ± 70 bc (HAR 801 S6) was associated with the trough dagger pommel which due to its affinities with the Manton amber pommel is likely to belong to an extended time trajectory commencing during the Wilsford grave series. (section B6.3).

At site MLN 130 at West Row Fen, Suffolk two radiocarbon dates (HAR 2516 & 2510) have been obtained for the form 3 food urn occupation. The date 1560 ± 80 bc (HAR 2516) obtained from twigs in the occupation level in the peat, offers the most reliable date for the site. This date agreeably places the form 3 transition and the A2 collar transition in the mid 16th century bc.

A useful intimation of a terminus ante quem for the introduction of the biconical urns into southern Britain is provided by the domestic Late Beaker assemblage from the class 1 henge monument at Gorsey Bigbury, Charterhouse, Cheddar, Somerset. This site lies only 1.5km WSW of the Tynings Farm barrow group which is noted for its form 3 food vessel urn and Inception Series ceramics. The well known Tynings-Toterfout affinity no doubt justifies Dr. Smith's suggestion (1956) that biconical urns were interred in this Mendip barrow group around the close of Wessex I.

At Gorsey Bigbury a series of charcoal and bone collagen samples have yielded complementary dates which place the occupation within the 17th and

18th centuries bc (ApSimon *et al* 1976). The bone collagen samples of 1716 ± 117 bc (BM - 1090) and 1656 ± 67 bc (BM - 1091) seem the most reliable and may obviate the old wood factor which may be present in 18th century bc dates obtained for charcoal samples BM 1088 and BM 1089. Further charcoal dates of 1713 ± 61 bc (BM - 1086), 1652 ± 71 bc (BM - 1087) confirm the bone collagen evidence and accord well with ApSimon's (*ibid*) calculation, based on pottery discard rates for an occupation spanning about 100 years.

Two kilometres north of the Tynings barrow group a further Late Beaker domestic assemblage found at Bos Swallet shows a strikingly close resemblance to the Gorsey Bigbury ceramic series. (ApSimon *et al*, 1976; also Taylor & ApSimon, 1964, for excavation report). This site would appear to have been occupied at the same time as Gorsey Bigbury.

The domestic assemblages recovered from Gorsey Bigbury and Bos Swallet appear to represent contemporary occupation during the 17th century bc at locations which, if occupied for another 100 radiocarbon years, should have brought these communities into intimate contact with those engaged in barrow construction at the Tyings Farm site. Although the sherd sample at both of these domestic sites is random and valid, it is undoubtedly significant that no plain wares suggestive of proto-biconical urn forms were present. Although a weak but possible case for social, ethnic or cultural exclusion might be invoked, the collective evidence from these three adjacent sites strongly suggests that biconical urns were unknown in the Late Beaker Period in this region at least until some time during the 16th century bc.

Dates relevant to the sustained trajectory of the biconical urn tradition during the Wessex II phase are not readily forthcoming but two sources provide an acceptable chronological position for the latter part of production.

In section C5.6 we observed a consistent association between biconical urns and the use of class 1 razors as grave goods. In the highland zone of Britain and in eastern Ireland we observed that the same burial practice was promoted by the users of cordoned urns who appeared to have based their ceramic style on collared urn and biconical components. The dates 1375 ± 75 bc (UB 474) and 1315 ± 80 bc (UB 473) for Downpatrick and the date 1395 ± 65 bc for comparable sherds at Stackpole Warren, Pems. at present place this particular variant of the form 3 response at least a century later than our proposed Inception point. The date of 1386 ± 58 bc (BM-402) obtained for urn Dv.B2 from Upton Pyne marks the use of cord-decorated biconical urns at a time co-eval with the later part of Longworth's Primary Series.

At Shaugh Moor (Dv.B1) a series of three dates obtained for specific ceramic contexts in enclosure 15 provide a useful terminus post quem for the latter end of the biconical urn series (Tomalin, 1982, 228-237). The urns on this site were undoubtedly in use during general site activity dated 1330 ± 80 bc (HAR 3358) and the date of 1480 ± 90 bc (HAR 2474) for the adjacent but sherd-free house 15 could reasonably back-date such use by a further century. The same local spilitic ware was still in use about 1150 bc when the last house and the enclosure wall appear to have been constructed. About this time a change to coarser tempering ingredients may be detected but any evidence of formal change is precluded by the poor condition of the sherds. The same impediment also applies to evidence for the survival of the biconical profile after 1330 ± 80 bc (HAR 3358).

C5.11 The absolute chronology of the earlier Continental biconical urns

Absolute dates obtained from European contexts suggest the manufacture of biconical-shaped urns over a period of some 700 radiocarbon years. These dates refer to a widely dispersed distribution extending from the Western Alps and the Golfe du Lion to the French Atlantic and Channel coast. A distinct region is also discernible in the Low Countries. In the Alpine zone, the Rhone region and in Brittany the earliest dates so far obtained suggest broadly contemporary production in the 20th and 19th centuries bc.

Early dates for the Alpine zone are those obtained from the western perimeter of the Alpine Massif in the French Jura. At Clairvaux-les-Lacs the lakeside settlement of La Motte aux Magnins has yielded a stratified sequence of deposits punctuated by intermittent lacustrine inundations (Thevenot & Strahm, 1976; Petrequin, 1978). The earliest biconical urns here are plain high-shouldered types dated 1930 ± 110 bc (GIF 1299) and 1850 ± 110 bc (GIF 1844). They are followed in bed 1 by a substantial assemblage of biconical urns with paired neck ribs, shoulder cordons and tongue lugs. A further variety bears tongue lugs and FN impressions marking the outline of running swag or multiple arc handles. Associated artifacts in this bed are handled carinated cups of the Rouseaux type and a flanged axe also of the Rouseaux type. Other finds comprise bronze awls and flat daggers of Gallay's Lussan and curved blade types (Gallay, 1981, nos. 165 and 169). The radiocarbon date of 1710 ± 110 bc (GIF 2297) would appear to represent an early stage of the bed 1 occupation. Also recovered from this assemblage were two faience beads of the quoit and spacer types which Petrequin (1978) has recognised as indications of a sustained period of

occupation.

Further dates for the Alpine group are those obtained with cordoned biconical urns at the Petit-Chasseur megalithic cemetery at Sion in the Swiss Upper Rhone (Gallay, 1974; Pape, 1979). Destruction of the megalithic structures seems to have begun during the 20th century bc when cordoned biconical urns of the Rhone type were interred in pits and minor cists, which were dug into the existing monuments. Gallay has proposed a date of c 1950 bc for the beginning of this phase; an approximation which is now appended by the dates of 1970 ± 60 bc (B 865) and 1750 ± 100 bc (B 2593) (Pape, 1979).

In Languedoc a substantial population of low shouldered biconical urns has been surveyed by Guilaine (1972). This region forms a western extension of Rhone culture ceramics. Cave habitation is common amongst these communities who were able to extend their territory from the Rhone valley and Mediterranean plain into the Karst landscape of the Cevennes and the Jura. The date of 1940 ± 150 bc (Gsy 38) obtained for the cave occupation at Aven du Gendarme (Ariège) corroborates the Clairvaux and Sion evidence for the production of cordoned biconical urns in the 19/20th century bc. At the Merindol site at Mauffrines (Vaucluse) a high shouldered urn with strong northern French and British affinities has been reported by Gagniere (1959). This urn may perhaps be equated with a feed-back of ceramic traits during a later period of biconical urn production. Such an event could be contemporaneous with the expansion of a Channel trade sphere during the development of Wessex II (section C6.8).

In northern and western France the archaeological record of early biconical urn production is extremely sparse. In the Karst region of the Dordogne, caves and rock-shelters such as Grotte du Noyer and Pêche Merle have yielded sherds of cordoned, globose and biconical urns which may be generally assigned to Bronze Ancien and Bronze Moyen. Further west, low-shouldered urns, some bearing plain horseshoe handles have been found with cord-decorated sherds of Artenacien character at Portes-des-Barques on the Ile d'Oléron, Charente Maritime (Gomez, 1980). At the occupation site of Petit Rocher at Bretignolles (Vendée) plain biconical shaped urns with simple high pinched shoulder cordons have been found with a domestic bell beaker assemblage which has yielded a notably early date of 2340 ± 130 bc (GIF 3761-4290) (L'Helgouach, 1977). The date of 1900 ± 130 bc obtained at Talmont St. Hilaire records an association between similar plain urns and bell beaker sherds (L'Helgouach, 1972, Pape, 1979). The biconical urn form was long established in this region and its FT high-shoulder cordoned

form persists as Gomez type 16 in the ceramic repertoire of the Duffaits Group. At Grotte des Duffaits (Charente) a date of 1210 ± 100 bc (GIF 2263) represents the deposition of Duffaits ceramics (Gomez ibid). From the similar cultural assemblage in bed 8 at Grotte du Queroy a complementary date of 1090 ± 110 bc (GIF 2739) has been obtained. Associated with this assemblage was a fragment of a low-shouldered biconical urn bearing a plain horseshoe handle FB.18b; (Gomez, 1978, 402).

In the Armorican peninsular a small number of biconical urns covering Bronze Ancien to Bronze Moyen have been recently surveyed by Briard (1981). An additional urn recovered from an isolated cremation burial at the megalithic alignment at St. Just is of particular importance. This urn displays a plain neck cordon and a low shoulder reminiscent of the Rhodanian urns. It is also equipped with four plain horseshoe handles. The handles are applied at two different levels, a practice otherwise unknown in northern France but one which is commonly used for the siting of large tongue lugs on Rhodanian urns such as those from Pouzilhac, Gard (FB32.1; FB32.2). The plain horseshoe handles are modelled in high relief, a style which is similarly exhibited at Port-des-Barques FB31 and Grotte du Queroy FB18b.

The absolute date of 1990 ± 80 bc (GIF 5235) for the St. Just cremation burial suggests that a number of characteristics similar to the Rhodanian style of biconical urns were already being produced in Armorica during the very early part of the second millenium bc. The handles however are likely to stem from another source. The horseshoe handles of northern France cannot be matched in the Rhone culture although some arched cordons and sausage shaped lugs found at Grotte du Salpetre (FB19.1 & 2) and the arc-handled urn from Grotte des Italiens (FB18) demonstrate that these features were not entirely unknown in the south. The association between high relief horseshoe-handled urns and cord impressed sherds of Artenacien character found at Port-des-Barques suggests that this distinctive handle skeuomorph was already in use during the earliest stages of biconical urn production. A plain high relief horseshoe handle recovered from bed 6 at Grotte des Sarrasins, Isère (Bocquet, 1976) provides evidence of a similar ceramic tradition at the end of a Chalcolithic sequence in the Jura. The overlying deposit contained a typical incised Alpine deckeldose.

The evidence from St. Just, Port-des-Barques and Grotte des Sarrasins suggests that the horseshoe handled urn was already established in Alpine France, the Centre-Ouest and the Armorican peninsula, in the opening stages of the ⁿsecond millenium _λ bc. The value of the St. Just date is conveniently

reinforced by the FT cordoned pot sherds from the primary barrow construction phase at St. Jude 2, Bourbriac which are dated by three complementary radiocarbon dates around 1860 bc.

C5.12 The absolute chronology of the later Continental biconical urns

In the Rhone-Alpine province and Languedoc the biconical urn with skeuomorphic cordons maintained a prolonged timespan. At Grotte des Chataigniers (Pyrenees-Occidentales) sherds with cordoned decoration of skeuomorphic style were recovered from a series of inhumations which have yielded a single date of 1480 ± 120 bc (GIF 1275). The most reliable series of dates comes from the Swiss Alpine occupation site at Padnal, Savognin. This site conforms to the Alpine and South German hill-top settlements which have been noted for their cordoned ceramics (Hundt, 1957; Gerloff, 1975).

The Padnal occupation reveals remarkable continuity in the maintenance of the Rhone-Alpine coarse ceramics style. The earliest C14 assays obtained from this site relate to horizon C and C/D and comprise a cohesive group of five dates ranging from 1390 ± 90 bc (B 2618) to 1150 ± 90 bc (B 2617). The urn sherds from these contexts show concave necks with slightly everted rims FT decoration is commonly applied to the outer lip of the rim and sometimes directly to the high positioned shoulder. Shoulders are commonly decorated with applied FT cordons. One such cordon adjoins the top of a fragmentary plain applied horseshoe handle. Boss lugs, tongue lugs and mammilated lugs similar to those of the Wessex biconical urns also occur. A further feature is a sinuous FT cordoned arcade which occurs on the neck of several vessels. Associated items are a Rhodian trefoil-headed pin and a whetstone of the Wessex type. The hoard of 140 amber beads, including two 'basic' bored spacer-plates of the Wessex type, is probably also co-eval with this phase.

A further series of seven C14 samples obtained from horizons B/C and B indicate the continued use of plain and FT cordoned urns within the range 1110 ± 90 bc (B 2615) to 920 ± 80 bc (B 2410).

In the Low Countries and on the northern French plain there is no dated evidence for the use of the biconical urn style of coarse ceramics until the closing stages of Bronze Moyen. The earliest absolute evidence for biconical urn production in this region rests on few radiocarbon dates.

In Holland Glasbergen's unilinear progression from Hilversum urn to the sub-biconical Drakenstein form has encountered some difficulties when applied to an absolute chronological framework. In a review of the radiocarbon evidence Lanting and Mook (1977, 117-9) have suggested a substantial period

of co-existence for the two ceramic forms. The timespan of the Hilversum urns appears in general to be comparable with the British biconical urns and shows a floruit ranging from the later 16th century to the mid 15th century bc and possibly later. The dates available for these urns are regrettably few.

At the settlement site at Velsen in the Hague the Hilversum urn material is conveniently dated by GrN 5973 at 1500 ± 35 bc and is terminated at 1460 ± 35 bc (GrN 5972). This date for Hilversum urn production is closely corroborated by the well-known cord decorated urn LB42.1 from Toterfout 1B which has been dated at 1500 ± 100 bc (GrN 050) and is confirmed by a more recently processed sample dated 1470 ± 45 (GrN 1828). At Vogelenzang some sherds of Hilversum style found in a pit dated 1190 ± 70 bc (GrN2997) have been claimed by Lanting and Mook (*ibid*) as a terminus ante quem for the continuation of the style at the end of the 12th century bc but on the present evidence the re-deposition of derived sherds at this late date seems more likely. At the settlement sites at Dodewaard (LB13) and Zijderveld (LB49) the sherd yields examined by the writer in 1978 revealed only the presence of hard, reduced, poorly finished sub-biconical urns of the Drakenstein/Laren style. The exclusion of cord decoration, bevelled rims and smooth finished coarse sherds from both of these sites and the evidence provided by the single radiocarbon date from Zijderveld imply that the Hilversum style may already have become extinct before the close of the 15th century bc. (I am most grateful to Dr. R.S. Hulst for providing me with the facilities and opportunity to examine the material from these sites prior to publication).

At Toterfout 1B the primary Hilversum urn cremation burial (LB42.1) was contained within a pit situated beneath a four-poster structure at the centre of the mound. The date of 1600 ± 50 bc (GrN 1693) obtained for a similar four-post structure in tumulus 14 in the same barrow cemetery is a reminder that the funerary customs associated with the Hilversum urn may already have been established a century earlier.

The 16th century bc is an appropriate time in which to place the overlap between the earliest Hilversum urns and the Barbed Wire Beakers which according to the radiocarbon evidence do not seem to have survived much after 1500 bc. The latest dates for Barbed Wire Beakers are those from Annertol, Drenthe 1500 ± 45 bc (GrN 6753C) and Hanborough, Oxon. 1490 ± 60 bc and 1510 ± 45 bc (GrN 1866 & 1685). Contact between Hilversum and Barbed Wire Beaker traditions is attested by the Vorstenbosch urn (LB45) which probably also belongs to the 16th century bc. At Vogelenzang, FN and barbed wire decoration on Hilversum sherds (LB44) suggests production at least during the

early 15th century bc which is probably the time at which the segmented faience bead arrived on the site.

The lower limit of the Hilversum style on the absolute timescale still requires clarification. At the Molenaarsgraaf settlement, Louwe Koojimans (1974) has discerned a preliminary change towards the Hilversum style during the latest phase of Barbed Wire Beaker occupation. The single date of 1690 ± 30 bc (GrN 5176) obtained for a context with cordoned and BW sherds at this site seems too early for the transition and is inadmissible without corroborative dates. At present the initial development of the Hilversum biconical urn can be placed no earlier than sometime during the 16th century bc.

The absolute dates obtained at three sites in south Holland provide some evidence for an early date for the development of the Drakenstein urn a possibility intimated by Dr. Smith in 1956. At Toterfout 1B the Drakenstein urn from the peripheral secondary grave has yielded a date of 1630 ± 130 bc (GrN 1053). At the Dodewaard aisled house a principal roof post has been dated at 1480 ± 35 bc (GrN 5935). Due to the high standard error at Toterfout 1B and the use of a principal timber at Dodewaard, some caution is required in evaluating these results. At Eersel however the charcoal from the primary grave, dated 1510 ± 35 bc (GrN 5350), seems to confirm the use of the Drakenstein urn at the opening of the 15th century bc.

One explanation of the early dates for the Drakenstein urn might involve its use as the principal coarse-ware component in the primary stages of the Dutch biconical urn production. The tempering of both Hilversum and Drakenstein urns is based on the same siliceous ingredients and the notable distinction between the two forms is really one of style. Hilversum urns generally display greater care in their external decoration and finish; a distinction which may well arise from social requirements versus function and expediency. The early abandonment of better finished urns within the domestic repertoire would readily explain the absence of the transitional forms which would be necessary to provide the unilinear link in a devolutionary series. The relative scarcity of handles and lugs in the Dutch urns noted by Dr. Smith in 1961 could certainly be explained by prompt discarding of the more elaborate vessels during the late 16th century bc.

In northern France the biconical urns in the Eramecourt group lack a precise chronological setting. At Pontavert and Bucy-le-Long in the valley of the Aisne primary cremation burials in biconical urns sited within the concentric double ring ditches have been equated by Blanchet (1976) with the date of 1370 ± 120 bc (Gsy 91) which was obtained for the similar ring ditch,

devoid of pottery at Cys-la-Commune. (Section C1.8). The placing of these urns in the 14th century bc is entirely reasonable, for none of the urns so far attributed to the Eramécourt group show the low shoulder and the high relief handle mouldings which are known at St. Just and on the earlier French urns of the Centre-Ouest and the south.

C6 DISCUSSION AND INTERPRETATION

In this study we have recognised the food urn ceramic tradition as an essential unifying element linking the Early Bronze Age communities in most of the major settled areas of the British Isles.

The food urn tradition is particularly well represented in Ireland and southern Scotland where its origins may lie in Later Neolithic and Early-Middle Beaker ceramics.

C6.1 The origin of the food urn tradition

The precise nature of the food urn genesis is still inadequately understood. In the region which has been termed by Herity and Eogan (1977) the Irish-Scottish Province, bowl food vessels provide an acceptable source from which vase food vessels/urns and form 1 food vessel/urns may perhaps be derived.

The importance of the strong beaker element in the bowl food vessel genesis has been expressed by Evans (1941), Raftery (1951), ApSimon (1959 & 1969), Clarke (1970), Waddell (1976) and Simpson (1979). Waddell (1976) has recently reviewed the nature of the beaker contribution noting that the cist grave inhumations found with bowl food vessels comprise the Irish version of the Einzelgrab phenomenon. In a further review Simpson (1979) has reiterated ApSimon's view of a major southern British Late Beaker contribution which might ultimately be traced back to contact with the Veluwe.

A further element in the bowl food vessel/urn style has been tentatively traced to some Late Neolithic ceramics. In the north of Ireland, ApSimon observed in 1969 that the variant of Sandhills ware known as the Goodland bowl (Case, 1961) could be favourably compared with bowl food vessels such as those from Duncragaig and Kilmartin (BAP, 2, nos. 237, 239). Like Kilhoyle pots and some plain wares from Ballynagilly these vessels flourish in the early 2nd millennium bc when contact with bowl food vessels seems plausible. At the sub-megalithic site at Cahirguillamore, Co. Limerick, Goodland bowls were found in contact with coarse beaker wares in a multiple inhumation context. The last inhumation was interred in crouched posture (Hunt, 1967; ApSimon, 1969; Herity and Eogan, 1977).

A further potential antecedent has been proposed by Longworth (1968) amongst some Late Neolithic wares found in the highland zone of northern England. These proposals originally based on the food vessel affinities of the Late Neolithic bowl fragments found at Ford, Northumberland have since been developed by Miket and Burgess (1976) and Gibson (1978). The absolute dates recorded

in the interim discussion of the Meldon Bridge bowls suggest that such an ancestry might be traced well into the 3rd millenium bc.

Goodland bowls have also provided an attractive but unsubstantiated precursor for the form 1 food vessel/urn. At Rath, Co. Wicklow (Prendergast, 1979; Case, 1961), ApSimon (ibid) has observed, with reservation, the presence of possible prototype form 1 food vessel stops on the shoulders of Late Neolithic cord-impressed bowls. At present however the origin of the form 1 food vessel/urn seems best placed somewhere within the Irish-Scottish Province, where the earliest known bowl food vessel/urns may be generally equated with Case and Harrison's Late Beaker Phase.

C6.2 The distribution of food vessel/urn ceramics

Following the genesis of the food vessel/urn tradition within the Irish-Scottish Province there arises a point at which this ceramic form was extended to southern Britain. In section C5.1 we observed that form 1 may be placed at the head of the English series and that throughout its long timespan we may demonstrate the subsequent emergence of first, forms 2A/2B; secondly of form 3; and finally form 4 (fig. 11).

The decorative motifs of forms 2A and 2B suggest that the potters concerned with this second phase of production may have responded to a common range of geometric designs which were generally employed at a time preceding the main output of 6-4 trait collared urns. The spate of form 2A/2B production may therefore be fitted, with caution, into the lenticular ontogeny timescale. (fig. 12).

Although food vessel/urns of forms 2A and 2B drew upon a commonly accepted stock of motifs the spatial distribution of the two forms is significantly different. Form 2B is well represented in northern Britain where notable concentrations may be observed in the Peak, the Wolds, the Scottish east coast and the Central Lowlands. In Wales, Cornwall and South Dorset a sparse incidence of the form occurs. In Wessex a notable dearth appears on the Wiltshire chalklands where common contemporary Late Beaker activity occurs. In all of these regions the 2B distribution conforms very closely to the spatial distribution of form 1 (figs. 17, 19).

In contrast the distribution of form 2A food vessel/urns shows only a modest distribution in the central and eastern Scottish regions and it is noticeably deficient in the Yorkshire Wolds. Of particular interest is the relatively high frequency of finds on the chalklands of Dorset, Wiltshire and the Isle of Wight (fig. 18).

Although the distribution maps presented in figs. 17-19 provide helpful and comparative details, a number of major impediments prevent their use as absolute parameters of the food vessel/urn population. In the first place it has not been possible to confirm the formal characteristic of every known food vessel/urn and there consequently occur a number of omissions which are particularly detectable in the Cambridge area (compare Fox, 1943, pl.IV). The second impediment arises from the differential survival patterns of the round barrows which are heavily skewed in favour of areas of long established highland and chalkland pasture. Due to their comparatively late discovery and their levelled condition, the ring-ditch concentrations on the Midland valley gravels have failed to reveal an adequate measure of their associated ceramics. Finally the sampling method is heavily skewed by the regional predilections of certain 18th and 19th Century barrow-diggers. This last effect, which we might term the 'Mortimer-Cunnington phenomenon', has been recently reproduced by scientific means in north west Wales as a result of the extensive barrow excavations carried out by Frances Lynch.

To observe major trends in the overall food urn population some of the impeding biases may be smoothed by the use of regional aggregates. In fig. 54 the aggregates for the three major geographic regions reveal the similar spatial trends of forms 1 and 2B. A comparison of the regional frequencies of forms 2A and 3 shows that these two food urn types are bounded by a further set of shared spatial constraints which may be contrasted with forms 1 and 2B (fig. 54).

Although no readily testable explanation can be offered for the spatial configuration of form 2A, its close conformity with the distribution of form 3 does suggest that the genesis of the latter may be based upon the transformation of the former. In the case of the form 3 food urn strong evidence has been advanced in sections B4.6-8 for a Wessex genesis resulting from localised interaction with Inception Series biconical urns during the 16th - 15th century bc. From the biased sample available to us the distribution of form 3 shown in fig. 51 appears to represent a diffusion mosaic in which a core area centred on the Dorset and Wiltshire chalklands contributed to northward expansion or dissemination into the homeland territory of forms 1 and 2B in northern Britain.

If the distribution of the form 2A food vessel/urn is similar to that of form 3 it may be appropriate to seek a suitable source of regional genesis in the south. The outstanding candidate is the south Dorset chalkland which is distinguished by a marked concentration of form 2A finds. The same region

has also yielded examples of the form 1 series on which the 2A form is known to be based. Although the high food vessel yield of this region might, in part, be attributed to the Warne-Durden-Shipp version of the 'Mortimer-Cunnington phenomenon', the dearth of similar ceramics in Cunnington and Hoare's control sample from adjoining Wiltshire suggests that the high Dorset yield does indeed reflect a distinct core area. A comparison of the domestic sherd yields from the Late Beaker Period levels at Durrington Walls and Mount Pleasant reveals a similar contrast.

As a food vessel/urn core area or cultural enclave of the Late Beaker Period, the Dorset region shows some promise. The cup and ring marked stones scarcely known outside the highland food vessel/urn zone but found at Shapwick G6a, on two slabs at Winterbourne Came G18b and possibly on a cover slab at Weymouth G34, accord with a strong cultural contribution from the highland zone community (Warne, 1866, Grinsell, 1959, 74-5). The form 2B food vessel/urns found at Hilton G2 (D.41), Winterbourne St. Martin G5b (D.47) and Bincombe G60c (D.28) are a further reminder of specific cultural ties with the North. Ashbee (1958) has recorded a similar cluster of cup mark features in Cornwall where a further concentration of food vessel/urn ceramics may be observed.

C6.3 Ceramic data and material culture

In discussing the spatial and diachronous dispersal of the food urn ceramic tradition we have so far avoided all reference to formal and stylistic conformity and the means by which it may be either maintained or changed. In the preceding discussion we have also alluded to the generation of new ceramic forms or styles by means of 'interaction' with other taxonomically assembled groups and we have proposed the transmission or dispersal of new forms by means of a diffusion process. Whilst such terms may be used implicitly to describe the agglomeration or dispersal of physical traits in a hypothetical taxonomic scheme the same cannot be applied to the cultural systems and exchange mechanisms upon which the production of Bronze Age pottery is essentially based.

The conflict between implicit and explicit interpretation of ceramic data has been discussed at considerable length during the last two decades. The dichotomy between old world and new world approaches to this problem has been recently summarised by Howard (1981). In the wake of the analytical and interpretive work of Anna Sheppard, the comments of George M. Foster (1966) encompass some areas of major and relevant concern in American ceramic studies of the 1960's. "In examining the voluminous ethnographical literature

describing the manufacture of pottery", Foster commented, "one notes with surprise how little attention has been paid to the social, cultural and economic settings in which the work is done. I am interested particularly", he commented, "in two questions: What status is assigned to potters by their society and how do they themselves look upon their position and work in respect to non-potters . . . (Secondly) I look for answers to the questions of what makes for stability or promotes changes in style and what factors are involved in the dying-out of a technique or form."

This difficulty in reconciling the physical evidence with broader questions concerning what Foster terms the 'sociology of pottery' has more recently been discussed from an ethnoarchaeological standpoint by Stanislawski (1979). The latter succinctly observes that 'archaeologists often assume that pots can multiply, types are born and die, and ceramic traditions, like lineages, can be classified into "families" or clans. We also assume that particular ceramic types, wares or schools of design are tightly linked to other aspects of culture as if they were part of a family. These assumptions may occasionally be true in a general sense, but our goal . . . should be to step outside these assumptions . . . to learn those technological ideas, behaviours, and end results of members of other ongoing traditional societies; and then to base our statements concerning the relationships among artifacts such as pottery and other parts of the Institutions of Culture, on those beliefs actions and patterns of material remains which are actually observed.' Whilst American fieldworkers such as Foster and Stanislawski have questioned the breadth of the ceramic data base, others have questioned its value. The pertinent questions in this field are those posed by Binford (1962) when asserting that 'material culture can and does represent the structure of the total cultural system.' Binford's more recent amplification of this statement reveals that whereas such representation may indeed occur, the behavioural patterns which are responsible for the deposition of the material evidence may also be effected by the environmental stimuli and constraints. To equate the archaeological record directly with the cultural repertoire of culture bearers is, Binford comments, 'to ignore the reality of their adaptive behaviour and the advantages which a culturally based form of adaptation offers'. (Binford, 1973). Although these remarks are not specifically concerned with ceramics Binford's comments are a salutary reminder that the archaeological record when presented as pot and sherd assemblages embodies more than simple functional and cultural indices. Inherent in the production and dissemination of pottery there is a rogue element which, according to Binford's thesis, we should recognise as the adaptive behaviour of the producers and consumers.

C6.4 Variables and values: the Clarke system

In distilling the 'cultural content' from the British Early Bronze Age ceramic record we are afforded very few guides. In the ensuing discussion on Dr. Longworth's 'Canticle for Collared Urns' (1979) one commentator described the formal and decorative traits of this well known ceramic series as the 'overt cultural signals exchanged between various pot-making groups in Bronze Age Britain.' The meaning of these signals was unfortunately undisclosed.

The guides we are obliged to seek in our interpretive quest are to be found in disparate scientific disciplines. In the well-worked field of ceramic taxonomy Clarke (1970) has defined four major variable qualities which are suitable for analysis and which may display regional change with the passing of time.

Major variables used for the classification of beakers (Clarke, 1970)

1. Shape
2. Decoration
3. Style (position of decoration)
4. Paste and firing

When ranking the value of these four major variables Clarke used intuitive reasoning. He consequently dismissed the value of variable no. 4 and gave weighted preference to variable no. 2 which in his opinion offered the most likely and sensitive measure of response to 'human group traditions'. Clarke's multivariate analysis and interpretation of data assembled within these three fields is now apocryphal but his recognition, without weighting, of the four major variables remains applicable to our needs.

C6.5 Ability levels and motor habit patterns

The second guide to the interpretation of our data is to be found in that area of human behavioural and cognitive response which is largely governed by motor habit patterns. Both Foster (1948) and Arnold (1981) have drawn attention to the significance of these unconscious neuro-muscular patterns which are usually acquired during childhood and which, once developed, are particularly resistant to change. Arnold (*ibid*) has argued that such muscular behavioural patterns are cultural just as attitudes and values are cultural. These patterns, including those employed for the

fashioning of pottery, are acquired by learning and imitation. Where native language is verbally rich, Arnold has argued that verbal instruction and ceramic-forming motions 'become unconscious motor habits which (may) differ from motor habits used by potters speaking other languages'.

With regard to the British food urn tradition, the motor habit theory has particular relevance. Once implanted, forming-habits are resistant to change; a phenomenon that is clearly apposite to the repetitive production and the proposed time trajectory of form 1, 2A and 2B. Motor-habit theory is also relevant to the geometric cord impressed and incised motifs employed in the food urn tradition. Longworth (1961) defined fifteen basic motif types (A-O) for the collared variety of food urn pottery, a classification which also remains suited to the decorative array of the tradition as a whole.

As a guide to the intellectual development and visual perception of food urn potters the motif range is extremely revealing. Booth (1974) has analysed the developmental stages of pattern-forming amongst children in Argentina and Australia when left to create without prompt or stimuli. In pattern-forming Booth observes that lines are usually first discovered and are followed by dots. Employing these two techniques the products of each developing artist will pass through a manifestation order comprising:-

1. Line repetition
2. Rotational lines around a central point
3. Reflective designs in which forms are repeated above and below or on either side of a central line
4. Reflective designs in which forms are repeated either side of a diagonal line.

Both Arnheim (1969) and Kellogg (1969) have drawn attention to the role of geometric units which may be employed to construct more complex patterns or 'combines'. To Arnheim the composition of units may be largely determined by the media employed. In the case of food urn ceramics these media comprise the incising point and the laid cord, both of which are best deployed on a curved surface in short straight lengths or lines. Kellogg's work on children's drawings reveals a further factor in unit construction. Kellogg observes that the number of units employed in early attempts at artistic expression is usually limited or refined to a small repertoire comprising those which are most visually pleasing. Such units may be adapted and combined at a more advanced stage to represent actual

objects or people.

Applying the observations of Booth, Arnheim and Kellogg to the food urn ceramic tradition we may observe at once that the A-O decorative motifs reveal a very low level of achievement in the manifestation order. Rotational motifs are entirely absent and only an intermittent claim can be made for some reflective pattern-forming in certain variants of motifs H and K. A further significant feature is the virtual exclusion of curvilinear form. Only the minority motifs M and N make any concession to curvilinear configurations and it is of considerable interest to recall that M motif may be traced to the Weelde loop skeuomorph found on biconical urns (section C2.4 attribute 14).

The overwhelming characteristic of the food urn decorative repertoire is its conservative adherence to a very limited range of angular geometric shapes. So limited indeed are the motor habit patterns of the potters that it is only in motifs G, I and J that mid-line changes of direction are occasionally admitted.

By contrast the decorative achievements of biconical urn potters reveal relative cognitive maturity. The principal decorative medium is relief technique which is very largely employed to convey realistic skeuomorphic representations of pot-carrying devices. Where cord decoration is occasionally used it too may reveal a skeuomorphic content as in the case of the Weelde loops. Motif F may possibly be borrowed from the collared urn repertoire but its relative rarity in that series and its comparative frequency amongst the small number of cord-decorated biconical urns suggests that it too may be a debased skeuomorph derived from the Weelde motif (section C2.4 attribute 14).

Other features in the biconical urn repertoire betray an overriding obsession with relief representation and skeuomorphy. The false handles on the Bere Regis G46b urn D.B31 convey, once more the irrepressible fascination with practical appliances while the 'mammilated' lugs reveal a concern with other relief forms which, although implicitly drawn from the realities of the animal or human world, are now beyond verification. A further relief feature which probably carries a lost skeuomorphic message is the annular boss or pellet. Annular pellets are found in the Alpine-Rhone province at Padnal (Rageth, 1977, Abb. 34, 13); Arbon Bleiche (Fischer, 1971, Taf. 35,8); Petite Caougne de Niaux, (Ariège) (Guilaine, 1972, fig. 61,6) and Saint-Feliu, Lo, (Pyrenées-Occidentales) (Guilaine, ibid, fig. 63, 1, 2, 3). At Arbon Bleiche the edge of the annular pellet is radially incised in a manner which is commonly repeated on the identical pellets found on Irish encrusted urns. In sections B5.1 and C5.4 we have postulated an encrustation horizon in

Ireland which may be equated with the British form 3 response. The eclectic Irish absorption of new ceramic traits, and the arrival in Ireland of collared urns, pygmy vessels and the widespread adoption of the pit-burial custom has also been attributed to the same horizon. In this milieu the possibility of a separate indigenous source for Irish annular pellets seems weak whilst a case for skeuomorphy or relief modelling from the biconical urn material culture seems probable. The case is further enhanced by the incidence of annular pellets on 37% of the Irish encrusted urns which present realistic relief skeuomorphy. Whatever their original purpose these neck-level, annular pellets appear to have arrived in Ireland in association with the net and basketwork pot-carrying devices.

Outside the field of relief imagery some other decorative devices betray the motor habit patterns of biconical urn potters. Gerloff (1975) has introduced an attractive case for potters marks which has been discussed in section C2.1 (attribute 7). The composition of certain potters marks is particularly interesting. At Shrewton (W.B52) and Charmandean (Sx.B5) the symbols appear to convey an ideographic message embodied in a schematic pictogram. Anati (1964, 96) has claimed the presence of makers marks, comprising simple symbols, on the Early Bronze Age Camunian petroglyphs but none of these particular marks are comparable with the British ceramic markings. Some Camunian house symbols attributed by Anati to the Late Bronze Age and Early Iron Age resemble the Charmandean mark but the well known Oudenburg incised figures found on Hallstatt pottery at the Hungarian site at Sopron (Gallus, 1934; Piggott, 1965) are a reminder that the triangular image can also serve as a convenient schematic convention for woman.

Whilst Anati's interpretation of the Camonica petroglyphs frequently appear to be insufficiently rigorous his comments on maker marks on both rock engravings and pottery are particularly helpful. Such a marking system, Anati observes, is also employed by West Asian Bedouins who use 'property marks' to identify both petroglyphs and camels. The camel brands, known as wassum are extremely old and may be traced to at least the 1st millenium BC (Field, 1952). These signs do not represent individuals but signify the tribe or clan to which the owner belongs. A similar symbol system, identifying clans, is used by American Indian potters of the Hopi-Tewa group (Stanislawski, 1973).

Some further decorative techniques associated with biconical urns serve to divorce this ceramic tradition still further from the food urn milieu. The deckeldosen frequently found in a number of Continental biconical urn

contexts reveal an incised and stabbed decorative scheme comprising triangular zones with dot infilling. This deckeldose decorative technique provides a further contrast with the British A-0 linear motif scheme. In section C6.9 it is further observed that the deckeldose stabbed technique is also to be found on Aldbourne cups, and in the pointille designs on the Twickenham and Havelinghen daggers. According to Booth's developmental analyses such techniques belong to a slightly more advanced order. In Britain the arrival of this advanced order can be specifically linked with the Armorico-British C phase when the precursors of the British pointille daggers make their debut in Wessex and the Thames Valley. Gerloff (1975, 117-18) traces the pointille technique to the homeland of biconical urns in the Rhone Culture of Switzerland. If Arnold's (1981) proposals are accepted, it is also in this same region that we should envisage the nurturing of a specific set of motor habit and linguistic responses embodied in the cultural background of the daggers. Whilst the link between motor habit and linguistic groups can only be conjectured it may be helpful to contrast the pointille daggers of Britain and Alpine Europe with the contemporary curvilinear decorated daggers of the Nordic group. Whilst both appear to draw fundamentally upon Unetician models, the peculiar Nordic curvilinear designs appear to be an appropriate manifestation within a culture which displays its own distinctive cultural attributes and which might justifiably claim its own particular language.

In summarising the motor habit profile and the visual perceptive content of biconical urn ceramics we are presented with evidence for accomplished relief imagery in which skeuomorphy and symbolism play a dominant role. The presence and character of the potters marks at Shrewton (W.B52) and Charmandean (Sx.B5) also reveal a grasp of ideogrammatic representation. These criteria confirm a level of visual awareness which is notably ahead of that signified by the low manifestation score assigned to the food urn potters. The dichotomy between the biconical urn tradition and the food urn tradition is now clearly manifest: invoking Arnold's (1981) argument for the motor habit-language equation, the cultural contrast may become total.

C6.6 Ethnographic Guidelines

The third guide to the interpretation of food urn and biconical urn ceramic data may be drawn from the fertile but ill-cultivated field of ethnography. In this territory there are innumerable pitfalls awaiting the unwary gatherer and interpreter of ceramic data. The most effective trap is that which awaits the imprudent seeker of analogies. Bonnicksen's

cautionary experience at Grande Cache, Alberta is a salutary reminder of the conceptual wall which the archaeologist may unwittingly erect between his intuitive-analytic schemes and 'reality'. At Grande Cache the cumulative errors in archaeological interpretation and inference were highlighted when the excavator was able to compare his interpretation of the excavated evidence of a recently abandoned Cree encampment with the testimony of Millie, a previous occupant (Bonnichsen, 1973). In this case, as Stanislawski has paraphrased, we must conclude 'that while we can develop scientific, logic and satisfactory explanations . . . our scientific categories do not always have much relationship with those cognitive concepts, or activities, of the native.' Heider's work on the settlement activities of the Dagum Dani of the New Guinea highlands has elucidated a similar response, warning us that archaeological models and assumptions 'must be based on a whole range of possibilities (and) not on any single ethnographic model'. (Heider, 1967). Citing both the above workers Stanislawski (1973) has appealed for a number of alternative working hypotheses which the ethno-archaeologist must individually and equally test.

When evaluating the range and content of ethnographic evidence and its relevance to British Early Bronze Age ceramics we must return to the primary fields of data collection defined by Clarke (1970). In dealing with the beaker population Clarke was obliged to ignore much contextual detail due to the omission of domestic evidence and the erratic recording of burial modes. The omission of associated behavioural norms represented by funerary modes was undoubtedly unwise; a shortfall readily revealed in the observations on grave orientation made by Lanting and Van der Waals (1972). In the case of food urn and biconical urn ceramics the domination of the sample by funerary finds means that the data base is similarly restricted. The topic of funerary contexts is pursued in sections C6.10 and C6.11.

Whilst the data base for British Early Bronze Age ceramics is generally similar to that encountered by Clarke, our approach should avoid intuitive analytic reasoning based on archaeological criteria alone. Certainly the guidelines offered by some general principles concerning ceramic production drawn from the field of ethnography may temper our reasoning. Using Clarke's data base, the two critical phenomena we might first consider are the behavioural patterns associated with change in shape and decoration. Although inductive reasoning, as used by Clarke, may suggest that changes in these two major variables can be attributed to logically separate dictates (i.e. function and aesthetic requirements), the evidence from the ethnographic field suggests that either of these variables may be altered by the same cause. The work of

Fontana, Robinson, Cornack and Leavitt (1962) on Papago Indian pottery, and the wide-ranging observations of Foster (1966) suggest that market demand is frequently the major cause of formal or decorative change. At present there appears little firm ethnographic evidence to suggest that response in one of these variables might generally take precedence over the other.

Whilst accepting that formal or decorative change may be induced by external economic stimuli we must account also for the means by which conventional appearance is maintained. Foster (ibid) has assembled a very large and convincing body of evidence demonstrating that conservatism in peasant potters is widely instilled by the status and nature of the job. Potters frequently have low self esteem and are commonly placed near the bottom of the social scale. At Atzompa in Southern Mexico the village potters regarded their work as 'pig-like' (Hendry, 1957; Foster, 1966). In the caste system of Central India pottery-making is placed below agriculture but above work dealing with dead things and bodily emissions (Mayer, 1960; Foster, ibid). These general observations have been confirmed by my own experience amongst the Zambian Ila who generally treated my request to see the village potter as a huge joke.

The case well investigated by Foster and confirmed by other investigations such as Fontana et al (1962) and Nicklin (1971) suggests that conformity of shape and decoration in simple systems of pottery production is infrequently reinforced by conscious means but is more often maintained by innate conservatism. Whilst this innate behavioural pattern serves to generate traits which are helpful to the archaeologist, other factors are at work which may either enhance or confuse the material cultural image.

On the negative side, exchange networks and distribution systems offer a wide variety of means by which ceramic products may cross ethnic or political boundaries. Evidence for long distance movement of ceramics is readily attested by the Cornish derivation of the Winterslow and Sturminster Marshall and Hardelet urns. Hodder (1979) has recently demonstrated through work in the Baringo district of West Kenya that the presence of tribal boundaries may serve to stimulate cross-border exchange. In the Baringo case the service area of the pottery when taken as an isolated artifact distribution would totally deny the existence of a major political and cultural dichotomy. We should recall however that this pattern of cross-boundary exchange, which Hodder considers to represent a practice of some 80 years, might also faithfully reflect the effect in this part of Africa of Pax Britannica.

Technology-sharing under peaceful co-existence is a further means by which

formal, decorative or overall stylistic elements in ceramic distributions might deny significant cultural boundaries. Stanislawski (1979) provides a further cautionary example using the Hopi-Tewa Whiteware of north-east Arizona. Due to a variety of learning networks based upon intermarriage and some non-kin relationships, the production of this ware is now shared by at least twelve different Hopi-Tewa clans living in five different villages, two settlements and in two different linguistic and ethnic groups.

Although the above examples serve to demonstrate the pitfalls which could accompany the direct cultural interpretation of British Early Bronze Age ceramic distributions, there remain other means by which formal and decorative variables might be usefully employed. Whilst these two key features may be maintained by innate conservatism we should be aware that some change may nevertheless take place as a result of a phenomenon which we might term 'temporal drift'. In section C6.5 we have observed that the low score for food urn potters in Booth's manifestation order reveals only weakly developed abilities to conceive and execute graphic images. With such elementary grasp of pattern-forming it is hardly surprising that the conformity of the food urn decorative repertoire should drift towards the use of differing motifs over a period of time. Ethnographic evidence for temporal drift is unfortunately poor, for few ethnographers have been fortunate enough to replicate their enquiry or repeat the work of others after a sufficient incubation period. In his investigation of the Hopi-Tewa however, Stanislawski was able to observe the shift in the frequency of use of potters' clan identification marks measured on three further occasions (1940-50s, 1960s, 1970s) since Bunzel's classic study of 1929 (Stanislawski, 1979, fig. 8.2). Although Stanislawski's figures concern only identification motifs and not motifs in toto, they do reveal how, due to the fortunes of marriage and mortality, changes in the size of individual pot-making clans or families may foster the proliferation of particular motifs while precipitating the decline or demise of others. In this particular case the Kachina motif employed by nine potters during the 1930s had declined to only one practitioner in the 1970s. By contrast the Corn motif employed by only two potters in the first survey had risen to the dominant number of five in the last count. Five other minority motifs showed little change over this forty year period although the Bear motif might be suspected to be an emergent type. In fig. 10 the temporal drift revealed in Stanislawski's data has been plotted as a lenticular ontogeny diagram that may be compared with the motif frequencies for the food urn series presented in fig. 9.

Although the Hopi-Tewa model does indeed provide a means of explaining the ontogenic development of the food urn motifs in terms of temporal phenomena, it does not explain how long a period may be required to develop significant major shifts or how such changes may achieve sustained effect over much of the British Isles.

It is appropriate at this point that we should consider some of the many salient points proffered by Helene Balfet. In discussing the history of pottery production in the Maghreb region of North Africa, Balfet has examined some of the means by which ceramic styles may be replicated and diffused over a wide area (Balfet, 1966). In this region Balfet has drawn attention to a double contrast in the controlling elements effecting standardisation and distribution. In the domestic mode of production the housewife may faithfully re-enact, annually, a chain of traditional pottery making steps which will serve to replenish household requirements and will transmit and perpetuate a common style from one generation to another. Whilst such potters remain unaware of each other, however, the opportunity for regional variation remains high. In the Maghrebian system, however, there exist further bodies of potters which Balfet terms elementary specialists and artisan-specialists. Organised in groups, the latter achieve widespread dissemination of their wares through town and country markets. In the specialist production mode Balfet observes that the producer has more need and opportunity to entertain and implement innovation. Paradoxically however, due to output pressures, the same producer tends to sublimate decorative innovation while at the same time designing his wares to meet conservative tastes in a traditional market where the products of the household potter may still hold considerable sway.

Whilst the town and country market system of the Maghrebian model may not be entirely appropriate to our purpose, Balfet's appraisal of interaction between domestic and specialised production sheds some helpful new light on the problem of conformity within the British food urn tradition. In the domestic food urn assemblages at Hockwold and West Row Fen we have observed that a shift from incised decoration to cord decoration was associated with a change to a low-quantity grog tempering technique. In section B6.5 it has been suggested that such an economising move in temper preparation and the standardisation of decoration might be best explained by the dissemination of specialist food urn products, a case which earns some further support from the incidence of developed fingernail marks.

Such as it is, the domestic evidence provides an appropriate basis on which a change in the nuance of motif selection might be rapidly transmitted between pot-making and pot consuming communities. The random effects of marriage and mortality in the Hopi-Tewa model provide one means by which such nuances may arise. The implications of the Maghrebian model provide an implicit rather than explicit means by which these nuances may be spatially established as a collective movement towards temporal drift.

A final ethnographic guideline may be drawn from evidence for the use of standard recipes for temper preparation. Like the attitude of potters to form and decoration, conformity in this matter does not normally depend on cultural dictates. It is however very often determined by practical requirements which may remain unaltered as a result either of production pressures or innate conservatism. Exceptions to this general observation undoubtedly exist. Fontana *et al* (1962) observed widespread variation in tempering materials used by Papago Indian potters but here perhaps freedom of choice may itself have been the established behavioural pattern; induced by environmental factors. The general mass of ethnographic evidence suggests that temper conformity is an innate characteristic of potters' unquestioning attitudes to their task. As Rouse (1966, 98) points out 'the nature of temper material may be the best criterion to use in classifying pottery because the potter selects this before anything else and by doing so he must value its modes over those for all subsequent parts of his procedure.' In practical application a number of ethnographic writers such as Bunzel (1929) and Linne (1966) have recognised the value of temper and textural attributes in determining regional proveniences but in all cases the retention of regional norms can be attributed to few conscious constraints other than, perhaps, resistance to innovation and the unstimulated expectations of the consumer.

In the British food urn tradition the standard grog tempering recipe endemic in southern Britain is entirely consistent with the low level of artistic and innovative ability revealed by the A-0 motif repertoire. In the highland zone, where stone temper may be found in food urn pottery, an environmental response may be present but the conformity of shape and decoration in this region suggests that there are no grounds for suspecting further change during the production of forms 1, 2A and 2B. The ethnographic guidelines discussed above suggest that such conformity of shape decoration and temper as that found in the food urn tradition is unlikely to be a conscious statement of cultural identity. The evidence does,

however, suggest that all of these three major variables may be viewed as consistent indications of the common expectations which once existed between intercommunicating Early Bronze Age communities in which both producers and users of pottery maintained a conservative equilibrium.

C6.7 The means of cross-channel communication

The final sections of this discussion must deal with the questions of acculturation and culture change which are posed by the contrast between British biconical urn and food urn ceramics.

In a number of regions of western Europe biconical urns of varying form enjoyed a sustained period of production from the 19/20th century bc until at least c1200 bc. Although formally and spatially diverse, all of these urns are united by the frequent use of common relief features and a tell-tale regard for handle and ropework skeuomorphy.

Although absolute dates obtained at the Armorican sites of St. Just and St. Jude suggest that biconical urns were in use on the north Atlantic coast during the earliest phase of production there is no evidence at all to show that this pottery arrived in Britain until some time during the 16th century bc. Such evidence as there is indeed indicates the contrary.

The manner and effect of this arrival is the key tenet of this thesis. In sections C2.1 and C2.2 we have defined an Inception Series comprising 26 urns in which confirmed or implied continental traits may be identified. With the exception of the examples from Winterbourne Houghton (D.B41), Bincombe G4 (D.B22), Lake (W.B17), Piddlehinton G4 (D.B53) and Hockwold F49 (N.B8.24) these urns are all tempered with flint, shell or limestone. The Inception Series urns offer a marked contrast with the indigenous food urn tradition and their number may be increased by the addition of a Supplementary Series of urns which may be drawn from 18 further sites where similar tempering materials were employed. Grouped together as the Combined Series these urns show a notably high incidence of horseshoe handles.

The distribution of the Combined Series is discrete and leaves no doubt that it was in the region of the Dorset-Hampshire seaboard and its Wessex hinterland that the primary circulation of biconical urns arose (some notable additions also occur in Gloucestershire, Somerset, Sussex and Kent). To understand the nature of this phenomenon it is necessary to review the evidence for maritime connections between this region and the Continent. In section E7 it is argued that the occurrence of no less than five Breton handled vases in Wessex barrows reveals that on occasion Continental ceramics

were indeed ferried across the English Channel and were employed by the food urn community. In the reverse direction we may observe the physical transfer of the gabbroic form 2A urn (F1) to Hardelot Plage and the presence of a form 1 food vessel urn (F2) at Ploumodiern.

The occasional passage of Breton handled vases on the cross-channel route provides the means by which continental ceramic styles might be introduced into the food urn routine. That southern food urn potters were receptive to such ideas is clearly demonstrated by the indigenous response to high gloss techniques observed at Figheldean W.25, Apesdown IW.11 and Pendennis 1 (section B4.7)

For the nature of this cross channel link we must invoke the arguments set out in section C6.8 where it is observed that British communities possibly centred at such maritime locations as Wight, Portland and no doubt Hengistbury were particularly well placed to pursue maritime trading ventures during an annual 'open season'. Communities in the Thames Estuary and the Isles of Scilly would also be well placed to pursue maritime ventures. The inhabitants of the Channel Islands may also have been active in maintaining a reciprocal connection (section B4.7).

In the Isles of Scilly some imported knowledge of biconical urn pottery is attested at Salakee Down where urn IS.B1 provides a marked contrast with the insular pots illustrated by Hencken (1932) and O'Neil (1952). In a recent review of Scillonian pottery Ashbee (1974) has observed the distinctive character of many of the Scillonian cremation urns which seem to display a mixture of beaker decorative techniques and a biconical form which does not seem to be as closely related to Cornish Bronze Age pottery as one might perhaps expect. The exotic nature of the glass and star faience beads found with the Knackyboy cremation urns (O'Neil, ibid) is a reminder that the Scillonian islanders too, were capable of maintaining sufficient maritime links to draw certain goods and ceramic inspirations from contacts in the English Channel and no doubt elsewhere. O'Neil's urns XIII and XIV from the Knackyboy site would certainly appear well at home in a late biconical urn context in south Dorset. The distribution of star and quoit faience beads in Britain and Ireland displays a distinct maritime bias and might have been quite capably dispersed through Scillonian hands.

Whilst island inhabitants may offer particular maritime skills propitious to cross channel communications, other seaboard communities are likely to have been similarly equipped. In his valuable posthumous review of evidence of a Channel traffic in metalwork in Middle Bronze Age times Muckelroy (1981)

has drawn attention to some of the means by which the development of coastal and cross channel shipping may take place. The construction of a boat, Muckelroy observes, 'creates an asset of lasting value. To receive full benefit from it, it should be used as frequently as possible . . . A boat's crew are much less likely to be season specialists than even a bronzesmith. In order to keep a craft in use as much as possible it is likely to be put to as many different uses as present themselves, and in particular both fishing and cargo-carrying'.

Once participating in off-shore activities it would seem that the seaboard communities of the English Channel would be automatically committed to a division of labour and an on-going involvement in boat-building and navigational skills which could only culminate in outright specialisation. Where such coastal communities developed in this manner a further social factor must also be considered. The fickle nature of sea conditions even in inshore waters of the English Channel are a reminder that in the mastery and maintenance of navigational skills the cost in men's lives is inevitably high. The loss of the 19 men of Samson in a single boat in the early 19th century and the consequent total collapse of the island's population (Mumford, 1967, 214-15) demonstrates that a maritime community must be able to draw upon a substantial labour resource in order to survive.

The discovery of Middle Bronze Age cargoes on the sea bed at Langdon Bay, Salcombe and Moor Sands, Dover (Muckelroy, 1981) are the first clear indicators of the organisation of substantial seaborne shipments and the risks such enterprises must have run. Muckelroy (1981) argues that both of these cargoes were scrap deliveries intended for the melting pots of inland smiths. The artifact types in both sea bed assemblages are generally well removed from their continental spheres of circulation and Muckelroy has argued convincingly that the cargoes represent a 'higher level' of bronze exchange in which 'a European-wide network might operate separately from local arrangements for production and distribution.' Within these two lost cargoes Muckelroy has pointed out that the absence of ingots and founding debris is particularly significant for it implies that the transportation of these materials, at least in this instance, was divorced from bronze-working.

C6.8 The Channel Trade Sphere

Whilst the Langdon Bay and Moor Sands cargoes are of later date, their analysis by Muckelroy reveals some important implications for the nature of cross Channel relations at a time co-eval with Wessex grave series. By

whatever means the voyagers may have been supported by their home communities, someone on the Continent had the job of assembling a quantity of bronze whilst the British coastal groups must either have developed their own hinterlands or served as entrepôts for the passage of exchange goods. Muckelroy's analysis of the Langdon Bay cargo reveals that the French agency was able to draw scrap bronze artifacts from very widely dispersed geographic sources spread across northern France and into western Germany.

The French evidence for an extensive hinterland network serving some suspected points of embarkation around the lower Seine and Somme (Muckelroy, ibid, 287) draws attention to the catalytic effect of the English Channel itself. Maritime communities plying the cross Channel route even on a seasonal basis must have been highly specialised and supported by well established port and hinterland exchange systems. The strength and extent of such networks depends very largely upon the acumen of the voyagers themselves.

Physical divides such as the English Channel comprise a wall of ignorance which may be adroitly maintained to the benefit of the voyagers who are able to retain the exclusive advantage of being able to pass from one side to the other. Such manipulated ignorance may become the basis of substantial economic wealth when surplus on one side of the divide can be converted into high profit on the other. The widely dispersed sources of the Langdon Bay and Moor Sands items reveal just how extensive the Continental support network for the Channel trade may have been. On the British side we have no reason to suspect that a complementary network should be any less developed or that economic activities, and possibly some cultural responses, orientated towards the Channel trade sphere, should not permeate the highland zone.

For the success of a Channel trade sphere it is important that a controlled disequilibrium should exist between the two regions. Early classical writers and geographers such as Pytheas record a friendly commercial intercourse which is no doubt based upon a long established trading pattern. Certainly the organised tin production recorded in Cornwall by Timaeus and Pytheas must have been based upon traditional and economically tested divisions of manpower which could hardly be rapidly evolved to meet the occasional visits and requirements of a few foreign craft.

In section C6.2 we observed that the relative frequency of form 1, 2A and 2B food urns in Dorset might be identified with a core area of food

urn culture which, unlike the Wiltshire portion of Wessex, showed close ties in its ceramic tradition with the highland zone. In the development of the kinship and trade-friend networks required to feed a maritime or Channel trade sphere this community, through its associations with the highland zone would be particularly well-placed. We may recall also that on the rare occasions, at Hardelot and Ploumodiern, where British ceramics were absorbed into the continental archaeological record, it is essentially the work of the food vessel/urn community which occurs on French soil. The horseshoe handles employed on the food vessel/urns at Wareham, South Afflington and Nymet Tracy reveal this community's casual awareness of the ceramic styles of its continental trade partners.

With the emergence of form 3 food vessel/urn pottery, the spatial distribution of finds reveals a dramatic change in relationship between Dorset and Wiltshire. This latter version of food urn pottery is very well represented in Wiltshire which is also well populated by Combined Series biconical urns. Whilst the former pottery can be clearly demonstrated to be an imitative response to the latter (section B5, B6.5 and C2.4), the ethnographic guidelines discussed in section C6.6 indicate that some effective economic pressure is generally required to trigger such change.

To attempt to explain this triggering mechanism it is necessary to view the form 3 horizon in terms of a major shift in the relationship between the populations of Wiltshire and Dorset. The work of Fleming (1971) and Renfrew (1973) has revealed that the similarity in the distributions of causewayed camps and henge monuments and the discrete distribution of long barrows and round barrows in Wessex may best be interpreted as evidence of evolving polities or chiefdoms based upon foci dispersed across the chalklands of Wiltshire and Dorset. At the opening of the second millenium bc Renfrew (1973), Ashbee (1978) and Wainwright (1979) have envisaged the 'giant' henge monuments at Avebury, Marden, Durrington Walls, Knowlton and Mount Pleasant as the physical manifestation of centralised secular and theocratic power. On spatial grounds they have suggested that these locations might be refined into three territorial units comprising North Wiltshire, South Wiltshire and Dorset. (To these Ashbee has added a further territory centred on the Mendip henge and stone circle complex at Priddy and Stanton Drew).

The continuity of territorial behaviour within these regions during the Early Bronze Age is signified, according to Renfrew (ibid) by the intensification of barrow burial in the vicinity of the same foci. At the

same time Renfrew also proposes that the abandonment of Durrington Walls and the erection of Stonehenge III as the focal monument par excellence may signify the emergence of a 'Salisbury Plain chief' as the paramount controller of at least the north and south Wiltshire polities.

It is against this background of territorial behaviour determined by centralised control that the inception of British biconical urns and the form 3 ceramic horizon must be viewed. Knowledge of continental biconical urn pottery had been available to the British seafaring community since the 19th century bc (according to the St. Just and St. Jude dates) but it was not until the 16th century bc that the impact of this ceramic form was received in Britain. This impact may mark a change in the nature of the cross-Channel contact; an event which would seemingly signify a shift in the relationship between the Wiltshire and Dorset polities.

Although the relevant C14 assays are regrettably inadequate it is difficult to avoid the conclusion that this event must directly or indirectly stem from decisions made by the person or persons responsible for the perfection of Stonehenge during building periods IIIa/IIIb. In current political parlance it might be argued that a conscious decision was made to 'play the Continental card'. The result of this move was a change in the nature of the cross-Channel traffic, admitting a sufficient influx of goods and people to initiate ceramic change and to secure the production of biconical urns in Wessex according to the continental tempering and firing techniques.

Whilst a shift in the balance of cross-Channel traffic and an expansion of the radially structured trading sphere may have admitted new ceramic styles and some latent ingredients of culture change into highland and lowland Britain, evidence of a reciprocal flow of material culture should also be sought on the Continent. For the outer perimeter of the sphere we should consider the examples of British craftsmanship found in the Alpine region and southern France. The basic pattern amber spacer-plates found in the Alpine and Foreland region at Württemberg, Oderding, Koblach-Kadel and 'Padnal' and also at Andrup in Jutland are important indicators of the contact which Dr. Gerloff has assigned appropriately to the Camerton-Snowhill phase.

It may now be claimed that a further British export may have comprised at least some forms of faience beads. At Vogelenzang the segmented bead has been proposed by Piggott (1973, 380) as a British derivative but other continental beads have traditionally been assumed to stem from more southerly

sources. At Arbon-Bleiche however Dr. Gerloff (1975, 224) has observed that the closest analogies for the single examples of 'quoit' and star beads recovered from this site are those found in Britain. Although not a conclusive factor it is in Britain too that the numerical superiority of these particular types lies. Whilst, due to the evidence discussed in section C5.7, a Continental source for British faience technology now seems arguable, the possibility of a contra-flow of British faience beads or bead forms to the Continent must be seriously considered. In addition to the beads from Arbon-Bleiche (and possibly from Parc Guren and Kerstrobel in Brittany) a significant suggestion of British output is presented by the unusual faience types found at Clairvaux-les-Lacs (Jura), Mailhac (Aude) Baudinard (Var) (Petrequin, 1978, 378-9). These beads comprise a translation of the simple straight-bored British amber spacer-plates into a faience composition. A further example of this very distinctive bead type was found with the form 1 food vessel (Fl.5) at Brynford, Flints. These beads of the Brynford-Baudinard-type may be compared directly with the simple borings of the amber beads found at Wilsford G50e and also at Lesgonil (Finistère).

Whilst ApSimon (1954) and Gerloff (1975) have both argued persuasively that Wessex amber spacer-plate beads are ancestral to the complex bored European forms, the Brynford bead and its southern French counterparts might be seen as examples of the transfer of this faience variant to the southern margins of the channel trade sphere. With ready passage of goods across the diameter of the sphere the reciprocal movement of southern and eastern French multiple-headed pins of the Baume-Latron^ê and Lac de Chalain types found in British contexts at Brough-by-Humber, Aldbourne G11 and Bryn Crug (Gerloff, 1975, pl. 46C; pl. 57G, H, L; Roudil, 1977 fig. 1; Petrequin, 1978, 382, fig. 18.8) may be more readily explained. The northward passage of ring-headed, crutch-headed and bulb-headed pins from the Alpine margin of the sphere to their well discussed contexts in Wessex II burials has already been extensively reviewed by Dr. Gerloff.

When Dr. Gerloff re-examined the precise Continental origins of foreign pin types found in Wessex her analogies were used to support a case for a strong Alpine connection (Gerloff, 1975, 242-3). Whilst the source of such imports might conceivably reveal a more positive cultural link, it is evident from the sources of the Inception Series attributes that the similarity between Alpine biconical urns and British biconical urns is not particularly strong. Since 1975 the growing body of evidence for use of biconical urns in the Aisne-Somme region has provided a new potential source for the flow

of relevant ceramic designs in Britain. In section C6.9 it will be argued that the distribution of Arreton axes in the Lower Seine, Somme and Belgian Schelde might accord with a homeland feed-back from the biconical urn community in Britain.

Whilst the occurrence of similar artifacts in British and Continental contexts need signify no more than the vicissitudes of trade, a case may be advanced for the use of certain goods as overt symbols of group identity. Gerloff (1975) has argued persuasively that whetstone pendants are likely to have served as status symbols and she has observed that their Continental distribution accords closely with the distribution of the amber spacer-beads which owe their design to Britain. The closest analogy to the Wessex whetstone pendants is that cited by Gerloff (ibid, 124) from the Early Tumulus Culture burial at Magerkingen, Württemberg. Similar whetstone pendants omitted by Gerloff and found in the same region of the Swabian Alb are those from Harthausen and Onstmettingen (Pirling et al, 1980, taf 23, A & 41, C).

Whetstone pendants are unknown in Britain until after the introduction of Armorico-British C daggers and they are principally associated with Camerton-Snowhill blades (Proudfoot, 1959; Gerloff, 1975, 112). It might therefore be conjectured that their debut in Britain followed the arrival of foreign bronzesmiths who also brought with them their own distinctive pointille motifs and intrusive ceramic styles. If the wearing of whetstone pendants did indeed serve as a significant symbol of identity then the occurrence of these artifacts at Fort Harrouard and in the Swabian Alb may point towards the source of the intrusive community in southern Britain.

When examining the attributes of the Camerton-Snowhill dagger series in 1975 Gerloff (ibid, 117-118) observed that the pointille technique on these blades was most commonly found in the Alpine Zone and the Middle Rhine from whence it may have reached Britain via Northern France. Gerloff considered the Middle Rhine region as a significant link between the Swiss ceramic tradition and the biconical urns of southern Britain but in the field of bronze trade and exchange she was able to find few items in common between these two regions other than the rare fluted ogival blades from Mainz and Ashford, Kent and the notched slender flanged axe from the Dorchester area.

In addition to these finds from Kent and Dorset some further bronzes deserve special attention. From Taunton, Somerset comes a further imported slender flanged axe which has recently been illustrated by Pearce (1982, no.755). This axe with its low cast flanges and slender parallel sides resembles the

Fussgonheim type which is principally found in the Mainz area of the Middle Rhine (Kibbert, 1980, taf 11 & 62, B). From the chalklands of Wessex two further relevant bronzes are the nicked flanged axes from Avebury and Beacon Hill, Amesbury (Cunnington & Goddard, 1934, pl. XX, 5; Moore & Rowlands, 1972, 82, pl. VI, 11). These axes are similar to those of the Fritzlar type and their homeland, like that of the Fussgonheim type, is to be found in the Middle Rhine (Kibbert, 1980, taf 14 & 62, C). The axe of Oldendorf type found in the Plymstock hoard and the Neyruz type axe from Burrington Combe (Pearce, 1981, 3, pl. 71, no. 610) may also be traced to the same region. Kibbert (*ibid*) places the development of the Fussgonheim axes slightly before the first Lanquaid axes all of which are assigned to Reinecke's phase A2. Axes of the Fritzlar type have been equated by Kibbert with the Lochham and Wohlde bronzes of Reinecke B. The absolute dates currently available for the Reinecke A2/B1 period is centred around 1600-1500 bc (Coles & Harding, 1979, 67; Pape, 1979, Abb. 6). This would seemingly allow the transmission of these Middle Rhineland bronzes to southern Britain during the opening stages of Wessex II. It must be acknowledged however that until a refined absolute chronology can be applied to the Middle European Bronze Age the duration of the traditional and modified Reinecke phases remains unclear.

A final suggestion of a specific link with the Middle Rhine region is to be found in the character of the German biconical urns. In section C2.2 it has been observed that the paired neck ribs which comprise attribute 3 of the British Inception Series are largely to be found in the Bavarian Alb, the Lower Maine Valley and in the Middle Rhine at Frankenthal (Hundt, 1957, Abb. 5; Gerloff, 1975, 265). It is in this area too that the cordon position of the German urns most closely approaches the high position which resembles the British Series.

Whilst the introduction of a small number of Continental items into southern Britain might be attributed to the expanding connections of a Channel trade sphere, the particular links with the Middle Rhine region might be envisaged as evidence of a more strongly sustained tie based, perhaps, on ethnic affinity. Although overt signals of identity expressed in the wearing of amber spacer beads and whetstone pendants might reinforce such a case it must be acknowledged that the burial contexts in southern Britain show these items to be associated with the male cremation burials of Wessex II and not, in the funerary record at least, with the users of biconical urns. At Rath, Co. Louth and Moneyrannel, Co. Derry whetstone pendants found in cordoned urn burials do nevertheless indicate that this

particular element of dress was employed by those urn users which, it is here supposed, formed a later extension of the biconical urn community in the highland zone. At Broughton-in-Craven and Stranraer further whetstone pendants were associated with bronze razors. The consistent association of razors with biconical urns and cordoned urns and their apparent exclusion from the graves of the Wessex I and II series gives some grounds to suspect that the pendants were also employed by the users of biconical urns. At Brane Common, Sancreed Borlase (1872, 212-13) records two cremation urns which were each buried with a whetstone pendant, The surviving urn (Patchett, 1946, 36, D7) is a plain collared food urn bearing two tongue or ledge shaped lugs indicative of the form 3 response. The second urn and a dagger associated with one or other of the urns was lost.

C6.9 The implications of the biconical urn horizon in Britain

Whilst the appearance of biconical urns in Britain might arguably be attributed to a stochastic process due to political decisions, the influence of other determining factors must also be considered. In the discussion on maritime contact it has been observed that, once initiated, cross-channel intercourse may readily become a cumulative process in which the specialist voyagers function at the epicentre of a radially structured communications sphere. Whilst a managed disequilibrium is maintained between the two nodal states, the spokes and the boundary of the sphere will expand further from the respective coasts.

Although the reciprocal transfer of items between the northern and southern perimeters of the sphere may be readily demonstrated, a major lacuna is revealed when we attempt to examine the convergence of hinterland activity on the French coast. During the second phase of the Wessex grave series Gerloff (1975, 235) has observed an apparent diminution of the Armorico-British contact in response to a strengthening of exchange ties with the Middle Rhine and Alpine zones. According to the ceramic evidence discussed in this section this event may be seen to coincide in a shift in the relationship between the Dorset and Wiltshire polities.

The clear evidence assembled by Rowlands (1976), O'Connor (1980) and Muckelroy (1981) for a strong and protracted bronze trade during the Later Bronze Age may lend support to the hypothesis that Early Bronze Age traffic, co-eval with the Wessex Grave Series may comprise the formative stages of a deterministic process whereby the material culture of both nodal states may inevitably absorb elements derived from each other whilst also continuing to

expand on divergent lines.

It is in terms of the expansion of the Channel trading sphere that British biconical urn and the form 3 food urn horizon is best understood. This event beginning sometime during the later part of the 16th century bc and approximately coinciding with the opening of Wessex II signifies a major strengthening of the radial exchange network whereby a new cross-Channel relationship was established with northern France.

At present the only clear intimation of the new direction of Anglo-French cross-Channel contact is that revealed by the continental distribution of Arreton axes (Butler, 1963; O'Connor, 1980) and the minor dispersal of some Irish halberds (Gaucher and Mohen, 1974, 29-37). The discrete spatial grouping of Arreton axes reveals a notable clustering in the valleys of the lower Seine, the Somme and the French and Belgian Schelde. The concordance of this distribution with the homelands of the Eramecourt and Belgian Hilversum ceramics accords well with the proposition that the biconical urn ceramic tradition may have been commonly employed by those responsible for the production and circulation of Arreton series axes. Invoking Muckelroy's argument for regional circulation spheres the quantity of Arreton axes dispersed between the Lower Seine and the Upper Schelde seems sufficient to justify a sphere of recognition within this region where axes of this style were deemed acceptable for use and were consequently exempt from his 'higher level' process involving the gathering and transportation of scrap. If axes of this type were culturally acceptable in this region as well as southern Britain it seems hardly surprising that the biconical urn ceramic tradition was regarded in the two provinces in a similar manner. The continental distribution of Arreton axes might therefore be viewed as a homeland feed-back emanating from an immigrant community whose ceramic and metalworking traditions were now well established in southern Britain. It should be observed nevertheless that the distribution of Arreton axes falls short of the North Brabant barrow cemeteries.

For the means by which Continental ceramic styles might be absorbed in Britain we have only a small number of inconclusive yet consistent hints. The presence in Wessex of Combined Series urns tempered in the Continental manner leaves little doubt that a certain number of foreign potters must have arrived on British soil. It can be argued that their arrival coincided with the circulation of Armorico-British C daggers. These weapons, unlike the typologically earlier A and B forms, appear to be of British manufacture (Gerloff, 1975, 82-92) made in close resemblance to some Armorican blades. Whilst Gerloff (*ibid*) considers that A and B dagger forms are most likely to

be Armorican imports, analyses suggest that the form C daggers and some subsequent types were made in Britain and might perhaps be attributed to the work of immigrant bronzesmiths (Ottaway, 1974). Of particular interest are the large ogival examples of the Armorico-British C dagger series which Gerloff has termed the Winterbourne Came variant. In Gerloff's view, these daggers and a further group characterised by the dirk-like blade from Roke Down (Bere Regis G46e) display notable affinities with the Camerton-Snowhill series.

The distribution of Armorico-British C blades (Gerloff, 1975, pl. 35) coincides very closely with the distribution of Combined-Series biconical urns (fig. 55). The Roke Down dirk was found with a secondary cremation beneath a plain inverted urn (lost) interred within a barrow group which has been specifically noted for its biconical urn cremation burials. Warne's description of the urn as 'unburnt, unornamented and of the rudest make' might perhaps be construed as being more likely to refer to a biconical urn or form 3 food vessel/urn rather than a collared urn which might more predictably have been decorated (Warne, 1855, (c.p.f.) 21). A further tenuous connection with dirk-like blades may be traced at the Badbury barrow (Shapwick G6a) where the outline of a substantial blade at least 26.4cms in length was pecked out on a sandstone block (Fig. 15). This work was apparently carried out by a community employing the form 3 food vessel/urn style and vessels of deckeldose type. A close examination of the Badbury carvings carried out by the writer reveals a broad projecting hilt and forshortened handle which are closely akin to the details shown in William Shipp's manuscript drawing of the lost dirk from Roke Down. At Kervellerin (FB22) the C-form blade was accompanied by a biconical urn of Inception Series type.

Whilst the arrival of foreign bronzesmithing families might readily explain the limited incidence of Combined Series urns in Wessex and East Anglia the evidence for association between this ceramic tradition and the bronzesmithing industry is not particularly strong. At Mildenhall Fen a single 'scrap flat' axe was recovered from an uncertain context on the site. In the matrix of the Winterslow urn (W.C2) a regular scatter of angular cassiterite particles indicated that the urn had undoubtedly been made in the presence of an ore preparation plant. Whereas this urn attests the familiarity of a form 3 potter, presumably in Cornwall, with the bronzefounding industry it does not directly implicate the makers of the Combined Series urn.

The notable association between faience beads and biconical and form 3 urns has provided grounds for the proposal that certain members of these

pot-making groups may also have fulfilled the role of bead artisans (section C5.7). The high tin content in British beads observed by Aspinall and Warren (1973) may provide reason to suspect that bead production was carried out by bronzesmiths who would have had the necessary access to this scarce commodity. Certainly the methods of temperature control necessary for the fusing of a faience product seem best reconciled with metallurgical technology.

Some further aspects of bronzeworking may be tentatively equated with the dissemination of the biconical and form 3 ceramic style. These comprise the Camerton-Snowhill blades and products of the Arreton bronze industry. Gerloff (1975, 98) has observed that the emergence of the ogival blade form in the Winterbourne Came variant of the Armorico-British C daggers provides an appropriate precursor to the Camerton-Snowhill series. The repertoire of the Arreton bronze tradition with its spearhead versions of Camerton-Snowhill blades has also been interpreted by Gerloff as an innovative extension of this new found industry carrying improved methods of manufacture deep into the highland province.

Products of the Arreton industry are regrettably devoid of helpful ceramic associations although it might be observed that the pointille-filled triangular motifs employed on the Twickenham dagger (Gerloff, no. 218) and also on the blade from the Havelinghen burial in the Pas-de-Calais recall the similar decorative technique employed on the deckeldosen found at Moreton, Shapwick 6a and Little Durnford (section C2.2 attribute 8). The same novel decoration is repeated on the Aldbourne series of cups which make their debut in Wessex at the same time as the Arreton industry's pointille daggers (Gerloff, ibid, 157). Like deckeldosen the Aldbourne cups are equipped with fitted ceramic lids which may be lifted by means of a lifting thong secured to a perforate lug.

Gerloff (ibid. 117-18) has observed that the use of pointille-filled triangles on dagger blades is mostly to be found in the Rhone Culture of Switzerland from whence it may have reached Britain via the Middle Rhine and northern France. Gallay (1981, 83-5) considers the Havelinghen blade to be a peripheral variant of the Rhone-Culture metalwork and compares the form with the dagger from Doucier (Jura).

In the Arreton industry and also on some Irish daggers Gerloff (ibid, 42-4) has observed that pointille-filled triangles were generally used in a confused or inconsistent manner suggesting prior knowledge of the continental tradition. It may therefore be proposed that both dagger motifs and the deckeldose decorative designs arrived in Britain together where they were placed beyond

the edge of their circulation sphere. North of the English Channel these motifs were only preserved by adoption into the new bronze and ceramic forms which are represented by the type objects from Arreton and Aldbourne. This proposal, if accepted, would tie at least one Continental ceramic form to the activities of the immigrant bronzesmiths.

Although the proposed tie between bronzeworking and biconical urn production is an attractive one there remain some problems of spatial compatibility. Whilst the distribution of Armorico-British C and Camerton-Snowhill blades accord well with that of Combined Series urns, the spatial pattern of Arreton metalwork presents a less convenient picture. Gerloff (1975, 129, 156-7) has found the marked absence of Arreton daggers and spears in the Wessex region difficult to explain and has appealed for new thinking. The attribution of this industry by Barrett (1980a) to the 'buffer zone' regions identified by Bradley (1980) has now offered a new persuasive alternative which is difficult to resist.

Gerloff's analysis of the Arreton industry has revealed a unique mixture of Anglo-Irish traits in which the British contribution may be largely traced to Camerton-Snowhill and Armorico-British origins. In such a blending of continental and indigenous technical traditions we are reminded immediately of the similar and contemporary response which was widely taken up by form 3 potters. Whilst immigrant smiths working within the Wessex region apparently confined themselves to the production of Camerton-Snowhill daggers it would be others of their number who would forge the amalgam of Continental and indigenous technology in the Thames Valley, East Anglia, the Midlands and the North.

It is within this background of amalgamation and innovation in bronze technology that the complementary change and adaptation in the form 3 ceramic style must be viewed. North of the Humber a further level of compromise was reached where the production of the form 3 biconical urn gave way to the form 3 food vessel/urn and the eventual development of the cordoned urn.

Once Continental conventions in bronzework and ceramics were established on British soil the radiating lines of exchange communication might conceivably transmit the elements of change in material culture to the highland regions of the Channel trade sphere. The means by which such changes might be induced and the extent to which change might be carried by the movement of individuals cannot be readily assessed. The absence of continental temper recipes north of the Cotswolds and the Upper Thames suggests that beyond these bounds the biconical urn was copied rather than reproduced. If smiths alone were

responsible for such change this evidence suggests that they would be insufficient in number to retain intact their family ceramics traditions. Probability would favour a package of exchange commodities only some of which might enter the archaeological record.

The ethnographic guidelines discussed in section C6.6 suggest that widespread ceramic change of the scale of the form 3 response might be most satisfactorily explained by economic forces. To explain such an event we might propose that the exchange of pots was carried out under the same circumstances in which a range of perishable goods and Camerton-Snowhill and Arreton metalwork was traded and bartered. The open networks which might admit Baume-Latrone pins to Yorkshire (section C6.8) might equally well evoke ceramic change where certain pottery types may secure advantageous exchanges in a competitive market. If immigrant bronzesmiths or bronzetraders became active in establishing a 'higher level' bronze exchange network on the lines proposed by Muckelroy then food urn potters might readily adapt and compete to fulfil southern and Continental expectations. Whilst shipwreck cargoes of this period are unforthcoming, the presence of the Oldendorf type cast flanged axe in the Plymstock hoard and the occurrence of isolated British ornamented axes in south Scandinavia, Saxony, France and Holland (Butler, 1963; Gerloff, 1975; Megaw & Hardy, 1938) suggest that metalwork during Wessex II was indeed marshalled and transported according to the Muckelroy model. Although such a system does not justify the biconical urn and form 3 horizon in Britain it provides a means by which such widespread ceramic response might be evoked in the indigenous community.

C6.10 Mortuary practice and social implications

Whilst an increased flow of metalwork commencing with Camerton-Snowhill production might assist in the development of an economic system in which modified arrays of ceramics might compete there remains a further possible means by which the biconical urn ceramic style might be promulgated in Britain. This possibility concerns the adoption of new pottery styles as part of a wider process of culture change in which a variety of overt or material traits might be assimilated from an ethnic minority embraced within the established social structure. Such traits might gain wide acceptance if we apply Childe's condition that 'whatever is diffused to another culture it will not be assimilated unless it fits into the complex but flexible structure of the recipient culture' (Childe, 1956).

In considering the role of an immigrant community it is necessary to review, albeit briefly, the material attributes of the Wessex community

itself. Fleming (1973) has conveniently summarised the various established explanations for this cultural phenomenon, observing that intensive barrow cemeteries, diversity of barrow structure and an incidence of richly furnished graves with diverse artifacts of high intrinsic value are its main attributes. For its ceramic requirements, Clarke (1968) and Fleming (1973) observe that this society generally drew upon the 'collared urn' (food urn) tradition. For its decorative and artistic requirements it was able to summon the versatile and innovative skills of a select school of artisans whose ingenuity and craftsmanship has been notably preserved in amber and gold. During its later phase a small number of personal ornaments were acquired chiefly from the Alpine region.

Amongst the funerary furnishings of primary burials in round barrows, Wessex biconical urns are generally excluded. The only apparent exceptions are the destroyed barrows Bere Regis G8b, G46a and Bloxworth G4 where in each case we are dependent upon the accounts of 19th century excavators. Outside Wessex, biconical urns found in primary contexts in five further barrows are discussed in section C6.11.

In general, the absence of associated grave goods in biconical urn burials and their relegation to secondary positions notably in the Wessex heartland might be reconciled with the proposition that these interments represent a particular class or ethnic group who were accommodated within prescribed limits in the necroculture of the host community. Such consistent omission of these urns from the Wessex II grave series makes particular sense if one accepts Fleming's hypothesis that the siting and spacing of burials in Wessex barrows represents 'a fossilised record of the social space enjoyed by those buried in them' (Fleming, 1973, 582). As a general anthropological phenomenon Levi-Strauss (1976) asserts a similar view when observing that 'the image a society evolves of the relationship between the living and the dead is, in the final analysis, an attempt on the level of religious thought to conceal, embellish or justify the actual relationships which prevail amongst the living'. The relevance of this observation to Wessex barrow burials has been readily recognised by Richard Bradley (1981).

Whilst the siting of biconical urns in Wessex round barrows tends to suggest discrimination the consistent association of two particular artifact types with Combined Series and form 3 series urns serves to enhance the case for cultural exclusion. In section C5.6 it has been observed that as 'cultural co-habitants' the bronze razor, the biconical urn and its form 3 and cordoned derivatives present a very strong case. The virtual exclusion, revealed by Jockenhovel (1980), of collared urns from razor burials is

highly significant for this very consistency emphasises the view advanced by Huntingdon, Metcalf and Levine and observed by Chapman and Randsborg that 'the issue of death throws into relief the most important cultural values by which people live their lives'. This event according to Levine precipitates a process of decision-making which will culminate in the position, furnishing and manner of the burial. (Chapman & Randsborg, 1981; Levine, 1977).

Whilst regarding Ucko's (1969) caveat that differentials in grave goods and burial mode may vary within a single cultural group due to both stochastic and ranking factors the consistent associations of faience beads, bronze razors, cremation mode and stone-packed burial pits with the biconical urn and its form 3 derivatives suggests that the grouping of these particular artifacts and behavioural characteristics may be identified as a recurrent monothetic entity. As a corollary to this proposition we may suppose that the decision-making process in which biconical urns were selected as burial receptacles involved an awareness of the 'social space' which separated the deceased from those occupants of other graves in which collared urns and an alternative range of grave goods were commonly employed.

A further indication of this social distance is intimated by the differential effort expenditure demanded by biconical urn and collared urn burials. Whilst collared urn burials may commonly intimate a ranked mortuary procedure in which low to notably high effort levels are expended in barrow construction, the burial contexts of biconical urns suggest that with the possible exception of the primary burials previously cited the energy expenditure for this burial type remained characteristically low.

Although Tainter (1978) and Brown (1982) have demonstrated that least effort constraints may be equated with ranked societies the omission of high effort levels in the biconical urn group need not necessarily denote low status burial. Low effort mortuary practices may also be equated with dispersed communities which have insufficient social cohesion to carry out protracted funerary undertakings. As a hypothetical case, a segmented society using biconical urns might be contrasted with a sedentary agrarian based population in Wessex where heredity, land ownership and rank are maintained within established chiefdoms.

An attractive scenario for a second cultural group interacting with Wessex society at the latter end of its timespan has been recently advanced by Bradley (1980, 1981) and Barrett (1980a). Bradley has drawn attention to dichotomy in urn type, grave furniture, barrow type and cemetery structure which falls between the 'downland' or chalkland communities of Wessex and the

inhabitants of the coastal region. In this latter area Bradley identifies the homeland of the Deverel-Rimbury community whose burials and settlements betray evidence of an extended family network which may include a higher degree of sexual equality and a less stratified social system.

For an explanation of the relationship between these two societies Bradley has turned to Rathje's interpretive model for Classic Lowland Maya settlement. In this model the core area is land-locked by a buffer zone which controls the essential sea and river access and the passage of commodities to ceremonial and redistribution centres maintained by the core society. Like Wessex, the Maya ceremonial and redistributive centres were not employed in the buffer zone.

To construct his model of contemporary contrasting social structures Bradley has drawn upon the evidence advanced by Ellison (1975), and Barrett (1976 & 1980) for a chronological overlap between the Deverel-Rimbury Culture and the latter part of Wessex II. This model provides a perceptive and attractive interpretation of two contrasting exchange and resource control strategies. The relative shift in emphasis from the strategy of the Wessex downland population to that of the coastal buffer zone is, according to Bradley, marked by a new concern with agricultural production as an alternative to portable wealth. In the coastal zone and on the heathlands of the Hampshire basin Bradley identifies the growing Deverel-Rimbury community as the controllers of trade and exchange access to the Wessex downland.

In determining the character of the buffer zone community Bradley has confined himself to sources where Deverel-Rimbury burial and settlement may be traced backwards during the period 1000 to 1400 bc. The result of this analysis is a discrete pattern of local cemeteries and associated settlements which are largely focused, within a 40km radius, on Christchurch Harbour and the Lower Stour. A similar buffer zone community is also proposed by Bradley in the Lower Thames. In this latter region we may also observe a conspicuous concentration of Armorico-British C daggers (Gerloff, 1975, pl. 35), a possible hint of a precursor community.

In summary Bradley has identified a distinctive buffer community occupying the Hampshire Basin at the end of the Early Bronze Age. The social structure of this population is demonstrably 'foreign' to that attested by the character of the Wessex grave series. Bradley has also suggested that this community was active in the control of maritime trade. Ellison (1975) has encountered difficulties in explaining the origins of

barrel and globular urns of this region other than in terms of spontaneous indigenous innovation without any clear stylistic precedent. Whilst all of these features confirm the activities of a distinct cultural group fulfilling the buffer zone role during the latter part of Wessex II no evidence has yet been convincingly assembled to explain the presence or emergence of this group before the 14th-13th century bc.

It is at this point that the relevance of the Combined Series of biconical urns and its Continental origins becomes clearly apparent. These urns arriving in south Wessex around the end of the 16th century bc have been identified in section C6.9 as the 'trace elements' of a significant cultural implant whereby Continental immigrants were established in this region at a time when the exchange networks of the Channel trade sphere were substantially strengthened. The size of this immigration is unknown but the ceramic response within the host community in Wessex was profound.

In the highland zone and in Ireland the extent of the form 3 response suggests that the influence of these immigrants may have been primarily directed towards the control or interception of long distance trade. The case for the interception and re-modelling of Anglo-Irish bronze production has already been argued in sections C6.8 and C6.9. In this current discussion the evidence, attested by biconical urn burial contexts, for greater social equality has also been discussed.

Due to the collective evidence now assembled for the biconical urn impact during the 16th-15th century bc, the validity of the case for continuity with Bradley's buffer zone scenario commencing in the 14th-13th century bc seems hardly surprising. That ceramic continuity in this region could be traced from biconical urn to bucket urn during this critical period has long been known (ApSimon, 1962; Calkin, 1964; Ellison, 1975). Now that an immigrant community may be recognised in south Wessex bearing precisely the precursive cultural traits of Bradley's Deverel-Rimbury buffer zone population, the case for continuity seems conclusive.

C6.11 The Question of Barrow Structure

The final matter raised by the evidence for a distinct biconical urn burial mode is the question of a Continental contribution to British barrow building practice.

Whilst the notable concentration of surviving funerary monuments in Brittany has provided at least sufficient comparative data to demonstrate the lack of close affinity between Armorican tumuli and the barrows of

Wessex I, comparative French material for Wessex II is by no means so readily forthcoming. The reason for this problem arises from the switch at the opening of Wessex II to increased cross Channel connections with an area in Northern France which is now very largely devoid of upstanding Bronze Age field monuments. The numbers of ring ditches now detected on the valley gravels of Northern France, particularly in the valley of the Aisne, are an indication that the intensity of the Bronze Age population of this region was substantial and might possibly be compared with Wessex. The main location of this population would have been the chalklands and the fertile plains of the Paris Basin, the Somme-Oise-Aisne region and the Pas-de-Calais (Coles and Harding, 1979, 230). Within this very extensive area we might suspect the presence of territorial units perhaps based upon the major river valleys and their interfluves.

For evidence of barrow construction in this region we are afforded very few clues. The chalklands of the Pas-de-Calais have retained a few upstanding barrows including the one at Havelinghen which was excavated in 1820. The concentration of barrows in the Boulogne region has been tentatively associated by Gaucher and Mohen (1974) with southern Britain but the absence of excavated evidence denies substantiation.

Since the excavation by M. Boureux of the Pontavert burial, attention has been drawn to the occurrence in this region of double concentric ring ditches. At Pontavert FB30 and Bucy-le-Long FB5 these features were associated with biconical urns bearing horseshoe handles. Further examples of these structures are also known at Conchil-le-Temple in the valley of the Authie and at Cys-la-Commune (Piningre, 1977; Joullie, 1962; O'Connor, 1980; Feman, 1980).

The possibility that funerary monuments with double concentric ring ditches might be specifically associated with communities responsible for the perpetuation of the biconical urn ceramic tradition must be treated with some care. O'Connor (1980, 278) has commented that similar ring ditches are to be found in British river valleys such as the Upper Thames and the Bedfordshire Ouse but all are inadequately dated. This observation omits however the important example at Radley 14, Berks. (which contained the bronze razor and Inception Series urn Bk.B1) and the absolute date obtained from Ring 4 at Hanborough. Some further examples might also be drawn from Holland where barrows 1 and 1B at Toterfout reveal that a similar concentric arrangement was developed by a community which was also characterised by its use of biconical urns (Glasbergen, 1954a, figs. 7, 9).

Despite these analogies it is important to recall that there are several ways in which concentric ditches may come to be employed in Bronze Age funerary monuments. The digging of quarry ditches to form an annular bank of the ringwalheuvel type might call for one or two ditches according to the terrain whilst elsewhere, or even in the same cemetery, a similar annular structure might be achieved by turf stripping. In such cases it would be the bank rather than the ditch or ditches that would have been the significant objective of the barrow builders. Double concentric post circles of Glasbergen's type 7 and possibly other types of post circle might also fulfil the same enclosing function in an environment where timber and hurdlework might be more expediently employed. Where barrows are subsequently enlarged secondary quarry ditches may produce a concentric configuration whilst bowl barrows chosen for the same purpose could present a quite different appearance whilst serving ostensibly the same cultural group.

In the plough-levelled contexts on the Aisne and Authie valley gravels the manner in which concentric ring ditches were related to their upstanding earthworks can no longer be positively determined. The slight evidence for a disc-like structure at Radley 14 suggests that a particular barrow type may have been involved but whether such a type may be specifically associated with biconical urn cremation burials it is still impossible to say.

Some further evidence in favour of the above possibility is revealed by an examination of disc barrow sizes. Comparisons of this nature were first pursued in 1961 by Dr. Smith who observed that whilst analogies of a general nature might be drawn from certain disc and saucer barrows in Wessex, the corresponding Dutch disc barrows in which Hilversum and Drakenstein urns were commonly found could not be directly equated with those in Britain (Smith, 1961). A notable distinction between the two series concerned the siting of the disc barrow ditch which in Britain was sited inside the bank, in henge manner, as opposed to outside the bank in the Low Countries.

In comparing disc barrow sizes Dr. Smith observed that the average diameter of 45m for British disc barrows was substantially larger than the average of 28.5m observed in Holland. A greater measure of compatibility nevertheless seemed to emerge when analogies for the Dutch barrows were narrowed to the notably small and discrete group of barrows termed by Grinsell (1959, 18, 168-171) the 'Dorset type'. In this latter group the average diameter of 25m and the occasional use of external and double

ditches seemed to provide good grounds for analogy with Holland.

The excavations of the last two decades have done much to substantiate the proposal made by Dr. Smith for a heritage of funerary beliefs shared between the makers of Continental and British disc barrows (1961, 116). In Northern France the excavation of the biconical urn burials at Pontavert and Bucy-le-Long have produced striking continental parallels in plan at least, for the double ditched biconical urn primary burial at Radley 14, Berks. In Dorset the double ditched disc barrows of the Dorset type (Grinsell, 1959 & 1974; Smith, 1961) at Kingston Russell G26d and G3a now acquire enhanced significance when compared with their Upper Thames and northern French counterparts.

The possibility that double ditched disc barrows were commonly the result of adoption and conversion of earlier bowl barrows due to the influence of biconical urn communities deserves careful attention. Recent excavations at Kingston Russell G3a have revealed that this disc barrow comprised a composite structure in which a small bowl barrow containing a Late Beaker inhumation had been remodelled by the later digging of two concentric ditches (Bailey *et al*, 1980). During the re-use of the monument a secondary child inhumation (D) accompanied by a form 3 food vessel/urn was inserted into the inner ditch fill. The purpose of the two concentric ditches appears to have concerned new demarcation of the original burial mound and the quarrying of spoil for the construction of an annular bank which converted the monument into a disc barrow with a diameter of 22.8m. The stratification shows that the re-modelling phase coincided with the partial destruction of the primary beaker burial and possibly also with the insertion of another inhumation in the central grave shaft. The food vessel urn D.20 found with child inhumation D attests the presence of the form 3 response sometime after the digging of the ditches. This response might perhaps be tentatively equated with the deposition of two Combined Series urns D.B64 & .65 in burials F and H in the adjacent barrow G3 (Bailey *et al* 1980, 25, P13, P14).

At Kingston Russell G3a the observation by the excavator that the double concentric ring ditches were 'totally unexpected' is of particular interest for it implies that similar arrangements could remain undetected in other disc barrows of the Dorset type. Although these excavations reveal that concentric ditches may be dug during remodelling they do not however confirm that such arrangements were planned to a common pattern or that they were consistently associated with biconical urns. Unlike the

French configurations the ditches at Kingston Russell G3a are close-spaced and drawn at a diameter which is greatly inferior to that of the encircling bank. At this site it would seem that the construction of a disc barrow of modest proportions was the main objective of the builders and that the digging and siting of the internal concentric ditches were incidental to this purpose.

In north Belgium, recent excavations of six barrows at Weelde have evoked further interest in Smith's (1961) original comparison between disc barrows of the Low Countries and those of the Dorset type (Van Impe & Beex, 1977). Barrow 4 at Hoozeindsche Bergen, Weelde comprised an unusual penannular ringwalheugel which has been compared by the excavators with the plan of Kingston Russell G3a and also with the ditched bowl barrows Poole G36 and G37. All of these barrows show a small causeway breaching the southern side of the ditch. In the view of the excavators such a causewayed 'hengiform' enclosure provides persuasive evidence that the 22 or more ringwalheugels which are now known in Holland contain a strong British cultural element similar to that indicated by the WBU-HVS analogy.

A further suggestion of compatibility with British barrow building practices is presented by the phase 2 structure at Weelde-Vlasroot I. At this site a small ringwalheugel with an outer ditch 10.4m in diameter was replaced by a larger disc barrow in which a substantial ditch was dug inside an outer bank. The completed monument which was 18.4m in diameter presented the appearance of a British disc barrow (Van Impe & Beex, 1977, fig. 11). Outer banks are also present at Postel 2, the Heksenberg at Wijchmaal and apparently at a round barrow at Lage Vuursche, Baarn but at all of these sites Van Impe and Beex observe that the complete spread of the barrow within the ditch brings these monuments within the British class of 'bowl barrow with outer bank' rather than disc barrow.

A further similarity between British and Continental burial practice is the use of upright or inverted biconical urns in stone-lined or stone-packed burial pits. At Eramecourt, Compiègne, Pontavert and St. Just these pits show a close affinity with those recorded with biconical urns in Britain and later with cordoned urns in Ireland. Invoking Levine's thesis (1977) we might conclude that whereas the supply of a cremation receptacle might vary according to local market forces, the decision making process concerning the attitude to burial mode on both sides of the English Channel remained very much the same.

On the level of monument construction the cross-Channel relationship is

far less clear. In Britain the only apparent primary barrow graves with biconical urns (excluding the three aforementioned barrows at Bere Regis and Bloxworth) are those at Nackington, Ringwold, Radley Ring 14, Harborough Ring 6 and Temple Guiting 8. At Ringwold a collared urn was present and could conceivably have comprised the primary burial.

At the remaining sites the barrow structure is particularly interesting. At Bircham the biconical urn N.B1 with Wilsford series gold beads was contained within a bell barrow surrounded by a single-causewayed penannular ditch. The urn was sited in the body of the mound where it would appear to have occupied a secondary position. According to the excavator's drawing of this barrow cemetery the causeway faced south west (Lukis, 1843). This penannular arrangement recalls the examples cited by Van Impe and Beex (1977) at Weelde 4, Kingston Russell G3a and Poole G36 and G37.

Specific British analogies for this type of barrow construction are in fact rather more numerous than have been indicated by these writers and the associated ceramics require some attention. Of particular interest are the penannular ditches surrounding barrows T11, T13 and T14 in the Mendip barrow group at Tynings Farm, Cheddar. The main elements of the burial sequences at this site are set out in table C6.11A.

Barrow T11 was first constructed as an earthen ringwalheuvel at a time when the form 3 response had already taken place. The primary burial comprised an inverted form 3 food vessel urn (Sm.3) bearing FN shoulder decoration in biconical urn style. It was deposited amongst a sequence of pits and hearths inside an internal ritual area which was later covered by the primary mound.

After the completion of the primary mound the biconical urn Sm.B2, well known for its Toterfout 1b affinities, was incorporated or inserted in the enlarged structure. This inverted urn rested on a limestone slab and was slab-packed and covered in the Eramecourt manner.

During the enlargement of the barrow, the heavily silted ditch was recut; the workers continuing their digging right through the earlier causeway. The recutting was halted however over a short distance in the east sector where the old ditch fill was reinforced with rubble to provide a new causeway. Biconical urn and food urn sherds (Sm.B3; Sm.2) from the fill of ditch 2 confirm the association between the biconical ceramic style and causeway construction.

Unlike T11 the adjacent penannular ditched barrows T13 and T14 were of cairn construction. The construction of T14 shows that this barrow was

Table C6.11A

Principal elements in the construction and burial sequence at the Tynings Farm Barrow Group

<u>Barrow</u>	<u>Primary burials</u>	<u>Secondary burials</u>	<u>Construction</u>
T10	Three primary cists A, B & C. A contained a cremation with a bone belt hook, 3 bone pins and 3 miniature accessory vessels. B contained animal bones and C contained charcoal.	<u>Sm.B5</u> inserted upright in stone-lined pit beneath secondary capping. <u>Sm.B6</u> inserted upright in secondary capping. Both burials were sealed with cover slabs.	1) Earth mound erected over primary burials. 2) Mound encased by secondary stone capping.
T11	Cremation in pit C. Double cremation in pit D with form 3 food urn <u>Sm.3</u>	<u>Sm.B2</u> inverted over cremation in stone-packed pit in secondary capping. <u>Sm.B3</u> deposited with food vessel/urn sherds in fill of re-cut ditch.	1) Penannular enclosure with external ditch broken by causeway in S.S.W. 2) Enclosure encased by primary earth mound 3) Ditch is re-cut (ditch 2) and new paved causeway installed. Mound is capped by stone rubble.
T12	Two cremations in pits. One pit contained form 3 food urn <u>Sm.4</u> with bronze awl, jet and faience beads. The urn was inverted beneath a cover slab.		1) Primary earth mound only
T13	Inhumed bones and lugged vessel in stone cist too small for a body. Cremation on old ground surface.		1) A mound with stone block 'walls' and a paved 'floor' is recorded by Read, 1926. It was surrounded by a penannular ditch.
T14	Widespread scatter of cremated bone over interior of penannular enclosure		1) Penannular ring cairn faced with sandstone blocks surrounded by outer ditch with southern causeway. 2) Ring cairn encased by further stone rubble.
T184	Not excavated	<u>Sm.B7</u> inverted over cremation in upper level of mound. Probably covered by stone slab.	An earthen barrow showing portions of a stone kerb or revetment which might represent the external face of a ring cairn.

clearly intended to serve as a penannular ringwalheuvel. T13 appears to have been similar. The date and primary contents of these two barrows are far from clear. In T14 Taylor (1951) records widespread calcined bone on the floor of the interior and in a less specific context he describes a 'carinated vessel', which might perhaps have been a biconical or form 3 pot of some type. In T13 the interior was largely disturbed but a sunken stone cist with an incomplete inhumation and an 'anomalous' lugged vessel said to resemble a beaker was found.

Whilst barrow T11 at Tynings Farm clearly demonstrates that penannular ditches were clearly dug during the biconical urn/form 3 ceramic phase the incomplete accounts of T13 and T14 cannot confirm whether these structures are restricted to this phase or began before it. At T14 the recovery of a single beaker sherd has previously given grounds for the speculation that this barrow had first been constructed appreciably earlier.

On the Dorset chalklands six penannular ditched barrows must be considered. At Berwick St. John G10 ten cremations, some with fragments of incomplete and unspecified urns, were found in irregularly dispersed pits beneath a bowl barrow. Two of these cremations, which were without pottery, were considered to be primary. (Pitt Rivers, 1898, 11, 28-29). At the saucer barrow G4 in the same parish urn sherds and a bronze awl apparently belonging to a primary burial were cast out by the intrusion of a Saxon inhumation (ibid, 256-9). A form 3 food vessel urn (D.36) was deposited in a primary context in the adjacent barrow G5.

Two further penannular ditched barrows were recorded by Pitt Rivers at Handley G24 and G27 (Pitt Rivers, 1898, IV). At the latter site however, the arrangement was completely irregular and atypical. At Handley G24 the interior was occupied by three large shallow unproductive pits. The interest of Bradley's buffer zone population in this particular annular structure was clearly emphasised by the development of the attendant Deverel-Rimbury cemetery. These graves appear to respect the approach to the causeway which seems to have retained its significance during the life of the cemetery.

Two Dorset sites demonstrate consistency in regard for the penannular plan. At Long Crichel G15 and the Litton Cheney enclosure inner penannular structures enclosing cremations were surrounded by a larger ditch of similar type (Piggott, 1941; Catherall, 1976). At Litton Cheney G8 the internal ditch served as a bedding trench for timber uprights which apparently comprised the walls of a slightly oval house averaging 10m in diameter. The house accommodated two cremation burials one of which was contained in a form 2A food urn. Outside the house five further cremations had been deposited within a small cairn.

Both house and cairn were surrounded by an outer penannular ditch which was sited immediately outside a corresponding bank.

The burial structure at Litton Cheney G8 closely resembles the arrangement at Long Crichel G15. Here the inner penannular bedding trench supported a house only 2.2m in diameter. This structure accommodated a single unenclosed cremation whilst a similar burial was deposited just outside its entrance. At Litton Cheney, Catherall (1976) has suggested that the house and enclosure may have served briefly as a domestic site before conversion into a mortuary. Whilst this attractive proposition is difficult to prove it seems clear from the orientation of the inner and outer entrances at both of these sites that the latter was clearly intended to provide continued access to the former.

Coupled with the evidence from the urnfield layout at Handley G24 and the renewed causeways at Tynings Farm T11, the Long Crichel and Litton Cheney structures suggest that penannular ring ditches may have been specifically provided by a cultural group whose funerary procedures required regular return to the burial enclosure. At Tynings G13 and T14 a flat internal area was approached through a funnel-like passageway in the stone revetted ring cairn. At Long Crichel and Litton Cheney the outer penannular ring provided a similar facility. The primary earthen enclosure at Tynings T11 may have also included an entrance but the relevant portion of the wall circuit was prematurely destroyed during excavation (Taylor, 1951, 137, 148).

On the podsolised soils of Surrey and the Hampshire basin some alternative building techniques were employed to construct penannular mortuary enclosures. At Poole G36 and G37 post structures were erected around the central grave which was covered by a small turf mound. At G37, at a distance of 3m from the edge of the central post setting an enclosing circle of wide-set posts was erected. The whole was surrounded by a penannular ditch with a post-set passageway leading out across the causeway of the ditch. From here a post alignment leading east suggests that a formal line of approach may have been established similar to that intimated at Handley G24. A similar arrangement was also encountered in the neighbouring barrow Poole G32 (ApSimon & Ashbee, 1956).

In the adjoining barrow G36 at Poole a less formal arrangement of posts in the central area was surrounded by a penannular ditch similar to G37. At both barrows the internal post structures and berm were subsequently buried by the enlargement of the mound.

In examining the spatial patterning of penannular ditched barrows in Wessex it should be observed that the number of examples is relatively small and mostly distributed in discrete clusters. In Ashbee's focal area which might

be termed the Mendip polity penannular ditches are clearly associated with the provision of entrances to ringwalheuvels. The evidence from Tynings Farm suggests that builders of these tombs were aware of the form 3 ceramic response and were also familiar with biconical urns.

In Dorset penannular ringwalheuvels are again found adjacent to the centres of high population and political activity (fig. 56A). In east Dorset they are found within 8km of Fleming's focal area of funerary monuments centred on Oakley Down. In the focal area of the west Dorset Ridgeway the single example at Litton Cheney G100 is supplemented by further penannular enclosures comprising the pond barrows at Kingston Russell G26a, G26b and Winterbourne Monkton 1a (Grinsell, 1959). At the two Kingston Russell sites paved pathways had been constructed through the entrances. In each case only a few 'urn' sherds were found inside (Grinsell, 1959, 172).

The discrete distribution of these penannular burial enclosures is particularly interesting when compared with Dr. Smith's disc barrows of the 'Dorset type'. Figs. 56A & B show that the agreement in distribution is very close. When the total distribution of Dorset pond barrows is added to this picture the image of polarised groups attending the east and west Dorset foci remains very much the same (Grinsell, 1959, map 2).

Whilst the distribution of these particular burial enclosures in Dorset suggests the presence of a specialised funerary tradition restricted to two particular areas there are difficulties in reconciling these monuments specifically with the production and distribution of biconical urns (figs. 57A & B). In the east focal area the occurrence of Combined Series urns (D.B1, D.B14, D.B39) at Ackling Dyke, Long Crichel G22 and Gussage St. Michael G7h demonstrates good agreement with distribution of penannular ditched barrows. In the west focal area however the Combined Series is poorly represented and this deficiency is only partially compensated by form 3 biconical urns (fig. 57B). Like the penannular enclosures these urns also skirt the focal cemeteries.

In addition to their occurrence near the two focal areas, the form 3 biconical urns and the Combined Series urns also show a marked clustering in the region of Bere Regis. With the exception of Bloxworth G4a the chalkland of this region no longer shows any trace of disc or pond barrows but this absence may perhaps be misleading. In this particular region the early and effective levelling and ploughing has precluded most opportunities to detect such slight field monuments. Writing of Roke Down in 1866 the eye-witness Charles Warne records:-

'In the few brief years which have intervened between the period when these notes were penned [i.e. c1842] and the present time, the plough has made such ravages, that tumuli have been levelled, settlements uprooted and ancient trackways obliterated, the once verdant down has disappeared and the antiquary interested in the early associations of his country will ere seek in vain for any vestiges of its ancient inhabitants in this neighbourhood.'

The collective evidence from Dorset suggests that the biconical urn mode of burial was not employed in the two main cemetery areas but was restricted to specific groups operating both on the periphery of these two focal areas and also at an intermediate location placed equidistant between them.

The suggestion of an appended community in Dorset is also to be found in Wiltshire where Combined Series urns are very sparse in the Stonehenge barrow cemeteries but are well represented east of the Avon. The biconical urns of this region are virtually restricted to just two neighbouring barrow groups at Bulford and Earls Farm Down. (Bulford G2-4, G27, G40, G45-8; Amesbury G68, G71, G77, G78, G83). At Bulford G40 the notable association between a saucer barrow and the Combined Series urn W.B10 has been cited by Dr. Smith but the precise context of the burial remains unknown. (Smith, 1961, 106, 116). It should nevertheless be noted that the distribution of saucer and pond barrows in this important area also appears to be discrete and selective. Saucer barrows are well represented north of the Cursus in the parish of Durrington (Grinsell, 1957, G13, G14, G28, G29) and three lie east of the Avon on Bulford Down and Earls Farm Down (Bulford, G40, G42; Amesbury G72). In the barrow groups lying close to Stonehenge they are very largely excluded, the only verifiable exceptions being Wilsford G22 and G69 and Winterbourne Stoke G17, G18 and G23.

The distribution of pond barrows is also restricted showing a similar concentration north of the Cursus in the parish of Durrington (G10, G51a, G55, G56, G59, G62a) and again east of the Avon in the parish of Amesbury (G92a). West of the Avon a notable group occurs in the more distant of the Stonehenge cemeteries at Lake Down (Wilsford G76a, G77a, G78) and in the Wilsford Group (G63). (Wilsford G85 is perhaps another shaft). Exceptions in the close-lying barrow groups are Wilsford G33a in the Normanton Group and Winterbourne Stoke G3a, G12 and G21 in the Cross Roads group. These latter two cemeteries are the only sites in the Stonehenge region west of the Avon to have produced biconical urns (W.B15; W.B18).

Whilst the distribution of biconical urn burials in Dorset and Wiltshire

suggests discrete cultural grouping there remains no consistent evidence to associate this practice specifically with annular or penannular barrows of the pond, saucer or Dorset disc type. Excavations of Wiltshire pond barrows have been particularly unhelpful, the only evidence of burial being a single cremation found at Wilsford G77 or 78 (Grinsell, 1957, 225). In Dorset the prolific series of cremation urns recovered from Winterbourne Steepleton G19c comprised two form 3 food vessel urns (D.15; D.16) and at least 10 collared food urns all of which should post-date the form 3 response (section B6.5). A single incomplete urn from pit 8 may have been a biconical type.

Outside Wessex, evidence for the use of annular and penannular enclosures for cremation burials is widely dispersed. Of particular importance is the emerging evidence for the association of these monuments with the form 3 response. At Whitmoor Common, Worplesdon, Surrey a penannular ditched saucer barrow excavated by Pitt-Rivers and yielding two primary 'bucket' urns has for some time been recognised as evidence for the late persistence of this particular barrow type (Grinsell, 1957, 127; Smith, 1961, 116). In his recent review of British Bronze Age burial practice however, Burgess (1980, 115-117, 304-325) draws attention to the more widespread association of Deverel-Rimbury and collared urn cremation burials with penannular funerary monuments. In particular Burgess draws attention to the striking similarity in plan between the Handley G24 cemetery and the Catfoss cemetery at Holderness in east Yorkshire (McInnes, 1968). By employing Lynch's convenient classification of ring cairn types (Lynch, 1972; 1980) Burgess has also been able to demonstrate a recurrent association between small cremation cemeteries (with or without urns) and the 'sepulchral ring monuments' of his Bedd Branwen Period.

The collective term 'sepulchral ring monument' employed by Burgess includes disc and pond barrows of southern lowland Britain as well as the variety of ring cairns encountered in the highland zone. In Derbyshire, Radley (1966) has described some similar funerary monuments as 'ringworks' a term which is used in this discussion synonymously with the sepulchral ring monument. Burgess has identified the use of these monuments as a significant feature of his Bedd Branwen Period, a convenient chronological term which might generally be equated with the timespan of Wessex II whilst avoiding undue emphasis on events in that region. Burgess has proposed a commencement date of c 1450 bc for this period. The period 1550 to 1450 bc might possibly accommodate the uncertain overlap between Wessex I and II where new absolute guidelines are urgently needed. Such a division might be termed EBA3b in the chronological scheme proposed by ApSimon (1976); the preceding 3a period, c 1600 to 1550/1450 bc being allocated to

the inhumation graves of Wessex I.

The sepulchral ringworks of the highland zone attest the association of this funerary custom with ceramics post-dating the form 3 response. At Totley, Barbrooke II, Bleasdale and Loanhead of Daviot and Bedd Branwen the monuments enclosed cremations in collared urns (Burgess, *ibid*) whilst at Catfoss and Stainsby Deverel-Rimbury and form 3 biconical urns were used respectively (McInnes, 1968; May, 1976). At Urbalreagh in Co. Antrim a penannular ring ditch was provided for two cordoned urn burials (Waterman, 1968).

Of particular interest are the urns of biconical and cordoned style (Der.B2-B5) found together with some collared urns burials at the Derbyshire site of Doll Tor near Birchover. The Doll Tor monument comprises a megalithic burial circle standing apart from the intensive barrow cemetery on Stanton Moor. A spatially diverse sample of ten barrows excavated by the Heathcote family in the main barrow cemetery has consistently produced collared food urns. The clustering of biconical forms at the Stanton Moor cemetery at the 'excluded' ring monument at Doll Tor suggest the presence of an appended community similar to that proposed within the Wessex polities.

The comment by Burgess that 'the smooth turf clad dome of a barrow may also conceal what was originally a very different shaped monument' is an important caveat when applied to the burial contexts of biconical urns. (Burgess, 1980, 308). Whilst these urns are generally found in secondary contexts in bowl and bell barrows in Wessex the evidence from barrows such as Temple Guiting 8 and Tynings Farm, Cheddar T11 are a reminder that cremations in biconical urns (or urns post-dating the biconical urn response) had already commenced within ringwalheuvels at the primary stage of barrow construction. In section C4.1 we have observed that due to Woodruff's record of freshly replaced chalk in all four of the burial pits at Ringwould the biconical urns at this site appear to have been deposited in a discrete primary group which may perhaps have accumulated in an enclosed area before the erection of the mound. At Frampton G4 the construction of a large disc barrow over the site of an earlier beaker burial seems to have been associated with a new collared urn 'primary' burial (pot 2) and the burial of the biconical urn D.B45 and its associated grave goods which apparently occupied a satellite position. The buried turf line over the primary disc mound and the source of the silting of the outer ditch demonstrate that the disc barrow must have remained in being for some time before being buried by a much larger multi-phase mound (Forde-Johnston, 1958, fig. 2).

The construction or enlargement of covering mounds is one means by which

sepulchral ringworks including those of penannular type may readily be obscured. At Witton in N.E. Norfolk a penannular ditched barrow was totally buried by the construction of a larger mound which was apparently thrown up at the completion of a small sequence of Deverel-Rimbury burials (Clarke, 1960, 80-1).

At Sheeplays barrow 293 at Llanwit Major, Glamorgan a penannular ringwalheuvel composed of a turf stack was constructed together with four concentric stake circles around a primary cremation in a collared food urn (Fox, 1959, 129-143, 154). Two further cremations were deposited in the entrance gap in the turf wall and another seems to have been sited against the inner face of the wall. After the decay of the turf wall, the internal enclosure was completely buried by a new turf mound which largely obscured the outline of the original penannular structure.

The penannular sepulchral monuments cited in this review, including those encased within later mounds, suggest that the penannular ring cairn cited by Burgess at Bedd Branwen is an appropriate eponym for the phase during which these cremation enclosures were constructed. The chronological significance of these enclosures is particularly important for their apparent association with the Wilsford Series goldwork at Bircham and their primary relationship with Deverel-Rimbury burials at Knighton Hill, Bowerchalke (Rahtz, 1970); Poole G126 (Petersen, 1981); Simons Ground barrows B, C, F & G (White, 1982) and Catfoss (McInnes, 1968) infer a time trajectory spanning that uncertain period between the commencement of Wessex II and the emergence of the Deverel-Rimbury complex.

Absolute dates for annular and penannular sepulchral ringworks accord closely with the Wessex II/Bedd Branwen timespan. On the gravels of the Upper Thames, ring ditch 4 at City Farm, Hanborough has yielded a date of 1510 ± 65 bc (GrN 1685) from the timber palisade erected in the inner penannular enclosure. The corroborative date of 1500 ± 45 bc (Grn 6753c) obtained at Annertol suggests that the Barbed Wire beaker sherds found in the ditches are probably contemporary.

In the adjacent ring 3 in the same complex five pits containing cremations included one collared urn burial dated 1490 ± 60 bc (GrN 1686). This cremation was sited within a small partially destroyed annular or penannular mortuary enclosure which had been erected, off-centre, within the main ring ditch in the manner of the structure at Long Crichel G15. The remaining cremations within the main enclosure included a form 3 food urn (Ox.1) and a collared food urn bearing motif M or Weelde cord loops. It should be

recalled that at the City Farm site the two ring ditches were situated near the Dutch/Dorset type disc barrow (Ring 6) which contained the form 3 biconical primary burial (Ox.B2).

In the highland zone, dates belonging to the 16/15th century bc are those obtained at Barbrook II, Derbyshire (1500 ± 150 bc BM-179); Circle 278 at Penmaenmawr ($1520 \pm 145 - 1405 \pm 55$ bc NPL-11 & 10); Bedd Branwen (1403 ± 60 bc - 1274 ± 81 bc BM-456 & 453) and Brown Edge, Totley ($1530 \pm 150 - 1250 \pm 150$ BM-212 & 211). At all of these sites the cremations within the funerary enclosure included burials with collared food urns.

The excavations at the Denbighshire barrow cemetery at Brenig reveal the limited value of single radiocarbon dates obtained for sepulchral ringworks. At Brenig 44 a series of five absolute dates obtained from cremation and charcoal-filled pits in the interior suggested that the enclosure may have been in use from 1680 ± 100 bc to 1280 ± 70 bc (HAR 501 & 503). In the present writer's view the earliest date in this sequence is open to question, for the building of the minor cairn feature from which the sample was obtained was considered to be 'one of the last acts at the monument' (Lynch *et al*, 1974,36). Whilst this cairn might be tentatively assigned to a pre-enclosure phase the construction date for the main ring cairn might be more satisfactorily based upon the central 'primary' cremation with collared food urn dated 1540 ± 70 bc (HAR - 500). This reduced timespan for the ritual use of the enclosure still leaves a possible period of some 260 radiocarbon years.

At the penannular ring cairn no. 2 at the Dartmoor site at Shaugh Moor (Wainwright *et al*, 1979) the absolute dates of 1480 ± 90 bc (HAR 2220) and 1290 ± 80 (HAR 2214) offer a possible timespan comparable with that of Brenig 44. At this site the presence of segmented faience beads with the primary cremation confirmed that the construction date was co-eval with the use of faience beads. The pot base obtained with this cremation resembled the fabric of the biconical urns employed at the adjacent settlement at Enclosure 15 but the inclusions were too decayed to allow positive identification. The cremation obtained from the neighbouring cairn 1, dated 1570 ± 70 bc (HAR 2216) confirmed ring cairn construction during the 16th century bc.

To conclude this review of barrow structure it is now necessary to advance three questions.

1. Is there a consistent relationship between the use of biconical urns and a specific mortuary and barrow building practice in Britain?
2. Does the known mortuary practice associated with British biconical

urns reveal any specific social or behavioural norms characteristic of the urn-users?

3. Can the mortuary practices of biconical urn users be consistently linked with sufficient additional sociocultural variables to justify the proposal of a polythetically homogeneous culture?

In answer to the first question the evidence assembled in this discussion enables us to provide a confident yes. Biconical urns are, in a number of instances, specifically associated with penannular and annular sepulchral ring monuments including those of the disc and saucer barrow type. Both the urns and the ring monuments are also however associated with other types so the association cannot be claimed to be mutually exclusive. Where biconical urns are found as secondary burials in conventional Wessex round barrows, pond and saucer barrows usually occur within the same barrow group. In the Winterbourne Cross Roads and Normanton barrow groups it might be suggested that the 'barren' pond barrows were employed as ritual enclosures prior to the interment of biconical urns in the neighbouring barrows such as Winterbourne Stoke G21b and Wilsford G5. Sepulchral ring monuments are commonly found to contain food urn ceramics but in almost every case the pots concerned are those which have already undergone the form 3 response. The exception to this observation is Harland Edge, where the precise nature of the ring cairn has been poorly determined by excavation. The primary burial at this site contained both a form 2A and a form 3 food vessel/urn apparently deposited together. The absolute date of 1490 \pm 150 bc (BM 210) is insufficiently precise to suggest whether this association might mark the point of transition in the food urn tradition.

In saying yes to the second question it is necessary to assess the evidence in relation to three hierarchical levels of behaviour.

1. The biconical urn cremation burial using the Eramcourt/Pontavert mode marks a consistent decision making process which, according to Huntingdon, Metcalf and Levine should reinforce a sense of identity and value amongst the immediate participants (section C6.10). The restricted choice of grave goods centred on the bronze razor certainly tends to reinforce this sense of identity. The removal of facial hair is likely to be a very important overt expression of group identity and one which seems likely to claim very high precedence in the requirements beyond the grave. Such a distinction might readily differentiate between the biconical urn community and indigenes. It is important to observe that the only other depilatory instruments, the bone tweezers, do not appear until Wessex II and are associated with 'male' graves

(Gerloff, 1975, 113; Proudfoot, 1963, 412-14, 424-5). Of the twelve known examples those found at Bloxworth G4a, Handley Hill G24 and Amesbury G11 were in contexts which suggest close contact with the biconical urn community. The tweezers from Amesbury G11 were contained within the 'Stonehenge' barrel urn.

2. The second level of behavioural consistency concerns the internal organisation of regional groups. The omission of biconical urns from graves of the Camerton-Snowhill and Aldbourne series suggests that this pottery was not generally traded across ethnic boundaries in southern Britain. Although removed from the Wessex region, the domestic assemblage from West Row Fen tends to support this evidence whilst allowing that at least three biconical urns had in fact been acquired by the food urn community. Biconical urn sherds were also absent from the 16th century bc assemblage in the enclosure ditch at Mount Pleasant. In the Dorset, Wiltshire and Mendip polities the distribution of biconical urn burials consistently emphasises the spatial integrity of 'appended' communities in a pattern which is consistent with the distribution of certain sepulchral ring monuments. In the south Peakland polity based on Arbor Low and Stanton Moor the same evidence of 'attachment' can be seen. In the Upper Thames Valley at Radley the double concentric ring ditches 14 and 15 were significantly excluded from the main barrow alignment (Atkinson, 1954, fig. 8).

3. The third level of behavioural patterning concerns the co-ordinated activity of the British biconical urn community. At this level of social organisation only a tentative archaeological assessment can be attempted. It is also necessary to distinguish between behavioural patterns based upon ceramic data and those based upon funerary and settlement evidence.

The Combined Series biconical urns demonstrate that only in the Dorset, Wiltshire and Upper Thames polities was the Continental method of urn tempering maintained. Outside these focal areas insufficient knowledge of the parent tempering tradition was transferred to the indigenous potters who, during the late 16th century bc, were adapting to the new demand. At the settlement sites at Mildenhall Fen and Hockwold-cum-Wilton the accurate replication of biconical urns in grog tempered ware reveals how discerning this demand could be. At Hockwold the presence of the food vessel/urn site F61/68 within 300m of the biconical urn community suggests once more the kind of mutual co-existence suggested in the Wessex polities. Whilst contemporaneity cannot be proved at this site the presence of form 3 food vessel/urns at F61/68 suggests that these inhabitants were well aware of the

ceramic style of their neighbours.

The most northerly examples of the biconical urn style are to be found on the lowlands of north Lincolnshire and the Middle Trent. At Hoveringham and Long Bennington on the Middle Trent gravels the modest array of grog tempered urns attests assimilation by indigenous potters. At Stainsby comparable urns were deposited within a penannular ring ditch. At this site the group identity of one of the deceased was emphasised by an accompanying bronze razor (Ln.B8)

Whilst the Stainsby cemetery attests the consistency of the biconical urn ceramic and funerary tradition on the northern perimeter of the lowland zone, beyond this boundary the relationship between ceramic style and mortuary practice changes. The presence of such divergence seems hardly surprising for in section C6.6 we have already observed that traditional ceramic styles are not generally subject to cultural control but, given the right economic stimuli, may be readily abandoned or adapted to fulfil market or exchange requirements.

With the exclusion of the biconical urn from the highland zone of northern Britain the presence of its parent culture is more difficult to detect. Fortunately the characteristic sepulchral ring monuments may, with qualification, be used as an alternative trace. In the south Peakland polity an invaluable survey of ringworks has been carried out by Radley (1966). Like the appended communities of Wessex, this Peakland population reveals a discrete distribution of ringworks which is set apart from the traditional barrow cemeteries. In this region the established cemeteries can be attributed to the food vessel/urn population settled on the Carboniferous Limestone. In contrast with the limestone core area the ringwork population is confined to the gritstone and sandstone regions of the Derwent valley (Radley, 1966, fig.7); Hawke-Smith, 1981, figs. 5.3 & 5.5). Hawke-Smith (ibid) has observed that the settlement of the Derwent Gritstone might be attributed to the utilisation of land more suited to grazing rather than to arable. The utilisation does not, moreover, occur here until the arrival of the ringwork community which Hawke-Smith places around 1500 bc. In this geographically discrete community an affinity with the funerary practices of the lowland biconical urn population is indicated at Brown Edge Circle on Totley Moor where the double concentric burial enclosure shows a remarkable similarity to the Pontavert, Radley 14 and Hanborough 6 burial sites. It should be observed that all of these latter sites occupy waterside environments which are well suited for grazing. The inner circle at Brown Edge contained five cremations spanning a possible

burial period of 1530 \pm 150 bc (BM 212) to 1050 \pm 150 bc (BM 177). The two restorable pots proved to be collared urns.

The choice of collared food urns for the Peakland ringwork burials seems particularly appropriate for their design makes them suitable for suspension in ropework carrying nets of the type we have proposed for biconical urns (sections B5.5, B5.6, B6.5). The scarcity of clays on the Peakland gritstones would make ceramic supplies from the food urn community on the neighbouring limestone a convenient option for the ringwork builders. Options such as these occurring amongst restricted clay resources in the highland zone might contribute to the eventual emergence of that complex product the cordoned urn which Butler and Smith (1956, 68) and ApSimon (1972, 149-152) have acknowledged as a highland complement to the biconical urn group. Due to the decorative affinities between the cordoned urns and the Secondary Series collared urns it would appear however that the date for the development of cordoned urns and their use in razor burials in the highland zone must *post-date* much of the proposed use of biconical urns in the South. The consistent association of this pottery with razor burials and its association with sepulchral ringworks or ring monuments such as Doll Tor, Derbyshire; Whiteside, Ayrshire and Urbalreagh, Co. Antrim leaves little doubt that in the British biconical urn and cordoned urn distribution we are viewing the behaviour and gradual expansion of an homogeneous human group whose presence in 'appended' or marginal communities attending the established centres of the British Early Bronze Age population is marked by a characteristic mortuary practice and a distinct taste in ceramic consumption which may be subject to expedient compromise with the food urn community. Such compromise exchanges might also be identified as potential propagator of the form 3 ceramic transition.

The final question concerns the cultural status and social cohesion of the human groups responsible for the inter-related archaeological phenomena comprising biconical urns, cordoned urns, pit burials of the Eramecourt/Pontavert type, razor burials, sepulchral ringwork and 'appended' burial areas. These polythetically linked units comprise the material manifestation of an extinct sociocultural system which must once have operated on a level of organised complexity which we must now attempt to define. (For the purpose of discussion the combination of these material units may be provisionally termed the Biconical Urn Complex). In evaluating this level of cultural complexity we are fortunately assisted by the set of four definitive attributes devised by Clarke (1978, 246) for the recognition of archaeological cultures. Tested against Clarke's definitive criteria the biconical urn complex reveals

the following cultural attributes.

Requirement 1. The component assemblages should share a large number of specific artifact-types one with another, although each assemblage need not contain all the types in the shared set.

Observation 1. The artifact-types in this case are the ceramics and the elements of mortuary practice given above.

Requirement 2. The artifact types represented in the assemblages should comprise a comprehensive selection of types from most of the material spheres of cultural activity.

Observation 2. Due to the nature of the excavated evidence which is heavily skewed in favour of funerary contexts the biconical urn complex can only in part fulfil this requirement. If the main spheres of the cultural system are however taken to be those functions or sub systems concerning economic activity, material culture, social behaviour and religious behaviour as indicated by Clarke (ibid 103-4) then the available evidence does nevertheless include data concerning these spheres. In the sphere of religious behaviour a restricted set of behavioural options clearly demonstrates consistency in various aspects of mortuary practice. In the sphere of material culture the method of pottery production and the use of razors demonstrates consistency within the limits of the available evidence. In the spheres of social and economic activity the evidence is largely inferential. On the strength of mortuary data Bradley (1981) has persuasively argued for the presence of a semi-egalitarian endogamous society comprising a network of nuclear family units whose social ties and organisation might be contrasted with the ranked structure of the Wessex chiefdoms (section B6.10). This contrast with the established social structure reinforces the case for a distinct cultural identity. In the sphere of economic activity a similar distinction may be observed in the apparent predilection of biconical urn communities to occupy regions such as the podsolised soils of the Hampshire Basin and possibly the Gritstone-Sandstone terrain of the south Peakland. Both of these regions reveal the choice of an alternative ecological resource strategy which may be clearly contrasted with the established centres of Early Bronze Age activity on the chalklands and the limestones. The case advanced in section C6.9 for occupational specialisation concerning the Arretton bronze industry suggests further differentiation.

Requirement 3. The same specific artifact-types should occur together repeatedly in the component assemblages albeit in varying combinations.

Observation 3. Repeated associations of specific artifact types are razors with biconical and cordoned urns; biconical and cordoned urns with pit burial cremations of the Eramécourt/Pontavert type; biconical and cordoned urns with sepulchral ringworks; the exclusive use of biconical urns and cordoned urns on settlement sites.

Requirements 4. The component assemblages must come from a limited, defined and continuous geographical area and period of time.

Observation 4. The continuous period of time over which the biconical urn complex flourished may be assigned to c1550 to c1300, a period of some 15 generations. At the end of this period the extension of the pottery style may be detected in modified form in the expanded ceramic repertoire of the Deverel-Rimbury complex (section C5.9). According to the mortuary evidence for the discrimination of kinship units in Deverel-Rimbury cemeteries a continuation and expansion of the same social structure may also be detected (Ellison, 1975, 1980 & 1981, Barrett & Bradley, 1980, Dacre & Ellison, 1981, Bradley, 1981). The continuity of the biconical urn complex during the fifteen generation period is readily attested by the radiocarbon dates for the urns and penannular ringworks which have already been discussed in this section.

In examining the spatial cohesion of the component units of the biconical urn complex we encounter the need for more specific evidence particularly from the chalklands of northern France where the population of ringwork burials and biconical urns is at present insufficiently sampled. This deficit blurs the relationship of these two particular artifact-types with the wider population of north west European biconical urns.

Although the Continental limit of the ringwork funerary monument remains unclear it is now apparent that this behavioural characteristic can be polythetically linked with biconical urns, cordoned urns, pit burials and razor burials during the period 1550 - c1300 bc (fig. 58). Whilst a greater number of chronologically and spatially compatible artifact-types would undoubtedly enhance the unity of this polythetic entity the bias of the archaeological record in favour of funerary contexts means that such an improvement is unlikely to be easily attained.

To conclude this assessment of the cultural status of the biconical urn complex it is necessary to return once more to the evidence for ontogenic unity of the component units during the period 1550 - 1300 bc. The evidence for an inception or impact horizon for biconical urns in Britain and the Low Countries during the later part of the 16th century bc suggests that the

arrival of this new ceramic form must be attributed to a common source which cannot be readily envisaged in a location other than the Aisne-Somme region of northern France. The transfer of this ceramic tradition to Britain and Holland and its differing assimilation by indigenous food urn potters and the makers of Barbed Wire beaker wares in these two respective regions provides an explanation for the consistent distinction between British and Dutch biconical urns observed by Dr. Smith (1961, 111).

With the recognition of a specific implantation of biconical urn potters during the 16th-15th century bc the evidence for 'appended' and 'buffer' communities in southern Britain can be more readily understood. Such an implantation may now be seen as part of an infiltration during which the poorly exploited heathlands of the Hampshire Basin and some marginal territories in Wessex, the Peakland and elsewhere were settled during the expansion of the channel trade sphere at the beginning of the Wessex II grave series or Burgess' Bedd Branwen Period.

Due to the contrast with the decorative motifs of the indigenous food urn potters it might be claimed that the biconical urn community conformed to a set of motor habit patterns which represent a separate linguistic group (section C6.5). Such linguistic distinctions add strength to the case for the initial establishment in southern Britain of an ethnic subculture whose presence during the fifteen generations led to the transformation of the established British Early Bronze Age society into the succeeding cultural system represented by the Deverel-Rimbury Complex (Barrett, 1976).

In explaining the role of such alien subcultures in the cultural disintegration of the host community Clarke (1978, 251) has cited few appropriate analogies. Jope (1973), drawing his example from the 16-17th century Continental ogee roof gables, has however demonstrated that an effective implantation and dispersal of material culture might be precipitated by initial patronage. In the patronage process the resident elite may draw upon the far flung and productive contacts which accompany the higher levels of cultural organisation. Such 'episodic dispersal', Jope observes, may be as much due to 'cultural colonisation' at an abstract level as to overt physical transmission.

A further component unit of the Biconical Urn Complex which must now be regarded as a potentially intrusive element is the sepulchral ringwork. Whilst the Continental boundary of this unit remains 'blurred' its discrete association with the distribution of biconical urns in Dorset, Wiltshire and Mendip and its similarly discrete 'appended' distribution in the Derbyshire peak conforms to the pattern of ethnic isolation which has now been proposed for these

traditional indigenous burial areas. This postulate contrasts with previous views which have seen ringworks, and in particular the saucer and Dorset disc forms, as an essentially British feature which might perhaps have been transferred to the Continent (Smith, 1961). The most recent advocates of this assumption have been Van Impe and Beex (1977a, 25-27; 1977b) and Lynch (1980) who have both seen a possible resurgence of the 'hengiform' building tradition in Early Bronze Age ringworks.

Whilst such a proposal may be applicable to some ringwork types such as the minor annular cairn rings of the Overton Down G6b type, there is an embarrassing lack of reliable dates for substantial annular or penannular sepulchral ringworks before the 16th century bc. Food urn pottery preceding the form 3 transition is moreover significantly scarce in ringwork cremation burials. Saucer and pond barrows are also conspicuously devoid of grave goods earlier than Wessex II. It is only in the large conventional Wessex disc barrows that Wilsford Series grave goods assignable to Wessex I have been found and these, like the Bircham beads, could arguably be attributed to Gerloff's overlap period.

In concluding this assessment of the status of the British Biconical Urn Complex it is now possible to advance this phenomenon as an ethnic subculture composed of five polythetically linked components. Of these components cordoned urns may be identified as a subsequent British insular innovation promoted by biconical urn users. The bronze razor also, at present, appears to be a specific insular type although we should remain aware that the inadequate sample of urn burials in northern France has drastically reduced the potential opportunity to recover razor finds. Whilst the sample size of HVS-DKS urns seems sufficient to detect razor burials in the Low Counties, the podsolised soils of this region are generally unfavourable for the survival of fine hammered bronzework.

In 1956 Butler and Smith drew particular attention to the Dutch tanged bronze razor found by Van Giffen with a Sogel dagger, and a nicked flanged axe of the Fritzlar type at Drouwen (Drenthe). (Van Giffen, 1927; Glasbergen, 1954b, 145, fig. 68). These writers stressed the similarity of the Drouwen instrument to the British tanged razors and proposed that this find might be a copy of a British razor or alternatively a Continental progenitor of the British type. They also drew attention to the tang and independently cast ring on the fluted razor from Omstmettingen, an arrangement which offered a possible typological link between the Tumulus Culture instruments and those of Britain.

With the presence of Fritzlar type axes at Avebury and Amesbury (section C6.8) a case might be proposed for the introduction of tanged razors into the Netherlands and Britain at a time concurrent with the circulation of these axes and the Sogel blades with which they have been associated on the Continent. Whilst the production of Sogel and Wohlde blades lacks a precise absolute date it is difficult to equate these events with a specific stage in the British chronology. The development of the elongated ogival blades of the Winterbourne Came variant of the Armorico-British C dagger is clearly an important contender and it has been compared by Gerloff (1975, 97) with the north European Virring blades which are contemporary with Sogel and Wohlde. Gerloff (*ibid*, 124-5) has also observed that the Continental whetstone pendants of Wessex type are found in Sogel and Wohlde contexts and that these moreover occur in those areas which have received amber spacer beads. Whilst these circumstances could support a case for the arrival of razors and Fritzlar axes during Armorico-British C, it must be acknowledged that the persistence of these features in Tumulus Culture graves of Reinecke B could readily facilitate a retarded introduction into Britain. Whilst this latter possibility remains open it must be recognised that the razor element of the Biconical Urn Complex could be restricted, like the cordoned urns, to the later stages of the subculture.

Of the three remaining component units, biconical urns and the pit burial mode may be identified as Continental features. Due to its chronologically and spatially discrete manifestation the sepulchral ringwork may now be also proposed as a further Continental feature. In its penannular form, and as an enclosure for successive cremation burials, this monument offers a link with the subculture's egalitarian mortuary procedures which seems difficult to deny. While the wide range of ringwork constructions defined by Lynch (1972; 1980) still require adequate dating and investigation the way must also remain open for a variety of indigenous contributions to the highland array of these monuments. We must now look to our French colleagues at work in the Aisne, Somme and Pas de Calais for a demonstration of the range of ringwork designs which might be transferred across the English Channel in the late 16th century bc.

D. CONCLUSION

D1 The essential elements of Early Bronze Age indigenous ceramic production in Great Britain may be identified as the food urn tradition accompanied in its earlier stages by a range of heavy domestic wares and fineware products produced by beaker potters.

The food urn series may be ordered ontogenically in a manner which can be explained by temporal drift (sections B2.4 and C6.6). The process of temporal drift can be observed in ethnographic analogies and is particularly well matched by the Hopi-Tewa model (section C6.6). A major portion of the drift is also confirmed by the relative contextual dating for collared food urns ascertained by Longworth (section B2.4; Longworth, 1961, 288). Absolute dates for the food urn series also accord well with the ontogenic model.

The general chronological range of the food urn series may be given as c1700 to c1250 bc. This range may be divided at c1550/1450 bc into an earlier and later period. During the earlier period food vessel/urns of types 1, 2A and 2B developed along individual time trajectories which may be arranged en echelon (sections B3.1-5; C5.1).

The later period of food urn production is characterised by the use of form 3 food urns, collared food urns and encrusted food urns. In the highland zone these forms are later supplemented by the composite vessel, the cordoned urn which, it is proposed, was primarily produced for the biconical urn community. In the South West Peninsular the urns of the Trevisker Series appear to have emerged through a further compromise at a date which largely precluded the development and common use of collared food urns in Cornwall. The later forms of the food urn series may all be attributed to varying levels of indigenous response evoked by the impact of the biconical urn and promoted by associated economic and social changes. These events appear to be generally synchronous with the beginning of the Wessex II grave series and the commencement of Burgess' Bedd Branwen Period but there remain difficulties in assigning specific biconical urns to the opening of this phase (section C6.11).

Critical to the case for a biconical urn impact is the evidence for a specific chronologically attested response. In the highland zone and in Ireland the wider effects of this response are clearly demonstrated by the emergence of encrustation skeuomorphy. The fact that

encrustation in general and that realistic skeuomorphic encrustation in particular is very largely confined to form 3 food urns provides very strong evidence to suggest that the biconical form and the ropework pot-carrier arrived in Northern Britain and Ireland as a single unit.

The restriction of pot-carrier skeuomorphy to these particular northern regions may possibly be attributed to the special novelty of ropework itself. Encrusted urns are principally found outside the Tilia zone where lime bast would not be readily available for rope-making. In the South, palynological evidence suggests selective retention of Tilia cordata during Early Bronze Age clearance, presumably for the exploitation of lime bast (Scaife, 1980).

D2 The formal and textural analysis of British biconical urns reveals two methods of manufacture. In southern lowland England, in a discrete cluster centred on Wessex, the Combined Series or urns are tempered in the manner of their Continental counterparts. (These urns may be further sub-divided into the Inception and Supplementary Series).

The second method of production involves the use of the indigenous food urn grog tempering recipe to produce faithful copies of the biconical urn style. Such products are termed form 3 biconical urns. At the occupation sites at Hockwold F49, F50, F66 and at Mildenhall Fen the use of these urns was almost exclusive, even though form 3 food urns were used on neighbouring sites. Such evidence suggests that whilst pottery was not usually exchanged between the users of food urns and the users of biconical urns, marriage into the biconical urn community might procure women taught in the grog-tempering tradition who might then produce pots in the biconical urn style. Such proposals conveniently accord with the contemporary expansion of kinship and exchange ties advocated by Barrett (1980a) and based upon the interaction of wife-givers and wife-takers.

The use of grog tempering recipes in a small number of biconical urns in the Low Countries may provide some further evidence to suggest the extension of kinship links across the Narrow Seas. The Leusden urn LB27.3 with its tubular impressions in food vessel/urn style is a particularly obvious example. The grog tempered urns LB42.1 and LB47.3 with their Leiston style cord loop impressions are another. The

securing of cross-Channel kinship ties through the trade friend system offers a more satisfactory explanation for these urns than the migration hypothesis advocated by Glasbergen.

D3

The associations of British biconical urns may be conveniently divided into artifactual and contextual classes. Both classes convey important data concerning the behavioural characteristics of the urn-users and the chronology of their ceramic products.

In the behavioural field the well attested use of the bronze razor and the adherence to a consistent mortuary practice has evoked the suggestion of a distinct ethnic subculture characterised by five polythetically linked elements (section C6.11). This subculture has been tentatively linked with further synchronised elements which are spatially or chronologically compatible but lack the appropriate and consistent first degree associations. These elements comprise the production of faience beads, the production of Armorico-British C blades, the development of the Arretton bronze industry and the use of whetstone pendants (section C6.9).

The chronological setting of British biconical urns is principally determined by the first degree association of grave goods and it is here that a critical distinction must be made between the contextual and the behavioural evidence. The earliest relative date drawn from the Wilsford Series gold beads from Bircham (N.B1) is partly reinforced by the recovery of a similar gold bead in a less specific association with the domestic biconical urn assemblage at Ogof yr Esgyrn (Br.B1). Due to the general dearth of closely datable artifacts found in association with biconical urns the implications of these two contexts require careful consideration for they concern the only direct indication that these urns were in use during the overlap period of Wessex I and II. Whilst similar products of the Wessex master goldsmiths can be demonstrated to have received only a short period of use before burial in the late Wessex I period it should be observed that in the case of these particular finds the apparent degree of wear has never been determined. In the case advanced in this study the occurrence of these early gold artifacts in a biconical urn burial has been equated with the widespread adoption, in southern Britain, of cremation burial. It has been further proposed that this behavi-

oural change was accompanied to a lesser extent by the introduction of the biconical urn itself and the initiation of the form 3 response. All of these events appear to coincide with the circulation of Armorico-British C daggers towards the end of the Wessex I grave series (section C5.2). Due to the overlap period identified by Dr. Gerloff, these changes may be generally equated with the opening stages of Wessex II but, whilst the behavioural changes concerning the adoption of cremation and the development of the form 3 food vessel/urn are readily attested, the unambiguous contextual evidence for the presence of the British biconical urn at this time is still lacking. At West Row Fen the presence of three biconical urn sherds in the form 3 food vessel/urn domestic assemblage may imply such an association but it must be acknowledged that the duration of occupation on the site cannot be reliably ascertained. At Tynings Farm, Cheddar T11, the biconical urn Sm.B3 was associated with food vessel/urn sherds in the occupation debris in the barrow ditch. In both of these cases the associations demonstrate no more than an overlap of uncertain duration between biconical urns and some stage of form 3 food vessel/urn production. The virtual absence in southern Britain of form 3 food urns associated with the inhumation burials preceding the Armorico-British C phase would appear to provide very good confirmation that the biconical urn and its ceramic response was unknown before this event. The remaining artifacts, and in particular the faience beads are well accommodated within the timespan of Wessex II. In Ireland the form 3 response is represented by the 'vase' and 'vase urns' which exhibit significant traces of their biconical urn ancestry in the versions which have been termed the 'Form 3 Encrusted' and Drumnakilly Series. The recovery of vases of the latter type found in association with daggers of Wessex I character at Topped Mountain, Co. Fermanagh and Grange, Co. Roscommon suggest that the response in Ireland was evoked at a time equally as early as the inception in southern Britain (ApSimon, 1969, 54).

Whilst the absolute dates of 1560 ± 70 bc (HAR 801 86) and 1505 ± 70 bc (CAR 277) for the form 3 transition in the food vessel urns from Brenig 51 (Db13) and Trelystan (Mt.7) and the date of 1556 ± 178 (BIRM 64) for the Combined Series urn from Bromfield (Sh.B1) may provide some support for the inception of the biconical form in the late 16th century bc, there remains the possibility that the biconical

urn impact could have occurred much closer to the end of the 15th century bc when continuity with the cordoned urn razor burials seems plausible. Whilst sufficient absolute dates are awaited for Wessex I and Wessex II there remains the possibility that the earlier of these grave series may have persisted throughout the 15th century bc or even later. The association of the wheel-headed pin of Speyer Type found with Armorico-British A and B daggers at Plouvorn, Finistere is a reminder that the daggers typical of Wessex I can overlap with items associated with Reinecke B (Gerloff, 1975, 97; Gallay, 1980, taf. 27 no 383). At Shapwick G6a it has been observed that the dirk-like dagger carvings which resemble the large ogival blades of West European and Treboul style were apparently employed by a group of barrow builders using ceramics of form 2A, form 3 and deckeldose type. Whilst the critical lack of absolute dates in Wessex and in Central Europe impede further discussion it must be recognised that the protraction of the Wessex I grave series might be more readily reconciled with the substantial number of British barrow burials containing form 2A and form 2B food vessels. Under such conditions the synchronisation of biconical urn impact with the opening of Burgess' Bedd Branwen period at c1450 bc or even later might well be justified.

D4 The recognition of the biconical urn as an intrusive element arriving in southern Britain during the Wessex II period provides qualified corroboration of the proposals for an Alpine and south German ceramic connection proposed by Dr. Gerloff in 1975. The textural analyses of the Combined Series reveal however that insufficient Continental potters were introduced into Britain to maintain the traditional methods of tempering and firing. Biconical urns displaying the Continental method of tempering are consequently largely restricted to the Hampshire Basin, the Wessex chalklands, the Cotswolds and the Upper Thames.

 The settlement of Continental potters in these regions has been attributed to a shift in the emphasis and intensity of cross-Channel trade. This shift has been seen as a combination of stochastic political decisions concerning the relationship of the Dorset and Wessex chiefdoms and a deterministic process whereby increased Continental influence was established as a result of the inevitable

growth of a maritime trading community. It has been suggested that the strengthening of British and Continental hinterlands for this community led to the ready cross-passage of goods such as Alpine and Baume-Latrone pins, and amber and faience beads within a broad Channel trade sphere (section C6.7 - 8). The single intrusive Continental axes noted by Gerloff (1975, 174) from Dorset, Amesbury and Bewtry can now be seen as part of the formative stages of the 'higher level' of the Anglo-Continental bronze scrap exchange which has been proposed by Muckelroy (1981). These formative stages, it is proposed, were primarily developed by the biconical urn community which was also responsible for the homeland feed-back of Arreton bronze axes to the Schelde, the Somme and the Lower Seine (section C6.9). These river valleys, it is noted, are precisely the areas in which concentrations of bronzes attest type-sharing between southern Britain and the Continent during the Later Bronze Age (O'Connor, 1980, 311-317; Muckelroy, 1981). The presence of axes of Middle Rhine origin at Avebury, Amesbury, Burrington Combe and Plymstock might be interpreted as evidence of a further homeland link.

D5

As a result of the textural, formal and contextual analyses presented in this study it may be concluded that British biconical urns comprise the material manifestation of an ethnic subculture which was implanted in southern Britain from northern France and the Middle Rhine during the Wessex II or Bedd Branwen period. The urns may be identified as part of a widespread Continental ceramic tradition which had already spread from the Rhone-Alpine region to the French Mediterranean, Atlantic and Channel coasts by the 19/18th century bc.

The retarded arrival of these urns in southern Britain signifies a change in the British political balance whereby a limited number of immigrants were admitted as enclave communities appended to major centres of population. If the implicit link between the contextual and behavioural evidence concerning these urns is accepted, these events should be placed in the 16th century bc.

Although the number of excavations on relevant burial sites in Britain and France remains small, the present evidence for mortuary practice suggests that the widespread use of cremation, undifferentiated grave status and the new social mores of these immigrants had a profound effect on the British population. Evidence of this effect is the widespread adoption of the form 3 food urn in southern Britain

and its virtually exclusive association with undifferentiated cremation burial.

Whilst a larger body of corroborative Continental evidence is desirable, the data assembled in the Low Countries, northern France and Britain suggests that sepulchral ringworks, particularly those displaying double concentric and penannular plans, might be polythetically linked with the subculture and could be implanted in Britain along with the urns. The importance of the penannular enclosure as a key element of the subculture is emphasised by the persistence of this sepulchral monument as a recurrent feature in the cemeteries of the Deverel-Rimbury daughter culture.

The final observations concern the role of the biconical urn community and its relationship in Dorset and Wiltshire with that established and ranked society of food urn users which has come to be known as the 'Wessex Culture' (Piggott, 1938; Gerloff, 1975). The error of elevating to full cultural status a hundred rich graves distinguished entirely by a small set of rank and prestige weapons, trinkets and gew-gaws has been emphasised by Clarke (1978, 248) who has observed that such a selection represents only the products of an isolated segment of the society or culture of the collared urn users. This select high status funerary assemblage (here termed the Wessex Grave Series) has been traditionally divided chronologically according principally to its dagger typology (ApSimon, 1954; Gerloff, 1975). The application of these schemes has however largely excluded that other and substantial body of poorly furnished bowl barrow cremation burials which Annable and Simpson (1964, 27-8) and Megaw and Simpson (1979, 220) have observed might belong to the pre- or post- Wessex phase.

The recognition of the form 3 response and its consequent division of British food urn ceramics into an earlier and later period has introduced a new means by which the in-urned cremation of the larger Wessex barrow population may be chronologically assessed. Due to the varied but widespread assimilation of the new ceramic form by the food urn community this yardstick remains applicable to the majority of the British Early Bronze Age population.

In 1975 Dr. Gerloff proposed the use of a ceramic 'yardstick' to assess the extent of a south west Central European immigration into Britain during the Camerton Snowhill phase (Gerloff, 1975, 243). The yardstick comprised the frequency and distribution of the biconical urn.

Due to the identification of the Combined Series we may now observe that British urns display close similarity with the urns of northern France and the Middle Rhine and some residual affinity with the Alpine ceramics cited by Dr. Gerloff. Whilst Dr. Gerloff proposed an immigration of uncertain size we are now able to observe through compromises in the temper tradition that the immigrant community was soon supplemented by indigenous stock. South of the Humber however the ceramic style of immigrants was not dissipated. The evidence from Hockwold and Mildenhall Fen suggests that this ceramic 'identity' was retained due to the reluctance of at least some communities to utilize food urn pots. Food urn potters on the other hand display a remarkable readiness to absorb and adapt the new biconical form.

The readiness of the food urn community to abandon conservatism in the matter of ceramic style is symptomatic of a more fundamental receptiveness to change. Such a change is clearly evident in the widespread adoption of cremation burial which we have observed was disseminated with the adoption of the form 3 food urn (section C5.2).

Invoking Bradley's (1981) and Barrett's (1980a) social interpretation of the mortuary practice of the Deverel-Rimbury daughter culture we might conclude that the readiness of indigenous communities from the Armorico-British C phase onwards to adopt cremation burial and a lesser degree of funerary differentiation betrays a similar readiness to adopt the social attitudes and mores of the biconical urn users (section C6.10).

Whilst greater palaeo-environmental evidence is necessary, the cumulative evidence from palaeosols from round barrows in the Hampshire Basin suggests that contemporary anthropogenic activity in the 'buffer zone' homeland of the biconical urn and Deverel-Rimbury group was probably characterised by birch-scrub browsing (Scaife, 1982, pers. comm.). At Totley Moor, Derbyshire the ringwork enclave occupying the sandstone upland was apparently responsible for the localised clearance of new land in the vicinity of the burial site. Such site catchment characteristics suggest a further contrast with established indigenous behaviour.

As a corollary of these observations it may be concluded that the ceramic, settlement, funerary and implicit social characteristics of the British biconical urn group appear to have offered some new alternatives to the established hierarchically structured food urn

community. In the spheres of social organisation and ecological exploitation strategy these alternatives may have been particularly attractive to the lower echelons of the food urn society.

In discussing this contrast in terms of 'core' and buffer zones Bradley (1980) has proposed that Deverel-Rimbury burials on the downland may be seen as the lowest level of Wessex society. In the buffer zone areas he has also suggested that the Deverel-Rimbury community might be seen as a regional counterpart to Wessex which together might be viewed as a 'whole society'. Such a relationship between environment and social structure would generally seem to accord with Clarke's (1978) definition of regional subcultures.

The point of departure presented by this analysis of British biconical urns concerns the substantiation of Dr. Gerloff's proposals for a Continental intrusion. Once admitted amongst the indigenous food urn community the distinctive attributes of the British biconical urn subculture would appear to make the decline of the Wessex hierarchy and the emergence of the Deverel-Rimbury culture from a proposed incubation period a matter of inevitability.