

Circumstance not context: the Neolithic of Scotland as seen from outside

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SUMMARY

An overall survey of the relative strengths and weaknesses of research on the Scottish Neolithic is attempted, focusing particularly on recent work. The high quality of much of the evidence is stressed as is the variability of the attention paid to it. Particular themes have been chosen to exemplify these and to provide some opportunity for a wider perspective.

INTRODUCTION

It seems that Scottish prehistory depends upon a persistent sense of the marginal: geographically, culturally and economically. Perceptions are coloured by a recurrent need to derive innovation from without and then to resort to the parochial for explanation and understanding. This forms the recurrent framework of recent work although, interestingly, the formative period of Wilson (1851; 1863), Munro (1882) and Anderson (1883; 1886) had already established Scotland as an original and important source of primary and comparative information. More recent syntheses have tended to the derivative or local in overall method (Piggott *ed* 1962; MacKie 1975; Feachem 1963 and 1977; Ritchie & Ritchie 1981), with the inevitable exception of VG Childe. His preface to *The Prehistory of Scotland* (1935) remains a fine statement, or re-statement, of actualities 50 years on:

Scotland *should* [my italics] be able to afford data for the solution of several most fascinating problems in British, and indeed in European prehistory.

This volume is laced throughout with Childe's characteristic distillation of perception, intuition and prejudice. This latter aspect is rather more apparent in his Rhind Lectures for 1944 (Childe 1946), a volume 'produced in complete conformity with the authorised economy standards' (*idem*, title reverse) but distinctly 'lively and convincing' (*idem*, preface). To this major stimulus – and advisedly here we are restricted to the period under review – there seems to be only one substantial response in recent times as providing an appropriate and creative context for Scottish prehistory. The symbols of power wielded by Clarke *et al* (1985) might be seen to derive from a political stance comparable to that of Childe, even if 40 years on, but invoke a challenging and provocative viewpoint which ought to incur some positive reactions.

The themes now to be pursued must already be apparent, as it must also be obvious that the approach has to be thematic. Inevitably this involves a considerable selectivity, and mention of one further caution: there is a single major corpus available for the Scottish Neolithic (Henshall 1963; 1972). The relative paucity of reference here to this magisterial work should be seen as tribute rather

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than denial, just as, elsewhere, the level of citation might be taken to reflect a personal view – from outside – of relative contribution or default.

BACKGROUND

Scotland, it need hardly be said, is a country of great geographical variability, remarkably diverse in landscape and climate. Whilst on the one hand there exists the pathetic fallacy that it is a northern peninsula of Britain, it can also be said that its unity rests upon its separation from the south rather than in its own uniformity. There is no reason, other than that of modern political expediency, why the ‘Scottish Neolithic’ should exist as an entity and clearly there is a prime need to isolate distinctive regionality from generalized British or West European background noise. This poses the basic problem: parochial definition without parochial thought.

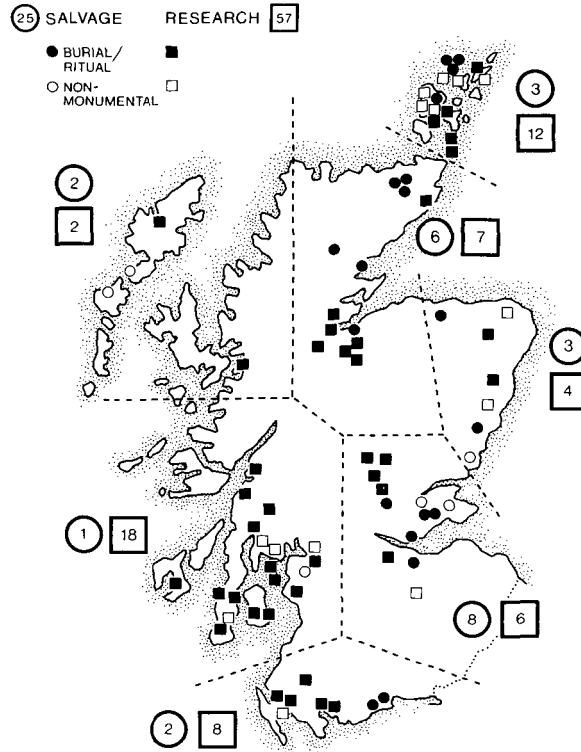
There have been many definitions of Scotland on a regional basis but it is not the business of this paper to adjudicate between them or to usurp geographical expertise. The main outlines are clear: a general trend from north-west to south-east of dissected montane to undulating lowland, a complex western littoral of islands and inlets contrasting with an eastern plain, precipitation and wind-force decreasing eastward and mean growing-season temperatures decreasing northward. For a limited population there is no shortage of favourable environments determined by topography, soils or climate although it must be stressed that the real characteristic of Scotland is the variability of weather – hence the recurrent oscillation across thresholds and an abiding sense of marginality.

The relative density of distributions does of course have some bearing on prehistoric actualities. The frequency of surviving monuments is high in the west and north and very low in the Highlands zone, and this would seem to reflect the opportunities for productive settlement. By contrast, monuments clearly have a higher survival rate outside the zones of destruction created by intensive agricultural or population concentration (Stevenson 1975) and the apparent paucity of evidence from the eastern lowlands from Forth to Moray must embody this factor, especially by contrast with the ‘marginal’ area of Caithness and Sutherland whose already-high density continues to be increased by detailed and informed field-work (Mercer 1980b). Here, certainly, in a region not ideally suited to early agriculturalists, the profusion of surviving sites for all periods is a striking illustration of the perversity of the archaeological record.

A further proviso to be entered is that of the relative contribution of excavation. Over the last 40 years Neolithic material has been recovered from over 80 formal investigations (illus 1) which represent some notable contrasts: 57 research and 25 salvage, 58 ‘ritual’ and 24 ‘domestic’ sites. For a substantial proportion (c 33%) the scale of excavation or retrieved information is minimal, further reducing the data base and almost 40% of the remainder, those with a subjectively significant quality or quantity of result, have not achieved definitive publication.

The essential diachronic scale is lacking in detail through the inadequacy of the radiocarbon dates available and the effective absence of informative stratigraphies. There are over 200 radiocarbon determinations available for the period but a high proportion of these are of limited value, relatively few fulfilling the essential criteria of multiple contextual dating (Kinnes *et al* 1982). The result of this is that traditional or received frameworks remain basic and radiocarbon results have done little, if anything, to reformulate either inductive or deductive systems; they are indeed unlikely to do so until sampling derives from context rather than circumstance.

There are no effective stratigraphies to shed light on matters such as ceramic succession. Setting aside the secondary occurrence of Beaker material at sites such as Northton there appears to be no instance of the relative stratification of different pottery styles. In southern Britain this has been occasionally provided by vertical sequences in ditch, earthwork or cave deposits or by the succession



ILLUS 1 A regional assessment of Neolithic sites investigated in Scotland since 1945

of intersecting features. In Scotland such sites are rare, or at least have not been actively sought and excavated, despite the opportunities suggested by dune/machair environments in the west, as at Northton and the Udal. Their potential is hardly matched elsewhere in western Europe and the known occurrence of the late Mesolithic material and pottery of all facies of the Neolithic in this Hebridean zone makes this regrettable neglect a serious indictment of current priorities for fieldwork and excavation. Occupation or midden deposits of considerable depth have been identified at several Orkney sites (Skara Brae, Rinyo, Knap of Howar, Noltland, Pool) but have so far produced only material within single traditions. Whilst ultimately informative for stylistic and functional change, the continued absence of an identifiable earlier Neolithic here must reduce the relative value of such sites for a wider understanding. We must set chambered tombs aside from this search for the relative placing of recurrent associations: claims have been made for observable successions of deposition but the likely complexities of mortuary practice suggest that these are more often apparent than real, a point to be pursued later.

Relative chronology, as an index of the processes of change, must be seen for Scotland as derived from observations made elsewhere and supported only loosely by an insecure and generalized radiocarbon framework. It is important to establish that much discussion on this point rests solely on assertion rather than evaluation and that, all too often, typologies created for other circumstances (notably, for chambered tombs) have been transferred wholesale and inappropriately to the artefact record.

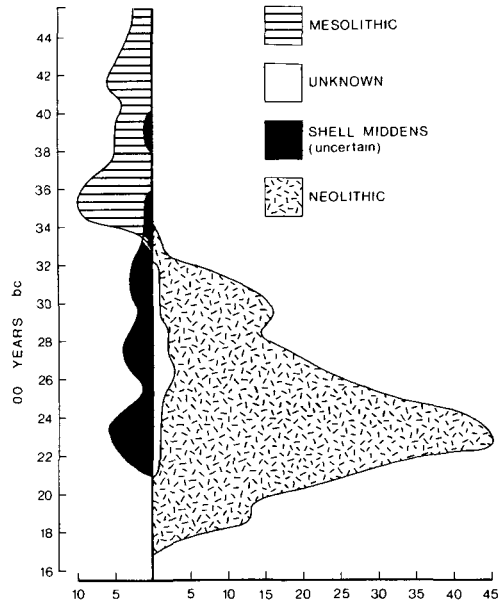
This catalogue of limitations must be extended to review the other potential sources of evidence. Specific categories will be addressed below with regard to the nature of 'domestic' sites and demographic reconstruction, as well as the level of understanding of lithic traditions, but this is an appropriate point at which to consider environmental and economic matters. Considerable effort has been devoted to soil and pollen analysis and whilst this is inevitably restricted in scope or intensity, it has provided a more secure understanding of some early agricultural environments. Economic information is extremely limited: for the plant record, significant recovery is restricted to Balbridie and Skara Brae and, with the exception of flax remains at the former, occasions few surprises in fulfilling expectations of wheat- and barley-based cultivation. With the exception of Knap of Howar no large faunal assemblage from a domestic context has yet been published. Only deposits in the Orkneys and Hebrides have yielded any significant quantities and here the inevitable restrictions posed by island circumstances and the likely and necessary contribution of marine and coastal resources will always modify any conclusions on the nature of mainland communities. The problem is in fact recurrent for Britain: as yet there is no reliable analysis for the economic base of any earlier Neolithic site.

THE MESOLITHIC BASIS AND NEOLITHIC BEGINNINGS

The circumstances of Neolithicization in Western Europe depend closely upon the nature of the local Mesolithic. Recent discussions have focused on the apparent gap between the establishment of secure agricultural settlements associated with Bandkeramik material by c 4000 bc in much of western Europe and the appearance of food-producing economies in adjacent zones such as Britain and South Scandinavia (Kinnes 1984; Rowley-Conwy 1981 b) as much as a millennium later, a circumstance which does not accord with the standard progress-diffusion scheme (Clark 1965; Ammerman & Cavalli-Sforza 1971). Rowley-Conwy (1981 b) has produced an elegant model for South Scandinavia in which the economic success of the late Mesolithic Ertebolle-Ellerbek, based on effective exploitation of natural resources on a seasonal round, excluded a need for food-production. Pigs, in their role as household scavengers, and the knowledge of pottery manufacture were acquired from neighbouring farmers as perceived advantages. In the late fourth millennium bc a system collapse brought about by the reduction of resources by a rapid sea-level rise enforced change and the wholesale introduction of farming practice.

It is tempting to use a comparable explanation for Britain, but far less easy since we are dealing with a much larger and more diverse environment and a poorly defined late Mesolithic. Most sites are uninformative: few have been excavated on any scale, soil conditions frequently preclude the survival of all but the lithic component, many have been lost to rising sea-levels. The existing chronology, poor as it is, points not only to a relatively late establishment of the insular Neolithic but also an apparent gap between this and the Mesolithic (illus 2). We must turn to the broader scene for explanations. Well-preserved contexts throughout Atlantic Europe reveal the successful exploitation by hunter-gatherer communities of the rich resources of climax temperate forests and littoral-marine environments. Even in the restricted and marginal circumstances of Oronsay, prolonged occupation attests reasonable success, even if the artefact assemblage is less than compelling (Mellars 1977).

The evidence of exchange systems in rare materials and for deep-sea fishing opens up possibilities for rapid long-distance contact and this might be the mechanism for the transmission of selected traits ahead of the full-scale implantation of new techniques (Kinnes 1984). Secondly, detailed studies such as that for the Neckar valley indicate population growth over several hundred years in the formative earlier Neolithic at a rate far less than the 3% per annum often suggested (Hammond 1981). The massive land uptake of the fourth millennium cannot be explained solely by



ILLUS 2 Frequency of radiocarbon determinations for the Scottish Mesolithic and Neolithic (standard deviations above ± 150 excluded)

demographic trajectories and the need for new land but must involve the incorporation of existing, formally Mesolithic, communities. Down the line contacts with farming groups might well have created the pre-conditions for change, beyond those dictated by environmental shifts. Dennell (1983) has outlined the possibilities for the assimilation of sheep and cereals into a Mesolithic framework as both economically and culturally acceptable to economies dependent on red deer and wild plant foods.

These factors make for a highly complex and variable situation and not one to be resolved by simple or exclusive answers. The mechanics of 'colonization' have been frequently discussed for Britain but conclusions range from unsatisfactory to implausible (Case 1969; Bradley 1984). The critical perception rests on an assimilation of observations and probabilities, and the realization that over the vital period any site or context might represent any degree of alteration between 'pure Mesolithic' and 'pure Neolithic'. Inevitably, therefore, much discussion and confusion has arisen over terminology and hence, unfortunately, interpretation. In particular, a failure to distinguish difference except by typical-atypical categorization has obscured and stunted the argument.

On a broad basis then we are faced by poor and little evidence and a necessarily conditional view of the first Neolithic in Britain. Its definition is restricted by the sources available but these should be reviewed. The artefact record depends largely upon ceramics and here some useful generalization can be made. Throughout the British Isles the earliest assemblages are characterized by shallow carinated bowls, a perception wholly in accord with Schuchhardt's original characterization (1919) of the insular Western Neolithic as the Grimston province. The sibling relationship with the contemporary Michelsberg west of the Rhine is clear but parentage is obscure. Lithic industries have not been characterized with precision and, again, typology has been confused with technology so that there is little basis for cross-Channel comparison. The most distinctive (to some, apparently),

the only) component is the leaf-shaped arrowhead: the generalized form is rare in western Europe and wholly prevalent here, a dichotomy with no apparent explanation. Broad-bladed narrow-butted axes are held in common as is direct hafting into club-headed handles, a contrast to earlier and eastern techniques and perhaps due to Mesolithic tradition. The organic component is sufficiently generalized as to render comparisons pointless although rare antler 'combs' occur on both sides of the North Sea.

Causewayed enclosures are an early feature and, in the technique of ditch layout at least, are a shared trait with much of western Europe. In Britain they are confined to the lowland zone south of the Trent, their absence elsewhere cross-cutting other perceived relationships. The recent discovery of an example in Antrim enforces reconsideration of this pattern and this point will be pursued later.

Organized exploitation of lithic resources in the form of flint mines and axe factories could be part of the cultural package but, given Mesolithic antecedents, the point should not be overstressed. The early presence of jadeite axes, distant imports from the Piedmont, is attested at the Sweet Track (Coles *et al* 1974; Woolley *et al* 1979) and certainly allies Britain to a broad international network of exchange for which little other evidence is tangible.

The question of funerary monuments will be more extensively treated later but for the present the familial links of the non-megalithic series with northern and western Europe should be stressed (Midgley 1985; Kinnes forthcoming). The megalithic chambers pose more extensive problems, again the point will be pursued subsequently.

Turning to the Scottish scene, we are fortunate in having a recent paper on the Mesolithic and its environment (Edwards & Ralston 1984). It is emphatically practical in approach and conclusions and precludes the need for repetition here. Two reservations might be entered. The claimed overlap of radiocarbon chronology between Mesolithic and Neolithic has no statistical validity (illus 2), but this does not affect the interpretations advanced. Secondly, it would be generally helpful to insist upon the point that the palaeobotanical sample is, if anything, sparser than the archaeological and certainly as subjective. Nevertheless the present writer would regard the paper as an essential basis to the developments presented here.

Edwards and Ralston concentrate on the forest exploitation mode of the Mesolithic, where palaeobotany is an essential tool, but some consideration must be given to two other aspects. The dissected coastlines and archipelagos of the west and north are a classic environment for marine-based economies. The Obanian facies is best known and seems to fulfil all expected criteria, its success perhaps ensuring survival into a period of competition or co-operation with the new farming economy. Further north little is known but occasional finds and flint scatters as far as mainland Orkney (inf Wickham-Jones and Richards) suggest real opportunities for research.

The eastern coastline poses greater problems. Full Mesolithic activity extends into the fourth millennium at sites such as Morton (Coles 1983), with good evidence for broad-based seasonal exploitation. In the Tay-Forth zone, however, are numerous large shell middens which have generated series of radiocarbon dates extending well into the third millennium bc (Sloan 1984 and *in litt*). Artefact associations seem to be rare and non-specific. Serious questions have been raised about the status of such sites, including the question as to whether the deposits are, in fact, anthropogenic as opposed to accumulated storm-beach episodes. Much depends on the forthcoming publication of the excavated evidence. In the meantime, it is surely as misleading to declare hunter-gatherer survival as to characterize all shell-middens as Mesolithic. Littoral and marine resources, in the right circumstances, could be as important as forest game to farming communities and form a sizeable component of the energy budget. Admittedly in a more marginal environment, the extent of such reliance is clear on Orcadian sites of the later Neolithic, and here no one has found it necessary to invoke the presence of lingering strandloopers.

The Scottish pattern, then, is closely in accord with that for the rest of the British Isles. A generalized but identifiable early Neolithic is characterized as elsewhere and appears to have much the same sort of late fourth-millennium date. No contacts with the local Mesolithic can be securely documented but this might be the result of archaeological perception rather than actuality. There is nothing to indicate that Scotland stands outside the mainstream of process or events.

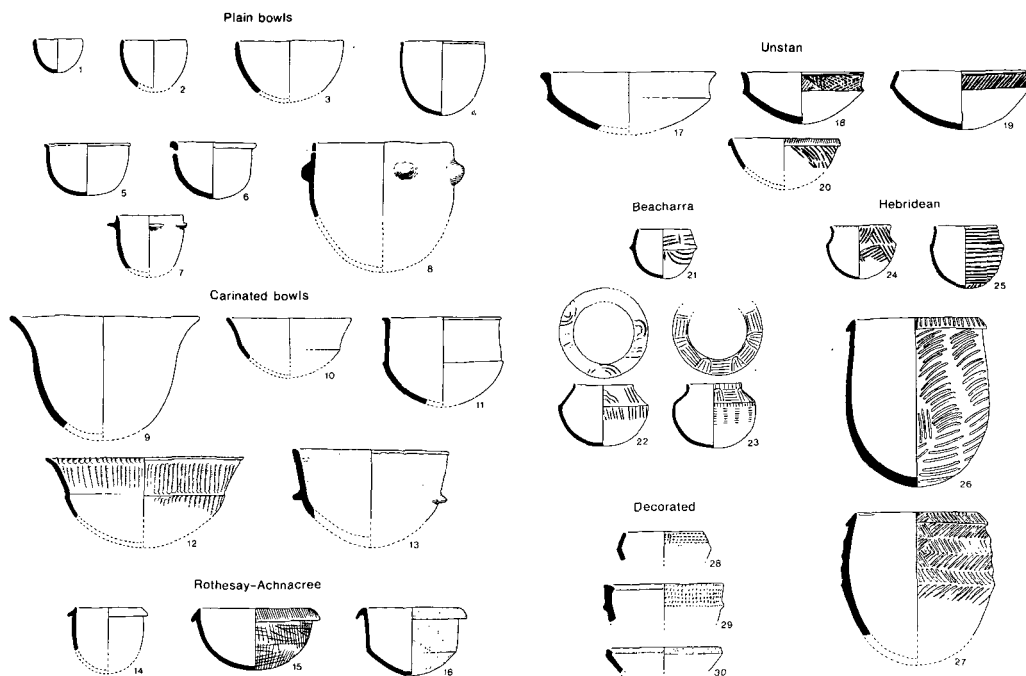
As examination of interpretations of ceramic affinities and sequence will show, the origins of Scottish farming implantation are normally sought in two areas. Essentially the sources are discerned as eastern England, especially Yorkshire, and around the Irish Sea and its southern approaches. The former provides plain carinated bowls and non-megalithic mortuary practice, the latter plain and decorated bowls of Irish and south-western English styles and the format of simple chambered tombs. Actual movement is seen implicitly as land-based from the east, marine and thence Great Glen from the west. Whilst certain truths, or truisms, are embedded here, the circumstances have been unduly subject to preconceptions.

Contextually there is nothing in earlier Scottish sites to demonstrate derived status and chronologically the radiocarbon pattern does not differentiate from their nominal southern progenitors. Overall the radiometric chronology indicates that the early Neolithic dates substantively to the last quarter of the fourth millennium bc, with no statistical separation from south to north or east to west. Only the Ballynagilly sequence (ApSimon 1976) stands outside this and this continues to pose serious problems for understanding the overall colonisation process. Elsewhere exceptionally early dates can be shown to have dubious contexts (as at Briar Hill: Bamford 1985, compare Kinnes & Thorpe forthcoming) or derive from the heartwood of old timbers (as at Raisthorpe: inf the late T C M Brewster). Differential sampling within the Street House sequence (Vyner 1984) shows how such dates can be misleading if we compare that for a massive post, some four hundred years earlier than all others for an integral structure. Equally the 'stray' dates for Knap of Howar (SRR-347: c 3750 bc) and Boghead (SRR-690: c 4000 bc) show the dangers of reliance on dates not confirmed by sequences.

Allowing for this there is no archaeological evidence to see Scotland as an area of secondary or derived colonisation, save for its geographical position, separated from the ultimate European sources. A determination to find external origins for each new idea has severely restricted the possibilities for processual understanding and, as we shall see, might actually have distorted perceptions of the evidence. An illustration of this might be seen in the concentration of petrological research on imported products (Langdale and Tievebulliagh) to the neglect of real opportunities of understanding the Scottish scene. Equally, it is sadly true that this combination of parochial method with an anxiety for external support has tended to demean the qualities of the local evidence. For example, the quantity and contextual integrity of early pottery in north-east Scotland exceed those in Yorkshire, yet constant resort is made to this perceived fount for explanation.

THE CERAMIC RECORD

Allowing for the potential for recovery posed by different contexts it is possible to define a series of ceramic styles in Scotland, with a limited degree of regional and diachronic separation (illus 3a, 3b and 10). There are few large assemblages and these are confined to the Unstan and Grooved Ware styles in Orkney and Hebridean at Eilean an Tighe; otherwise the information is limited by scale or, in the instance of prolific provenances such as the Luce Sands, insecurity of contexts. Little work has been undertaken on fabric analyses so that no basis exists for speculation on wider exchange systems or further characterization of styles distinguished by form or decoration. The absence of stratigraphic controls has already been remarked so that relative chronology largely depends on the

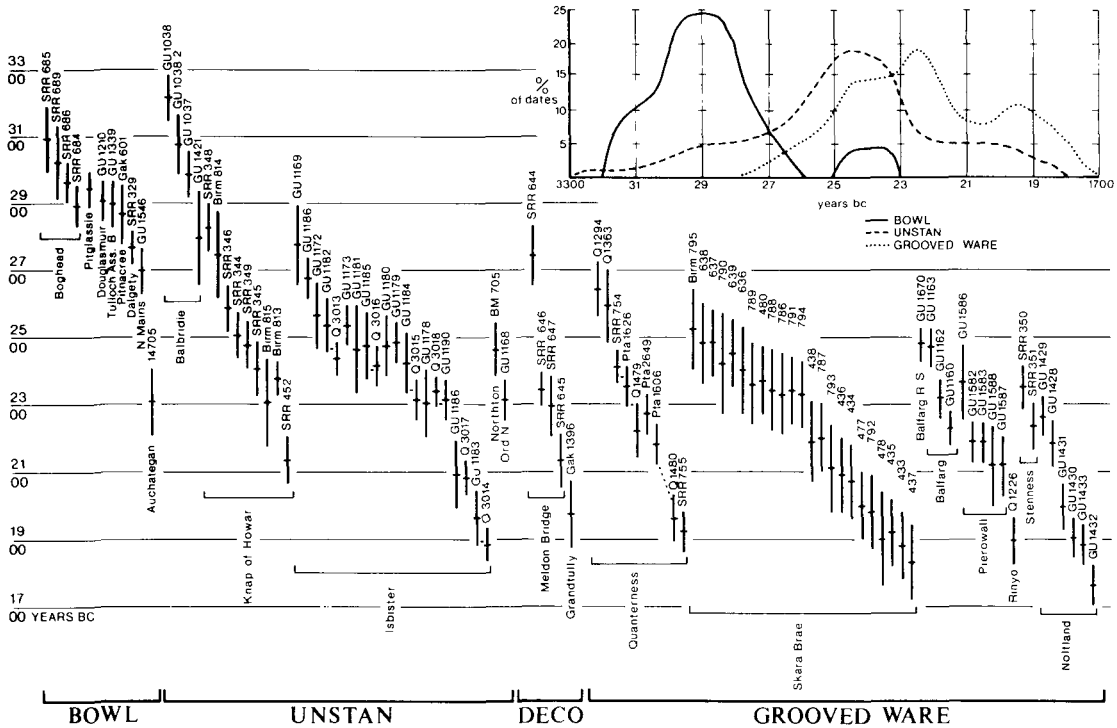


ILLUS 3a, b Examples of Scottish Neolithic pottery styles

dangerous method of correlation with monuments and the available radiocarbon dates. Comparison of the latter (illus 4) provides little more than confirmation of existing schemes with a broad succession of Bowl-Unstan-Grooved Ware and an uncertain status for the decorated styles. There are no dates for the Hebridean group.

Some broad distinctions can be established for distributions. Plain bowls, largely defined by negative characteristics, are ubiquitous; so too are carinated versions, although there is some possibility of a particular north-eastern style with frequent fluted decoration. The Rothesay/Achnacree group is limited to the south and central-west as is Beacharra and both appear to have close linkage with Clyde tombs. Unstan in terms of its broadest definition is limited to the north-west and north is of uncertain relationship to the localized Hebridean style. The decorated styles of the later Neolithic lack real definition but occur only in the south where a few Peterborough components are also known. Grooved Ware occurs in all areas. The potential for regional analysis is here but, added to the restrictions already voiced, this is rendered even more difficult by the looseness of definitions involved (Sharples 1981, 39). These cannot be remedied until far more detailed study and classification is undertaken.

Some broader affinities can be recognized, although these should not be straightforwardly accepted as indications of source. The carinated bowls belong to the extensive British group known as Grimston-Lyles Hill (Smith 1974). The term is unsatisfactory in carrying an implicit sense of regional origins and has tended to be employed loosely on a broad geographic range without abandoning this formative regional role, thus creating misleading patterns of influence or interchange. The fluted decoration common in some assemblages (Henshall 1983) invokes comparison with the Irish Ballymarlagh and Lyles Hill styles (Case 1961) and this has persuaded several scholars to the vision of



ILLUS 4 Radiocarbon dates for Scottish Neolithic pottery styles (standard deviations above ± 150 excluded)

direct colonisation of the north-east from Ireland via the vaunted but unproven Great Glen route (Atkinson 1962; Walker 1968; Burl 1984). It should be stressed that, with rare exceptions for specific assemblages, the present state of understanding and lack of publication is much the same in the rest of the British Isles as for Scotland. Detailed corpora, based on agreed methods of characterization rather than the existing combination of intuition and prejudice, are the only remedy.

Comparable attempts have been made to discern contacts for various forms with external styles as diverse as Abingdon, Hembury and a range of Irish traditions (Scott 1969, *in* Marshall 1978, *in* Marshall & Taylor 1977; McInnes 1969). This obscures the overall sense of trending within the insular ceramic tradition: immaterial of the degree of inter-regional contact, there is a general pattern of shift from widespread generalised forms to an increasing emphasis on elaboration of shape and decoration where defined regional styles become identifiable. We must be sure that we are drawing parallels on the material and not processual level before invoking formative or influential contact. This is not, at present, possible.

For the developed styles it certainly seems unnecessary to extend beyond regional process to explain origins and to see those such as Hebridean and Beacharra as the products of a clear local ancestry. Unstan is less easy: there is no agreed definition except, perhaps, in Orkney and even here serious differences exist (Piggott 1954, 248; Hedges 1983; Clarke 1983; Sharples 1981). Its apparent presence in the north-west pre-supposes some relationship to the Hebridean style but no assessable context is yet available. In the Orkneys it is in part contemporary with Grooved Ware on radiocarbon evidence but no actual relationship can be shown and attempts at social or hierarchical division (Hedges 1984) or even affiliation (Clarke 1983) remain tenuous.

Any concept of the nature of the decorated styles is severely qualified by the usual poverty or fragmentary nature of the known assemblages, with the effective exception of the pit groups from Brackmont Mill, Grandtully and Meldon Bridge. There are certain affinities with the southern Peterborough styles but these rest largely on a common taste for ornate decoration in a wide variety of impressed techniques. Their distribution extends from the Tay to northern Northumberland and is effectively complementary to that of accepted Peterborough vessels. A further point of comparison lies in deposition: evident selection was remarked at Brackmont Mill (Longworth 1967, 72) and this seems likely in the other known pits. The very few finds of Peterborough within this area hint at processes outwith normal ceramic use and this will be discussed later.

STONE AND FLINT RESOURCES

The potential resources of flint and other materials with usable flaking properties have been mapped for Scotland (Wickham-Jones & Collins 1978) and substantial effort is being devoted to the elucidation of the exploitation, working and distribution of Rhum bloodstone (inf Wickham-Jones and Sharples). The latter, as a specific problem-solving exercise, is much to be commended as a model for others to follow although firm results are not yet available.

The existing research on other materials is limited: information is confined to a presence/absence record. There is a critical need for the assessment of the potential of deposits of flint (here used as a shorthand term for a suite of flakeable materials). Technology and, critically, typology are obedient to the size and quality of the raw material. Currently it is not possible to model any scale of exchange mechanisms, although one might expect that the Buchan deposits are likely to rank highly for the north and east and Antrim should be important to the south-west, for large implements at least. Continuing work is likely to remedy these difficulties (Wickham-Jones 1981). Apart from documenting the regional scene, critical assessment of the utilisation of alternative materials to flint (as quartz, bloodstone, pitchstone, even bone) should supply valuable comparanda to the southern British picture where the apparent dominance of flint has, perhaps, obscured or devalued the flexibility of response to other sources. Recent work on the Langdale axe-factories, for example, suggests that substantial blades were produced alongside the familiar axes (inf Bradley) and there is now an urgent need to document these products on site within the market area.

Major difficulties still attend the understanding of the role and occurrence of stone axes. Response to the problem has been inconsistent and ill co-ordinated (Ritchie 1981). These variable responses include attempts to isolate particular axe-factory products as with Tievebulliagh (Group IX) on a national basis, or Langdale (Group VI) for the south-west. Elsewhere systematic study of a particular regional collection (MacKie and Holgate at Inverurie Museum) has allowed the identification of a specific source on the Aberdeen-Banff border (Group XXXIII) and a rare fieldwork exercise has located elements of the factory site at Creag na Caillich (Group XXIV: Ritchie 1968; MacKie 1972). Practical evidence for extraction methods is available only for the Northmaven source (Scott & Calder 1952).

The latter is of interest as the product of detailed fieldwork and excavation creating and realising a framework for both production and utilisation. The insular microcosm here is worthy of highly-detailed study.

The total number of stone axes is unknown: the distribution of c 500 has been mapped and about half of these grouped by macroscopic or thin-section identification (inf Scott). The collections in the National Museum alone comprise over 1400 examples (inf Clarke) and this figure could perhaps be doubled for the entire country. The statistical basis for assessment is thus insecure although two interim estimates could eventually prove important: Langdale products predominate in

the south-west and Tievebullagh seem important in the north-east, perhaps reinforcing apparent ceramic affinities.

Although useful, these observations are extremely limited and the tendency to obscure the scale of local production is explicit. In southern Britain relatively systematic survey on a regional basis is well-established (Clough & Cummins *eds* 1979) but the techniques have come under increasing criticism. The regional basis tends to conceal rather than enhance broader patterning and this can all too easily be misinterpreted, as in the curious use of proportional counting by Cummins (1974; 1979). Equally, geological fieldwork at Langdale suggests that the variation of the mineral inclusions is greater than currently allowed in petrological analysis. In effect some groups may well not exist, others might be more extensive than realised and more might be identified by inter-regional co-ordination. One way ahead must be the active utilization of detailed geological mapping, which is readily available, to identify rock sources which would be both accessible and suitable for axe manufacture, thus working from raw material to product rather than the reverse. This opportunity exists for Scotland and, given the present state of petrological studies here, should form the basis for the next generation of work. The process is clear: firstly, cartographical identification of available and usable rock followed by specific fieldwork with sampling towards a petrographic index and active search for *débitage* and quarrying traces; secondly, systematic analysis region by region of the axes themselves, combining typology (cf Howell 1981) with sourcing.

This might seem to divert massive resources toward the elucidation of a narrow circumstance but the advantages go far beyond this. Stone axes are the most visible and resilient part of the archaeological record. Whatever the circumstances of their deposition, relative quantities are an index of settlement density and their sources an indication of broader cultural and economic contracts. They are, potentially, the most solid basis for the quantification of Neolithic studies.

HOUSES AND SETTLEMENTS

It is not clear what might be expected to characterize domestic sites, spatially or culturally. This is an abiding problem for the British Isles and, indeed, for most of western Europe in post-Bandkeramik times. The familiarity of longhouse settlements plans for the Bandkeramik areas such as Limburg, the Rhine valley and the Aisne has effectively disguised the poverty of the record over the next 1500 years or so. West of the Rhine house-plans for the TRB, Michelsberg and Chassey are few and, even then, often fragmentary. Even in intensively-studied areas such as the Aldenhoven plateau (Hammond 1981) and the Aisne valley (R A P 1982), where pits and ditches are common, Michelsberg houses remain unknown. Whilst regrettable, therefore, the scarcity of structures in Britain should not be the occasion for insular paranoia. There are several possibilities in explanation, both structural and post-depositional. A change in building-methods to sleeper-beam construction, suggested by surviving traces at the Federsee sites of Aichbuhl and Riedschachen, might leave little archaeological trace just as turf-walled crofts might remain elusive. Equally the sophisticated carpentry exemplified by surviving timbers in the Somerset Levels (Coles & Orme 1979) would allow of the construction of log-cabin styles with a minimum of sub-surface features. The vulnerability of such evidence is enhanced by the effects of erosion, most commonly that of effectively continuous cultivation over four or five millennia. The post-depositional record equally comprises deposition – normally alluvial or colluvial – sealing evidence from the standard techniques of the archaeological discovery. It is instructive to compare the means by which three recently-excavated substantial Neolithic buildings were retrieved: Ballyglass accidentally beneath a court cairn (O’Nuallain 1972), Buxton beneath colluvium in speculative trenching for a Roman road (inf Garton) and Balbridie after aerial photography revealed an apparent Dark Age longhouse (Reynolds 1980; Ralston 1982; 1984).

These circumstances are not made easier by the need to reassess some known structures. That at Fengate (Pryor 1978) is a small rectangular emplacement with no obvious roofing methods: the exceptional nature of the few finds (concentrating on high-quality pottery and a rare form of jet bead) suggests that a non-domestic function must be envisaged, just as for the mortuary houses of comparable construction which underlie chambered tombs at Gwernvale and Knowth (Britnell & Savory 1984; Eogan 1984). This process is comparable to that which has enforced reconsideration of Danish sites such as Barkaer, now re-interpreted from terraced rows of single apartments to a pair of long barrows (Madsen 1979).

This point is appropriate to a consideration of the timber buildings known in Scotland. At Balfarg Riding School (inf Barclay) two long narrow post-framed structures have been excavated. Essentially they consist of an outer 'wall' of close-set posts with two internal rows of larger elements. The relative width of the aisles and variations in internal alignment make it difficult to envisage roofed buildings with adequate internal space. The excavator has postulated instead an elongate palisade enclosure for a row of four and, perhaps, six-post platforms, presumptively for exposure of corpses. One was set within a circular enclosure of henge affinity, which enhances the claim to 'ritual' function. There are difficulties to this interpretation and these will be discussed later, but for the moment we must accept that we are not dealing with a domestic or roofed building. Comparable reservations have been entered about the massive Balbridie structure. Originally excavated as an example of a Dark Age hall (Reynolds 1980), the evidence for a Neolithic date is now compelling (Ralston 1982). The radiocarbon determinations form an acceptable cluster, allowing for a spread derived from sizeable timbers, so that the later dates are the most likely. Artefacts were sparse but in accord with a Middle Neolithic date, and the plant macrofossils consonant with this attribution. Earlier misgivings about its antiquity must now be set aside, but, interestingly, were frequently attached to reservations about the scale of the structure and the necessary sophistication of architectural technique. Implicit in this is an inbred assumption, to which prehistorians are unfortunately vulnerable, that the house is a Roman invention, all predecessors being huts. Terminology, here again, must be seen as formative to both perception and expectation.

There has been speculation on the Balbridie superstructure. It is certainly the largest known building in the post-Bandkeramik west and roofing must depend on an optimal view of the abilities of Neolithic carpenters. Surviving fragments from the Somerset Levels, already mentioned, are sufficient evidence here. Equally the other sizeable buildings known at Ballyglass and Buxton, whilst less substantial show a comparable method of tripartite unit construction. In particular the critical use of squared timbers at the main load-bearing points argues for elaborate mortise-jointing in the superstructure. The prevailing climate of the British Isles demands stable all-weather roofing. The alignment of Balbridie along the line of prevailing wind, and conceivably the aerodynamic design of bowed ends, resolves the problem to some extent. Equally, the sophistication of carpentry technique necessary to roofing might provide further reason for the paucity of Neolithic structures: the stronger and more resilient the bonded roof construction, the less the need for massive wall-emplacement. Some speculation must attach as to the distinction between architectural necessity and social/economic function in the tripartite arrangement but there is no obvious reason why the two should not coincide. The distribution of cultivated plant remains at Balbridie argues for a specialized role for the rear division, and at Ballyglass this section was formalised into an effectively external lean-to. In plan and scale some internal components at Balbridie could be readily compared to elements of funerary sites such as the exceptionally well preserved structures at Nutbane (Morgan 1959). This does not *per se* demand a vision of Balbridie as aggrandized mortuary house, with occasional offerings of pottery and foodstuffs. Constructional techniques for the manipulation of large timbers are likely to remain standard whatever their on-site purpose and the interchangeability between domestic and ritual

necessity needs no reiteration. The location of Balbridie is agriculturally ideal and likely to be of predictive value for future research: there seems no reason to deny it the status of Neolithic farmhouse: whether croft or manor remains to be seen in future perspective.

Elsewhere post-framed structures are known at Raigmore (inf Simpson) and Auchategan (Marshall 1978). Pending publication of the former, comment must be restricted to the claims made for the latter site. Again, discovery was accidental in the cause of investigating visible post-medieval remains which sealed a complex sequence. Whilst there seems little reason to doubt the stratigraphic context of the Neolithic artefact assemblage, the format and integrity of the claimed building(s) are not clear from the published evidence and the site must rest with a status of 'occupation, probably domestic'.

The Hebridean zone presents the greatest potential for surviving structures but this has hardly been exploited. The striking success of investigations on Bronze-Age sites is clear and a firm indication of the possibility for earlier periods. The vast quantity of material from Eilean an Tighe (Scott 1951) shows what might be made of the detailed analysis of a better-preserved site. Preliminary accounts (inf Crawford) suggest that such exists at the Udal, combining apparent domestic and ritual structures in a context which can hardly fail to extend understanding.

The Orkney settlements at Skara Brae, Rinyo and Knap of Howar are well known and have recently been accessibly summarized (Ritchie 1985; Clarke & Sharples 1985). They can serve here to make a few points. The Knap of Howar farmstead conforms to the established earlier Neolithic pattern of dispersed settlement, the Grooved Ware villages to the clustering implicit in the centralizing social changes of the mid to later third millennium. Recent discoveries are likely to enforce reassessment of these familiar circumstances. The apparent emphasis on ritual at the Links of Noltland (Clarke & Sharples 1985) should bring a more active realisation of its formative role in more mundane contexts elsewhere and the completion of excavations in the stone structure should allow of further explanation of other random observations currently regarded as accidental or acausally ritual. The deep stratigraphy at Pool should provide further perspective on site formation processes. More importantly a new perspective on the Orkney landscape has been provided by the initial fieldwork of Richards. The results from a single transect have already enforced perceptual change as to the density and variation of activities. The discovery and current excavation of a substantial Grooved Ware site adjacent to and perhaps contemporary with the Stones of Stenness represent a substantial addition to understanding. Interestingly, this is a rare example for Scotland of the organised field-walking which has been a standard technique in southern Britain for some years: the results suggest that the practice might be usefully extended, even or especially in areas felt to be unsympathetic to the technique.

This is perhaps the place to record distinct reservations about the nature of the evidence at Knap of Howar (Ritchie 1983). The basic circumstance of structures inserted into existing midden deposits is clear and it would seem that all diagnostic finds derive from these latter, either *in situ* or displaced. Little material can be firmly attributed to either construction or use of the houses and the most distinctive (pot 57), from a floor deposit, is sufficiently anomalous as to raise doubts about its real date (? crucible). Whilst house 1 could be seen as a reasonably direct rendition into stone of the rectangular timber-framed tradition, and the addition of house 2 as pre-figuring the accretion process familiar at Rinyo and Skara Brae, some doubts must be retained. The depredations of earlier excavation may have been more extensive than allowed for and this does not assist the possibilities for re-assessment.

On the problem of definition of domestic sites the logical progression from fieldwork to excavation does not necessarily provide resolution. Pits are recurrent although in 1964 only one certain site could be claimed for Scotland (Field *et al* 1964, 377). On the assumption that storage was the standard function, comparison of this pattern with that for the Iron Age led Piggott (1966) to

define two economic spheres – effectively agricultural and pastoral – by pit presence/absence, effectively a renewed version of the highland–lowland zone of Fox (1938), after Mackinder (1902).

Since 1964 excavations on appropriate sites have added a few examples (appendix 1), but it remains true, as for the south, that function has not been clarified. Few Neolithic pits are suited to storage by shape or size and none have produced remnants of the necessary lining or cover. The absence of pits in or around the investigated area at Balbridie is significant, particularly since the major density of processed crop remains suggests in-house storage, perhaps in a separate section.

Accumulating evidence from English sites, none published in interpretative terms at least, provides an alternative view of pits as a surviving format for the organized deposition of selected material, and the most apparent component of in-site structuring of activities, providing a clear avenue towards the explanation of the integration of ‘ritual’ and domestic. This point, again, will be developed below.

As already outlined, the enclosures familiar for most of western Europe are lacking in Scotland. Geographically there are two outliers of the southern British cluster which lie within the Scottish cultural sphere: Hasting Hill is unproven but probable on cropmark evidence (Newman 1976) and Donegore Hill in Co Antrim has been dated to the earlier Neolithic (Mallory & Hartwell 1984). Until the discovery of the latter a plausible case could have been made for a genuine cultural or social differentiation of north-west/south-east Britain. We must now actively test this. There appear to be no contenders for this site form in Scotland on the existing aerial survey record but it is appropriate to recall the European experience. Overall the combination of increasingly intensive aerial coverage and specific search has seen a substantial increase in the number known. This is nowhere clearer than in south Scandinavia where at least eight sites have now been proven in the last decade, none being known previously (inf Madsen). It seems to be the general experience that having found one, others soon join the record. Nevertheless, the Scottish lacuna might be genuine: East Yorkshire, with its many affinities in the earlier Neolithic, has been intensively covered by aerial photography and only one atypical contender for causewayed enclosure status has been noted (Kinnes *et al* 1983).

Mercer (1981a, 188–98) has outlined the evidence for hilltop occupation in western Britain, with the possibilities for defended enclosures, as at Carn Brea, as a recurrent form. Balloch Hill (Peltenburg 1982) and Traprain Law (Jobey 1976) have both produced quantities of Neolithic material: the case for enclosure remains unproven but nevertheless eminently worthy of further investigation. The clear evidence for concerted warfare episodes at Hambledon Hill, Carn Brea and Crickley Hill (Mercer 1980a; 1981a; inf Dixon), coupled with the frequency of death by arrow in the mortuary record (Kinnes forthcoming), has not been echoed so far in Scotland.

A comparable circumstance may exist for field systems. For Britain, overall synthesis, to some extent inductive, of the evidence suggests that agriculturally favourable areas at least had assumed a familiar landscape pattern within the first few hundred years of established farming: organised fields, farmsteads and controlled woodland reserves. Fragmentary patterns survive for land divisions in the Late Neolithic at Fengate (ditched: Pryor 1978) and Trelystan (fenced: Britnell 1982), and at an earlier date with more durable stone walling beneath blanket bog at Behy (Caulfield 1978). In Orkney there are indications of field systems dependent to Grooved Ware settlements at Skara Brae and Links of Noltland (inf Clarke) and at a comparable date in Shetland the enclosure process at Scord of Brouster (Whittle 1980) seems to have been in formation. Elsewhere field boundaries of the second millennium are known, as at Achnacree (Barrett *et al* 1976) but earlier examples are as yet unknown, although current work on Machrie Moor suggests the existence of extensive fence systems. Again, surfaces protected by dune or bog formation would seem to offer real potential and this emphasises the comparative archaeological neglect of the western zone. In the east extensive ditch and pit alignments are becoming a familiar feature of aerial survey and their dating remains largely

untested. The evidence from an excavated length of the Ewart I pit alignment in the Milfield Basin (Miket 1981) suggests a Grooved Ware attribution and opens real possibilities for landscape elucidation here and elsewhere (Miket 1976; Harding 1981).

One method of enclosure remains for discussion. At Meldon Bridge, a rare example of earlier prehistoric investigation in the borders, Burgess (1976a and *in litt*) has defined a remarkable palisaded structure enclosing some 8 ha. at the confluence of two stream valleys. Two distinct episodes of activity were recognised: pit groups with later Neolithic decorated pottery dated to the mid-third millennium bc and the enclosure, perhaps with internal? ritual post-settings, at the end of that millennium but with no associated material. Burgess has argued for a defensive function, both by the scale of the palisade and its relative strengthening at strategically vulnerable points. Since this excavation a close structural parallel has been discovered by aerial survey at Forteviot in the Tay valley (St Joseph 1978). Here a substantial palisade encloses an area of c 6 ha and has, in common with Meldon Bridge, a single avenue approach; a series of probable henges lies in the immediate area, recalling possible ritual components at Meldon Bridge. Both sites lie on gravel, an easy medium for ditch and bank construction, so that the extra effort devoted to palisade building must be seen as a deliberate choice for practical defence or prestige enhancement. There are, of course, themes held in common with the insular enclosure tradition of social monuments but no sufficient explanatory mechanism has been advanced for this class whose numbers are likely to be increased by further survey. The possibility must remain that both sites represent the changing circumstances of the early second millennium bc where the appearance of Beaker pottery, whatever its particular interpretation, at least indicates a period of considerable social readjustment. At Mount Pleasant the henge monument was re-defined by a defensive palisade enclosing c 4.5 ha. with an internal stone setting replacing an earlier timber shrine; here again, we seem to be dealing with a society under exceptional pressure.

ECONOMY

A very few Scottish sites have produced evidence for the economic base and much of this derives from recent excavation where the level of analysis now necessary involves considerable time and labour input. As a result little is currently available in definitive form. Scotland is not unique in this respect since a solid information base is equally slight for western Europe as a whole.

We must resort to a predictive and inductive method: the success of adaptation within the temperate zone is well-attested by the density of settlement and speed of diffusion of farming systems from the Balkans to the shores of the Baltic and North Sea. Although firm knowledge is sparse, a clustering of observations does allow a broad understanding and the problems and practicality of this approach are well set out by Dennell (1983). Whatever, there can be little doubt that the system(s) introduced to these offshore islands were the product of at least two millennia of successive and successful adaptation. The potential variability of these has already been outlined as critical to interpretation of the colonization process.

The constraints on food-production economies in this context are few. By the later fourth millennium bc the range of established cereals was sufficient to cope with the potential variation of soils and climate within the temperate zone and oil- or nitrogen-based legumes provided both dietary supplement and the possibilities for crop-rotation and soil conservation. The long-term restricted catchment occupation by Bandkeramik groups in river-valleys across Europe can only have been possible under this system with the addition of deliberate or forage-manuring. With the concomitant background of natural resource exploitation implicit in local Mesolithic communities, food-supply is effectively guaranteed in any particular British locus, given the predictive flexibility of response.

Before assessing the Neolithic pattern it is important to take account of later environmental history in terms of depletion of forest cover and soils, the creation of acid moorland and blanket bog and so on: on balance it is more productive to take an optimizing view of early farming circumstances and test actuality against this.

Outside Orkney domestic sites have produced little by way of faunal assemblages, being largely on acid soils. Preliminary information for Northton (Simpson 1976) shows an emphasis on sheep and cattle with a large contribution from marine resources, a predictable pattern which seems to continue into the second millennium at sites such as Northton, Kilellan Farm and Rosinish (Burgess 1976b; Shepherd 1976).

A comparable economy has been documented for Orkney. Full results are available for the Knap of Howar (Ritchie 1983) and indicate a secure production base of cattle, sheep, a few pigs and extensive inshore and sea fishing. Red deer are rare and this would seem to reflect scarce local resources rather than a distaste for hunting. Initial results from recent investigations at Skara Brae and Links of Noltland seem in conformity. One important aspect of these well-preserved and broad-based assemblages is the possibility for detailed specialist studies of wider relevance: at Noltland, for example, the careful distinction of natural and cultural populations in the bird remains allows informed assessment of depositional processes in an apparently ritual context and has shown the remarkable similarity of Neolithic exploitation to that of recent times (inf Armour-Chelu). The specific circumstances in chambered tombs, where detailed selection has been interpreted as totemism (Hedges 1983; 1984), should benefit from this approach.

The particular role of animals awaits further assessment. The unduly high proportion of young individuals, especially cattle, at Knap of Howar and Skara Brae has been variously interpreted. A previous insistence on autumn culling to conserve insufficient supplies of winter fodder, a situation incompatible with the evidence from the bones for good nutritional standards, must give way to other possibilities. On the basis of assemblages from Hambleton Hill and Grimes Graves Legge (1981) has postulated a dairy economy as explanation, although this has been questioned by others (Clutton-Brock 1981; Jewell 1981; Noddle *in* Ritchie 1983).

One further circumstance in Orkney deserves mention. Red deer do not seem to have been native to the islands and Clutton-Brock (*in* Renfrew 1979, 113) has argued for their importation by early farmers. Papa Westray is unlikely to have sustained a viable deer herd in its 12 sq km, especially in competition with an agricultural landscape, so that the few bones at Knap of Howar would represent introduced carcasses. The rarity of antler as a raw material in Orkney contrasts with its frequency elsewhere in Britain and this might be taken as an index of availability. It might, indeed, have been possible to view all red deer occurrence as due to imported venison from mainland hunting but this cannot be sustained in the face of a single discovery at Noltland where 15 complete skeletons lay together (inf Clarke). Although domestication is unlikely, human conservation and control must be invoked, perhaps in a form comparable to that suggested for the later Mesolithic (Mellars 1976). Whatever, the critical factor is the allowance that must be given for economic flexibility based on solid experience.

The role of crops suffers equally from the poverty of evidence with viable information from very few sites. Wheat and barley, the latter apparently preponderant, have been recovered from Skara Brae, Knap of Howar, Boghead and Balbridie, with the addition of quantities of flax at the last-named. In essence it would seem that wheat, especially emmer, was very much at the geographical limits of its cultivation with a consequent emphasis on barley. Despite the difficulties which attend the preservation and recovery of plant remains (Hillman 1981), information is available from a growing number of sites although hardly yet capable of synthesis.

Agricultural history must still depend on inference from other sources. Pollen profiles provide a

generalized record of clearance and cultivation, although beset by real problems of interpretation and specific correlation with the archaeological context (Rowley-Conwy 1981a; Smith 1981), a situation easily exemplified by past over-reliance on the elm decline as an indicator of anything except elm decline (Groenman-van Waateringe 1983; Goransson 1984; Edwards & Ralston 1984). Agricultural implements survive only rarely, being primarily of wood, although wet contexts have preserved some Neolithic implements at sites such as at Ehenside Tarn, Etton and in the Somerset Levels (Coles *et al* 1978). Single-piece flint sickle blades are rare and seem to be confined to southern Britain and necessary microwear studies have not been applied on any scale to the elucidation of the (probably) more common composite version. Querns and rubbers are frequent associations but cannot be invariably assumed to demonstrate cereal processing rather than wild plants, or even the production of fish meal (as at Skara Brae) or crushing of shell and stone in pottery production.

Ard cultivation has been documented on protected surfaces at Callanish and Noltland and ridged plots survived beneath the North Mains barrow, perhaps the result of spade-cultivation (inf Ashmore; Clarke & Sharples 1985, 73; Barclay 1983). These practices seem to continue into the second millennium with examples at Sumburgh, Rosinish, Machrie and Kilellan Farm (Halliday *et al* 1981). How far these represent actual furrows, as opposed to land preparation, remains a topic of some controversy (Rees 1981; Barker & Webley 1978) but there is general agreement that they reflect an agricultural process.

The modern pattern of land-utilization for Scotland shows relatively little emphasis on arable, occupying c 20% as opposed to c 70% rough-grazing although the productivity levels for cereals in favourable areas in the east compare well with those for the most fertile zones in southern Britain (Nash 1981). We can reasonably assume that any Neolithic community would find economic stability in most Scottish locations depending on the flexibility of adjustment anywhere between standard mixed farming and heavy reliance on natural resources.

One observation is worth mention here: the construction of the mound at Dalladies involved the stripping of turf and topsoil to a depth of 20 cm over 0.75 ha (Piggott 1972). We can reasonably assume that this represents stable pasture after initial forest clearance and that the mound represents a considerable commitment of an economic resource. Whilst the requirements of ritual might be compelling, it seems unlikely that the subsistence base would be placed under threat and this argues for a genuine state of surplus.

MORTUARY SITES

Scottish megalithic studies, as often elsewhere, are bedevilled by applied typologies in which assumptions predicate unilinear arguments which offer their own proof. The subject is indebted to the late John Corcoran, particularly for his insistence upon regarding the monument as of equivalent interest to its contained chamber, an approach previously followed only in random forays into the question of long barrow origins (Piggott 1967).

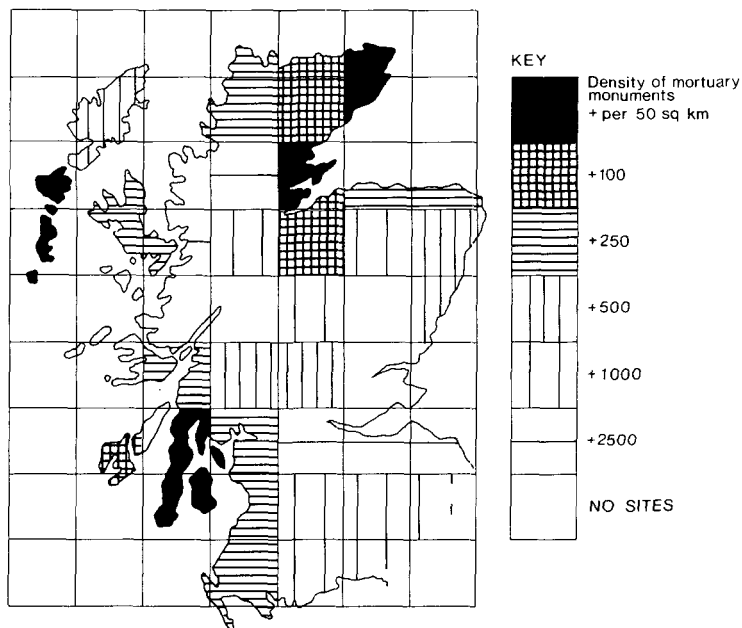
Corcoran's perceptive excavations at sites such as Mid Gleniron and the Loch Calder group (1969a; 1967) were innovative and highly influential in demonstrating principles of remodelling, primarily by chamber extension and cairn accretion. They were, perhaps, too influential and Corcoran himself was to pursue the argument almost to sterility by an insistence that the fundamental result of this work was to justify and extend the absolute importance of typology as culture history (Corcoran 1969b; 1972). The final syntheses by Henshall (1972; 1974) betray this influence and, whilst valuable, it can now be seen that the concern with 'multi-period' construction diverted attention from more pressing matters: serious questioning of the bases of typological or taxonomic studies and the possibilities for social interpretation, in particular. Equally, others were persuaded

that the systematization of structural change provided the answers to the questions of origin and chronology which were seen as the effective purpose of research (Scott 1969).

This is nowhere clearer than in work on the Clyde group. The simple perception that small box chambers are likely to be early has become a universal precept so that all such, including those isolated from their surroundings by observation rather than excavation, are not only early but the earliest, leading, among others, to the creation of the misleading term of 'protomegalith'. Coupled with this is the demonstration that simple chambers at Mid Gleniron were contained within round cairns which preceded long mounds: this despite the fact that these are of undifferentiated rectangular plan, as indeed are some in the 'evolved' long cairns.

By interpolated ceramic association and a single radiocarbon date the excavators were persuaded that this form of sequence existed at Glenvoidean (Marshall & Taylor 1977), although examination of the recorded contexts at best leaves us with Masters's calm verdict (1981) of 'not proven'. The desire to reconcile perceived sequences of ceramic and structural styles by using each to justify the other leads also the identification of sources *qua* origins: the Irish Sea for decorated pottery and the megalithic chamber, Yorkshire for Grimston bowls and long mounds, the south-west for Hembury ware and Severn-Cotswold façades.

Without any promise of answers, we can pursue alternative approaches to these problems. As with all present and future work the admirable Henshall corpus (1963; 1972) provides the basis and the forthcoming fascicule additions are eagerly awaited. There are some basic observations. The overall density of monuments (illus 5) provides the usual problems of interpretation: factors of relative survival are clearly influential but we have no yardstick for the assessment of prehistoric actuality. It might be appropriate here to provide an analogy with another part of the megalithic province. Twelve recognizable megalithic monuments survive on the Channel Island of Guernsey: a

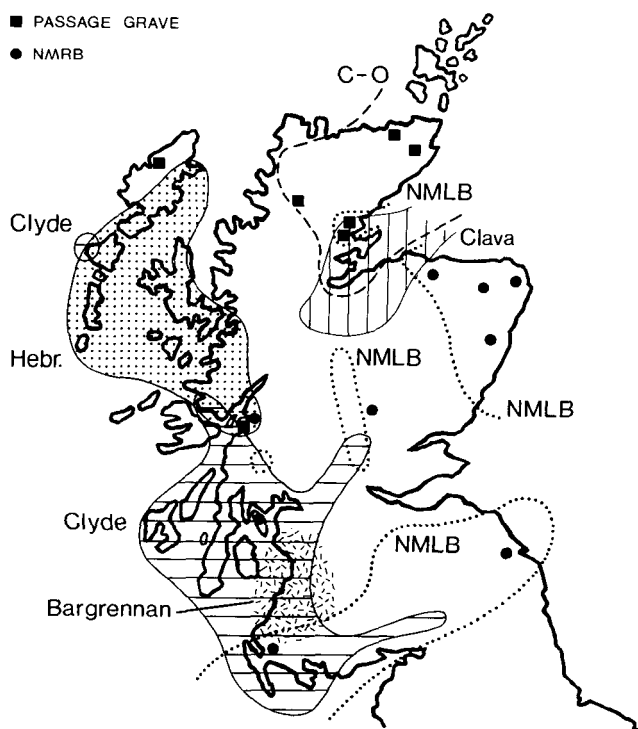


ILLUS 5 Density of mortuary monuments in Scotland

density of approximately 1 per 6 sq km. All lie on land now marginal to agriculture and this pattern is reinforced by information available from both medieval charters and specific place-names which suggest that c 70 recognizable monuments survived into the last millennium, a density of 1:1 sq km. Such evidence is, of course, conditional and the circumstances of small islands may not reflect those elsewhere; it is, however, compelling and a necessary proviso to all interpretations of both distribution and regional styles. The impact of relative visibility in the archaeological record is clear for Scotland as any comparison of effort expended by regions will amply demonstrate (illus 1). The picture is not wholly gloomy: the classic instance of the Rousay distribution (Childe 1942; Renfrew 1979) continues to satisfy increasingly sophisticated methods of topographic analysis (Fraser 1983).

Accepting these reservations it is possible to produce broad clusterings of particular structural traditions (illus 6) and these readily invoke some general observations. The geographical division of megalithic and non-megalithic (NM) traditions is clear. In the megalithic west and north regional styles – Clyde, Hebridean and Cromarty-Orkney – can be distinguished. Overlapping or isolated clusters – Clyde outlier, Bargrennan, Clava, Maes Howe – point to a diachronic or functional separation. Distinctive forms—passage graves and non-megalithic round barrows – although this choice might be open to question by those not of the author’s persuasion, provide an alternative intra-regional patterning.

This being established some attempt might be made to define the particular. The structural distinction of chambers defined by the presence or absence of large stones is both absolute and relative. As in southern Britain the east-west distinction holds broadly true and this is broadly related



ILLUS 6 Regional styles of mortuary monuments in Scotland

to geological circumstance. In the formative stages of modern British prehistory, the information base was securely 19th century so that the excavation of NM structures at sites such as Wor Barrow, Thickthorn and Giants Hills demonstrated a priority for megalithic chambers; those in timber or turf being seen simply as improvisations in stone-free areas.

A growing awareness of real settlement densities, of potential European correlations and accumulating information from analytical excavations of long barrows reversed this position, especially stimulated by the proven NM long barrow–Severn-Cotswold chambered tomb sequence at Wayland's Smithy (Atkinson 1965). The terminology alone is explanatory: NM or non-megalithic is a negative term; long barrow a field monument category elevated from descriptor to class; Severn-Cotswold the cumulative effect of three generations of devoted field-workers within a specific area (compare the witless inversion to Cotswold-Severn as an attempt at explanation; Corcoran 1969b; Darvill 1982); chambered is by definition *stone* built; tomb recognized the fortuitous coincidence of functionless structures with human remains.

There are only three established relationships between NM and megalithic structures: Wayland's Smithy, Lochhill (Masters 1973) and Gwernvale (Britnell & Savory 1984). In each instance NM components had precedence; at Wayland's Smithy a completely new monument was built, at Lochhill existing structures were remodelled and embellished and at Gwernvale a complex of wooden structures, probably mortuary houses or shrines rather than domestic, was partly-concealed, partly-incorporated into the long cairn.

Linkages between the two structural forms are common: the long mound, provision of forecourts, segmentary construction and so on. At Slewcairn a slab-built area seems to have held some specialised role within the mortuary process (Masters 1981) and Dooley's Cairn has a composite NM-megalithic chamber (Evans 1938; Collins 1976). This flexibility of response is echoed by the appearance of stone-built façades at sites such as Ballafayle (Megaw 1938) and Dalladies (Piggott 1972). Equally the difference between a Clyde chamber such as Cairnholy 1 and a standard NM embanked form is one only of architectural materials, not of form or function (Kinnes 1981, fig 6.1).

Given that mortuary rites were prolonged and complex in the Neolithic with the importance of the ancestors as the guiding principle, it is likely that any particular context will demonstrate apparent variation. Held in common by the monumental forms is the provision of an enclosed space. The potential formats available in the earlier Neolithic are wide-ranging and we must allow for some degree of deliberate choice from the repertoire. It is possible to establish distinctive regional traditions which allows of some formulation of the social processes involved.

There seem to be two major early traditions. Broadly speaking there is an eastern (lowland) emphasis on NM construction, particularly of narrow embanked linear zones, covered by both long and round mounds; in the west is a series of simple box-shaped megalithic chambers, commonly set within circular platforms cairns, which might be elaborated into the distinctive Portal Dolmen form, as at Dyffryn Ardudwy (Powell 1973).

In a succeeding stage linear accretion characterizes the northern zone, cutting across the perceived NM-megalithic boundary and uniting sites such as Kilham and Crosby Garrett with the Clyde and Court Cairn series, whereas the southern tendency – as at Nutbane and in the Severn-Cotswold group – is towards agglomeration and dispersal. A simple modular system can be created for this (Kinnes 1975, fig 7).

This is not the place to rehearse the familiar theories of the notional development of Clyde cairns: the basic and, perhaps, over-valued evidence has been thoroughly exposed by Scott (1969) and Henshall (1972). The restrictions posed by the interpretation of unexcavated and badly- or partially-examined sites are all too clear. It is, perhaps, only necessary to point out that there is no need to invoke successive waves of intrusive ideas or populations to explain process or change.

Locally the distributional overlap with NM long barrows and the concepts implicit in round cairns such as the linear zone at Hilton (Marshall 1976; Kinnes 1979) or the closed chambers of Achnacreebeag and Mid Gleniron (Ritchie 1970; Corcoran 1969a) give some indication of the potential for local development from modes intrinsic to the colonisation process.

There is general agreement that overall in western Europe there are two major styles of monument. The passage grave, usually with round mound, has an essentially Atlantic coast distribution from Iberia to the Orkneys, often in cemetery clusters and frequently associated with mural art. The 'long grave', for want of a better term, is found across the north European plain, frequently beneath long mounds and often of NM construction. These broad observations are simply recognitions of developed trends and should not carry any sense of specific connections or cultural packages.

The passage grave is not easy of explanation: comparable architectural features can be traced over great distances and the regional art styles reflect broader linkages (Shee Twohig 1981). For present purposes the attribution of the non-Clyde monuments to this tradition requires specific consideration. In southern Britain there is only one serious claimant as early passage grave: the isolated Broadsands sites in Devon (Radford 1958). In Ireland the pattern is unclear given the relative concentration on the most elaborate monuments but recent work on the Carrowmore cemetery has provided a cluster of radiocarbon dates from c 3000 bc (Burenhult 1984). There is therefore a strong likelihood that simple chamber-with-passage forms are an early feature of the west. It has yet to be established whether these are part of the international style or of local origin. As in Brittany and south Scandinavia, a plausible argument can be made for this ground-plan as the result of providing a means of continued access to hitherto closed chambers.

The dating evidence for the Scottish regional traditions is obscure although accruing evidence from the north at sites such as Tulloch of Assery, Ord North and Camster indicates an early establishment. The Bargrennan group could be of any date on current information and attribution of the Hebridean tombs depends on associated finds which suggest a developed stage, although this is a questionable method. Generally simple forms which, typologically, might be early can be recognized in all areas but little can be said beyond this.

Trends can be identified which have much in common with those discerned elsewhere and this must bear on the functional aspects of this architectural form. Among these are aggrandizement and elaboration, as in the Maes Howe group, and clustering, as with the Clava cemeteries. The latter also provide examples of a shift towards open arenas from roofed chambers, a circumstance in parallel with Ireland (Fourknocks: Hartnett 1957) and Jersey (Mont de la Ville: Hibbs 1985).

Some particular aspects of the Scottish evidence will be treated in more detail below in discussing the NM tradition in the east and the circumstances of the Orkney microcosm. For the present, however, having been somewhat dismissive of the real information base, attention should be drawn to the possibilities and advantages offered by the Scottish sites.

With the possible exception of Ireland, Scotland has the largest number of well-preserved chambered tombs in Europe. Not only does this allow of the accumulation of fieldwork detail exemplified by Henshall (1963; 1972) but also provides a major source for excavation. The large-scale dissection of sites such as Lochhill, Slewcairn, and Camster has not only provided a quantitative but, more importantly, qualitative transform of information and understanding. Further to this, there are chambers with intact contents, an extremely rare event, and the articulation of these within their architectural context is of outstanding importance, as shown for example at the Ord North (Sharples 1981). Work at Quanterness and Isbister (Renfrew 1979; Hedges 1983; 1984) has shown the real possibilities for demographic studies although both are open to serious doubts on the validity of some conclusions by sampling and study method or interpretation (Hedges 1982; Fraser & Kinnes 1982; Bocquet-Appel & Masset 1982). Unlike southern Britain, artefact associations are relatively fre-

quent; their potential for determining chronological sequences has been over-stressed given the recurrent circumstances of deposition and re-deposition within confined areas but the context offers prospects of identifying their social roles.

One further thread might be pursued. The social role of monuments has generated an extensive literature (Fleming 1972; 1973; Kinnes 1975; 1981; Chapman 1981; Renfrew 1976). Whilst conclusions differ there is general agreement on some form of correlation with social systems and here the relative quality of the Scottish archive is of great potential value.

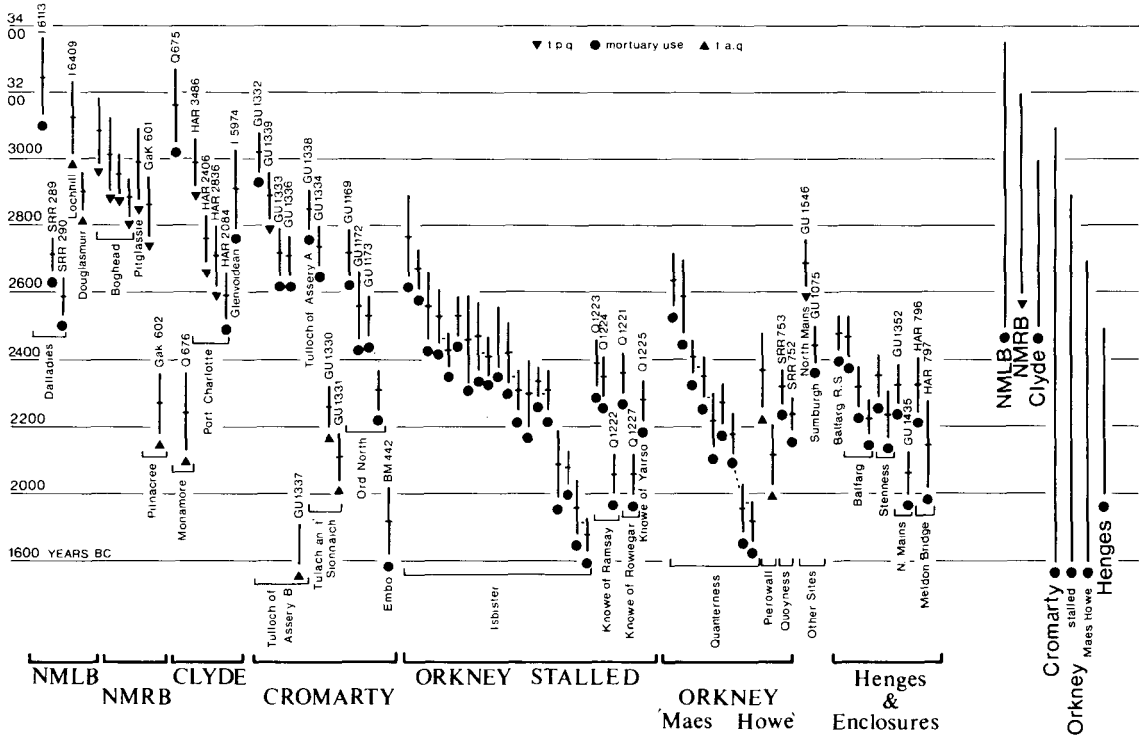
One example might suffice here: that of forecourts. The device is obvious as a focusing device on chamber entrances and is commonly embellished by massive post or stone façades. It is not therefore surprising to find significant deposits here, such as the rows of ornate vessels in Scandinavia, the shrine and ox burial at Bryn Celli Ddu or the occasional pit or hearth. The format can come to dominate the architecture as in the Irish full-court series or the horned cairns of northern Scotland. They can be viewed functionally in two ways: as an integral part of mortuary ritual conducted outside the chamber and as part of a progressive exclusion of participants, a point also made by the spatial structuring of segmented or passage grave chambers indicating status change from outer to inner sanctum.

Those at Slewcairn and Lochhill were prolific of pottery and flint and this is echoed by material from façade trenches at several Yorkshire sites. At Hanging Grimston there were many bones of pig – a plausible animal for conspicuous consumption in a notional ritual context as Durrington Walls suggests, but unconvincing as totemistic. Few Scottish forecourts have been extensively investigated: the dramas enacted at Isbister (Hedges 1984, endpapers) being purely invented. There is, however, a recurrent pattern of careful blocking and infill comparable to that for the chambers and invoking a similar desire to seal off recognized activities.

Elaborate forecourts are very much a feature of north and west Britain and their absence elsewhere must be held to be significant. Other features recur across this boundary so that this differentiation should be seen as genuine in observance and process. There is some coincidence with the division of agglomerate and segmented structures and, indeed, the distribution of causewayed enclosures. We are, perhaps, looking initially at the effects of economic base between landscapes conducive to a dense, evenly spread, agricultural population or to dispersed and economically diversified communities. The latter are more likely to be hierarchical in the interplay of power and wealth and their ancestral rites and mortuary process more wide-ranging and eclectic. The contrast might, indeed, derive from the colonization stage. The north and west are the areas where accommodation had to be reached with stable Mesolithic communities and assimilation by – or of – farmers would be a critical process.

Two final points might be made. The sampling basis for radiocarbon dates has already been held in question and those for the monuments provide little assistance in resolution (illus 7). There are few examples of multiple-dating and rather more of single determinations from vague or unknown contexts. Absolute sequences should not be expected and, indeed, the existing broad indications of the diversity of contemporary traditions are plausible, but research designs for closer resolution are actively needed.

The other matter, of which one aspect will be discussed in the next section, is the remarkable diversity of Scottish practice. Available evidence concentrates upon structural formats and there is much to be gained here from informed analysis, including the techniques developed by Fraser (1983). The complexities of the mortuary process are only hinted at by work to date but there are real possibilities here as the partial records at Quanterness and Isbister show. The prevalence of cremation in the NM structures broadly contrasts with that of inhumation in the megalithic chambers and this deserves further investigation. Mortuary rites, whilst matters such as selective deposition and



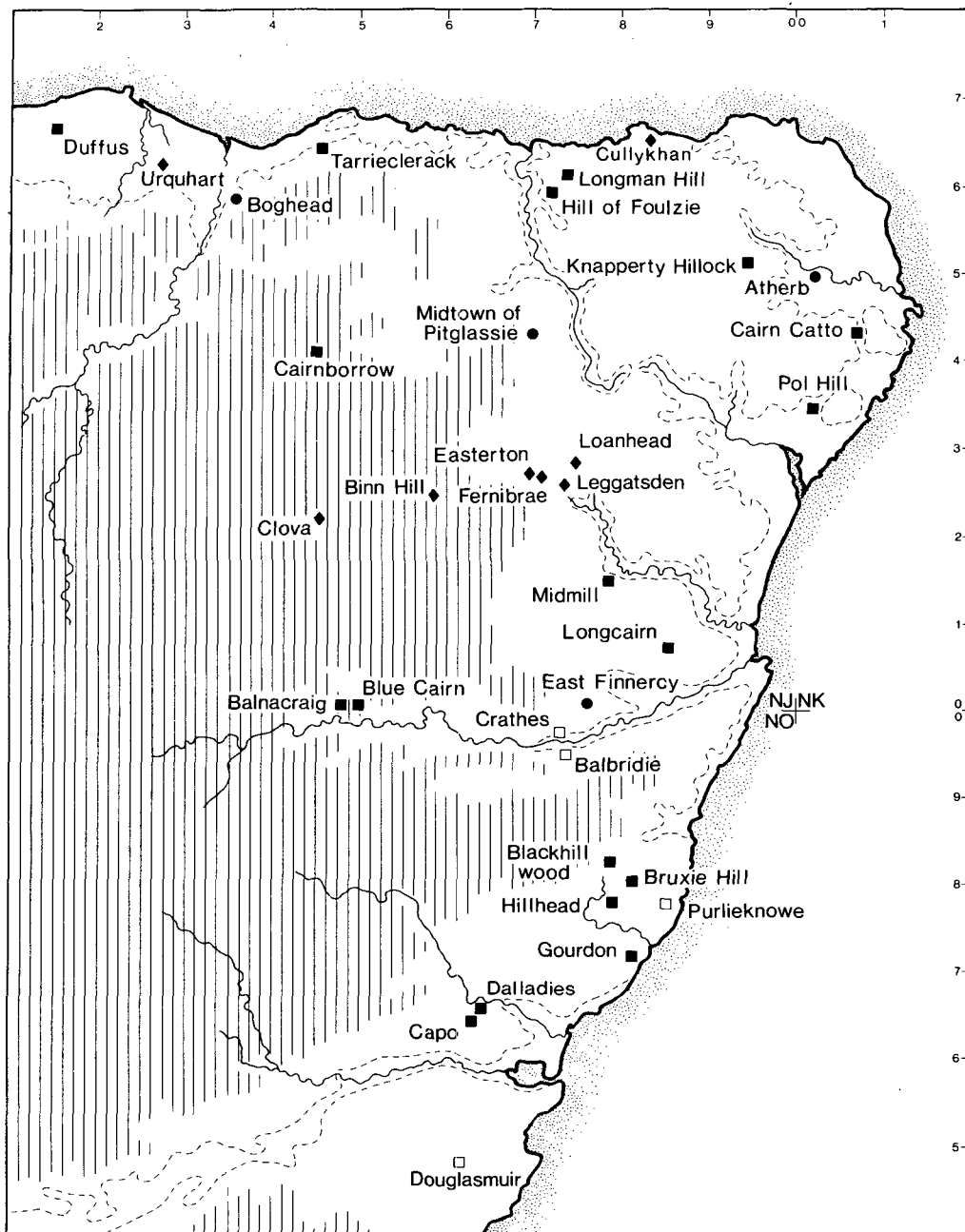
ILLUS 7 Radiocarbon dates for mortuary sites and henge monuments

re-arrangement are to some extent an artefact of the confined chamber format (admittedly a circular argument), may well be as valid in determining affinities as architectural form. We could point here to cremations in notionally early Clyde chambers, as at Cairnholy I, or the apparent consistency of inhumation in the various 'passage grave' forms, a notable contrast with Boyne practice.

MORTUARY PROCESS: A MODEL FOR EASTERN SCOTLAND

The fertile lowland strip between the Tay and the Moray Firth has ample evidence for earlier Neolithic settlement in high density. Its continued agricultural use has reduced archaeological visibility as measured by monuments but increased the rate of casual discovery by artefacts (cf illus 5 and 10). This circumstance is being slowly remedied by the impact of increasingly-detailed ground and air survey. It is instructive to cite some comparative statistics which have a close bearing on the changing perceptions of Scottish prehistory. Finds of earlier Neolithic pottery are largely the product of monument excavation (c 60%) but of the remainder one-third of the Scottish total derives from this zone, or more than half if only casual retrieval is in question. Equally the absence of megalithic chambers involved relative neglect: in 1963 Henshall could document only 10 long barrows, accruing to 13 in 1972 and now some 18. The Dalladies example, recognized only in 1968, was over 2m high and 50m long; Piggott (1972) rightly draws an analogy with the pre-war English circumstance where the Lincolnshire Wolds group remained unknown until 1930.

There are two further points. Even by 1972 Henshall was unable to assimilate excavated earlier Neolithic round barrows such as Pitnacree into her corpus of mortuary sites: this part of a perceptual circumstance which led the present author to proselytize on their behalf (Kinnes 1979). Further, the



ILLUS 8 The earlier Neolithic in north-east Scotland ◆ pottery, ■ long barrows, ● round barrows, □ timber structures

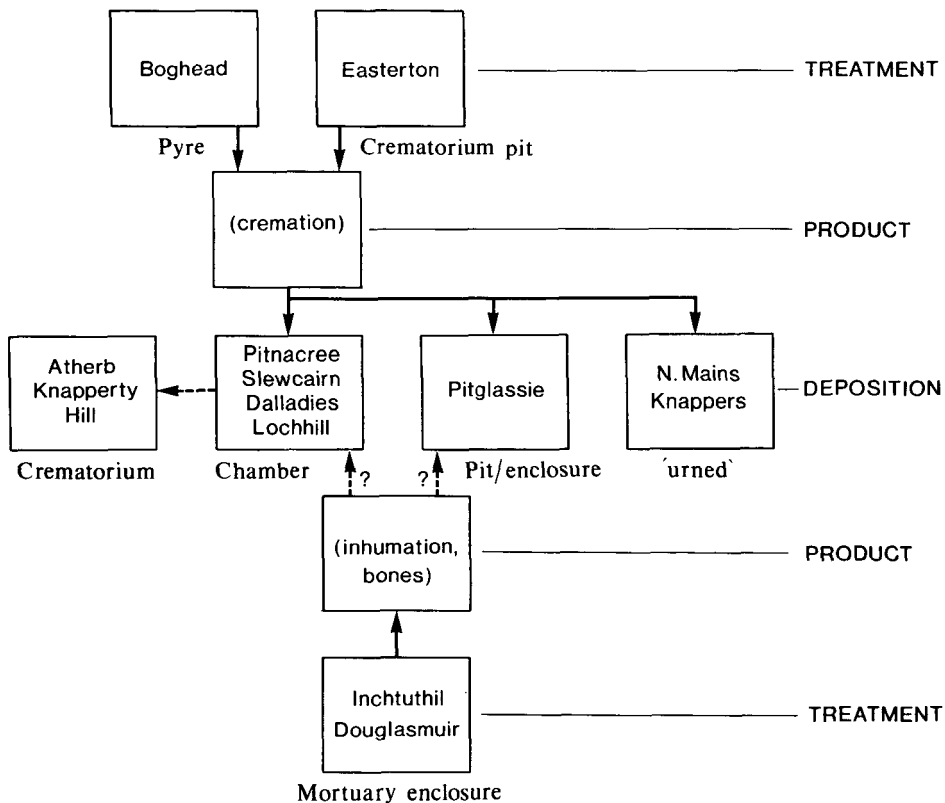
increasing presence of apparent mortuary enclosures – and their cursus descendants – established by aerial survey has been effectively ignored in syntheses (with the exception of Ralston 1984).

This relative neglect is all the more surprising to those experienced in the archaeology of the agricultural heartlands in southern Britain and western Europe, since eastern Scotland has an exceptional level of available evidence for the complexities of non-megalithic mortuary process (illus 8).

The evidence must be reviewed. Four excavated round barrows have produced consistent assemblages of early carinated bowl pottery. A single radiocarbon date for Midtown of Pitglassie (in A Shepherd) fits well into the series for Boghead (Burl 1984), concentrating around 3000 bc (illus 7). The claimed association of Beaker sherds in the East Finnercy cairn (Atkinson 1962) must, at least by default of publication, be discounted.

The mortuary contexts at each site are ostensibly different. Nothing was recorded for East Finnercy; Boghead has its closest analogy in the Grimston pyre at Ford (Kinnes & Longworth 1985, 101); Atherb seems to have been a crematorium of a format familiar in north-east England (Milne 1892; Kinnes 1979); Pitglassie began as an embanked enclosure with single cremation deposits. Thus monuments of comparable external form would seem to cover particular stages within, or aspects of, the mortuary process.

Material, both human bone and artefacts, was selected from formal pyre sites for separate deposition (illus 9). It is appropriate to recall pit-graves with cremations and simple bowls at North



ILLUS 9 A scheme for NM mortuary process

Mains and Knappers (Barclay 1983; Ritchie & Adamson 1981) and English parallels at Mere, Roughridge Hill and Garton Slack 37 (Kinnes 1979). Simple cremations were deposited in the linear zone chamber beneath the Pitnacree round barrow (Coles & Simpson 1965) and the structural context here would be appropriate to that envisaged for Atherb before its final crematorium role, and to the wooden chamber in the Dalladies long mound (Piggott 1972) with its single charred skull fragment.

The other long barrows have not been excavated, although occasional depredations at Knap-perty Hillock have disclosed considerable quantities of burnt material. Dalladies compares closely in details of chamber construction to Slewcairn and Lochhill (Masters 1981; 1973) but this coincidence of format from the three Scottish sites examined need not predict the remainder. In East Yorkshire, for example, only some of the embanked chambers became crematoria (cf Kilham and Willerby Wold: Manby 1976).

We can add a further element to the process from two recent excavations. The accidental discovery of a rectangular ditched precinct beneath Roman barracks at Inchtuthil (Pitts & St Joseph 1985, 248) invokes close comparisons with the long mortuary enclosure class first established at Dorchester (Atkinson *et al* 1951). The enigmatic palisaded and sub-divided enclosure at Douglasmuir is earlier Neolithic by ceramic association and radiocarbon date (inf Kendrick) and might be related to this class of monument. Local parallels, some aggrandised and known only from aerial survey, can be cited at Balneaves, Kinalty, Inchbare, Bannockburn and Fourmerkland (inf Loveday). The long mortuary enclosure label derives from simple morphological comparison and evidence *ex silentio*: the elongate narrow format of no apparent function, hence ritual, has some resemblance to long barrows, hence mortuary. The excavated examples at Dorchester and Normanton Down (Vatcher 1961) are of Neolithic date and the latter had an axial wooden structure. The establishment of enclosures as a first phase of long barrows such as Fussel's Lodge, Kilham, Willerby Wold and Street House enhances the claim of the LMEs to a role within the mortuary process. A specific caution must be entered for Inchtuthil: no dating is available and the possibility must remain that it belongs rather with the late Iron Age example – of indeterminate purpose – excavated at Caldecotte (Petchey 1983).

The search for complexity of process leads also to other possibilities. The long post-structures at Balfarg Riding School (inf Barclay) are of novel form and their interpretation must inevitably be qualified by the factors of denudation and poor preservation of organic or environmental evidence. Barclay has rightly pointed to the difficulties implicit in a roofed longhouse reconstruction: primarily the restrictions on internal movement posed by the post layout and disconformities in alignment of potential structural members, and also the absence of expected domestic debris in primary contexts. Dating is uncertain, being dependent only on a Grooved Ware *terminus ante quem* so that an earlier Neolithic attribution is possible. The suggested interpretation involves a row of raised floor structures ('exposure platforms') with a palisade enclosure and this has the ring of plausibility. Whilst exposure platforms have yet to be proven for the insular Neolithic there is good reason to postulate their existence (Atkinson 1965) and the form has the added virtue of ethnographic analogy in the excarnation process (Schoolcraft 1851). Sequential construction or embodied linear segmentation would both conform to the known histories of some long barrows (Kinnes forthcoming). It is unfortunate that an adjacent mound of apparent long barrow form was destroyed without record in recent years.

To extend the range of speculation one further conjecture might be advanced. The well-known pits at Easterton of Roseisle (Walker 1968; Henshall 1983) could be related to mortuary process. Their recorded dimensions, burnt lined walls and piles of ash and charcoal closely recall the circumstances of early Neolithic crematorium pits in East Yorkshire at Bridlington, Garton Slack and Raisthorpe (Earnshaw 1973; Kinnes forthcoming) and, perhaps, at Killaghy in Co. Antrim (Evans

1940). These appear to be carefully contrived for *in situ* cremation with subsequent removal of burnt bones for deposition elsewhere. Those at Garton Slack and Raisthorpe lay within the forecourt areas of long barrows.

Allowing then for an acceptable level of speculation, there is a range of structures which appear to play specific roles in a prolonged and complex mortuary process and the record for this area is unusually complete. It remains to be established why the final monumental form is variable. On existing evidence both here and in northern England there is no reason to separate long and round barrows chronologically: ceramic, radiocarbon and structural associations coincide for both and they cannot be distinguished by distribution. If a social difference is in question the longhouse origin of long barrows might provide a clearer linkage with ancestral rights and territorial claims with round barrows infilling, as it were, the overall pattern.

This is, perhaps, an appropriate place to mention one further class of monument: the cursus. Eight sites have been recorded in Tayside and the south-west (inf Loveday). Some show affinities with enclosures such as Douglasmuir in the use of apparent palisading and septal division and this would seem to confirm the long barrow ancestry likely for southern British examples. Whilst not certainly allied to mortuary function these enclosures derive primarily from such structural tradition. The linear aggrandizement, coupled with the frequency of siting along river terraces or across promontories, combines the territorial role of long barrow positioning with the formalization of boundaries, most likely those of infield-outfield distinction on the local scale. The slight dating evidence from southern Britain suggests a mid-third millennium formulation. The Scottish examples would seem to provide real opportunities for explanation within structural and landscape terms.

SOCIAL CHANGE IN THE LATER NEOLITHIC

Around the middle of the third millennium communal burial rites in southern Britain were largely replaced by a shift towards single interment, frequently associated with high status grave-offerings (Kinnes 1979; Kinnes *et al* 1983; Clarke *et al* 1985). Such graves were commonly beneath round barrows, especially where the form had an established tradition as in northern England, but some long mound associations are known, as at Radley (inf Bradley).

This single grave tradition is apparently absent north of the Tees, although there are a few possible contenders. The 'richest' graves in northern England (Duggleby Howe, Liff's Low, Ayton East Field, Whitegrounds) are associated with finely-finished edge-polished axes and adzes, often of colourful or visibly exotic flint (Manby 1979, class D). These, as with other components, form a visible display of the control of resources and craft skills. Within those areas of Scotland dominated by non-megalithic tradition there are three contextual or artefactual associations for such axes: a possible flat grave at Knappers (Ritchie & Adamson 1981), a hoard or grave-group with jet and amber beads at Greenbrae (Kenworthy 1977) and in an unknown context but probably with a large lozenge arrowhead at Lochgoin (Ritchie & Adamson 1981, 191). None are of proven mortuary associations but linkage to sizeable projectile points and elaborate jet ornaments certainly echoes southern parallels.

Two other perceived status symbols occur in Scotland. Antler mace-heads recur in several rich grave-groups but in Scotland the sole example was in apparent domestic context at Northton (Simpson 1976). Jet sliders (McInnes 1968) in the south occur with single inhumations (Handley, Linch Hill, Radley, Whitegrounds, Painsthorpe), a communal cave deposit with Peterborough pottery (Gop) and in potential votive contexts at Newbury (peat with animal bones) and Skendleby (long barrow ditch). In the north the examples from Glinzier and Balgone may have been formal wet-site deposits, the latter perhaps with human bones (Struthers 1866), and those attributed to Skye and

Wigtown are of unknown context. The final example was found in the Clyde-series chamber at Beacharra, probably in infill material at the end of use.

In all instances it is clear that we are dealing with artefacts which should be classified as social in both use and deposition. Elsewhere mortuary contexts invoke these symbols of power, related to a recognition and acceptance of individual status reflected in the decline of local communal funerary sites. The formal closure of many, if not all, Scottish chambered tombs seems to occur at about the same time with the exception of Orkney to be discussed later. In effect it seems that we must accept that burial disappears from the archaeological record for the later third millennium with the exception of the small cremation cemetery at Cairnpapple (Piggott 1948) comparable to northern English examples at Whitton Hill (inf Miket) and Duggleby Howe (Kinnes *et al* 1983).

The contexts of the relevant Scottish finds, even if not deposited with individuals, point to a comparable recognition process as part of gift-transactions (Gregory 1982; Barrett *in* Clarke *et al* 1985). The raw materials involved: exotic flint, jet blocks of a size unknown for local deposits (Shepherd *in* Clarke *et al* 1985, and *in litt*), suggest external sources. The Greenbrae amber may have come from north-eastern English beaches, since it is in this area that comparable worn pebbles simply perforated as beads are known in the Neolithic (Whitegrounds: Brewster 1984) and Bronze Age (Englingham: inf Beckensall). These sources may have been involved in long-distance gift-transactions although it is as likely that material was deliberately acquired down the line for local circulation. Formal deposition in cists, pits or bogs is strongly suggestive of gifts to gods as a means of legitimizing social authority and establishing rank. Whatever, it is clear that even such rare finds are sufficient to indicate a considerable shift in social patterning.

Likely contexts for such evidence are highly vulnerable to post-depositional effects and we might expect that comparable observations should be possible in protected contexts. It is significant that exceptional later Neolithic material accompanies final or closing deposits in several Clyde chambers: jet slider at Beacharra, Peterborough pottery and jet bead at Cairnholy, Grooved Ware and macehead at Tormore.

There remains another form which might claim special status. Over 400 carved stone balls are known, of which half have recorded find-spots in the north-east (Marshall 1977; 1983). Their function is unknown, although prosaic suggestions of weights, bolas components, etc have been advanced. Contexts are sparse but those from Skara Brae reinforce decorative parallels with the Grooved Ware-Boyne art continuum. Two are said to have been found in a cist at Ardkeiling and another in a pit at Buckhall. These formal, but not certainly funerary, contexts recall those for the prestige objects already discussed and the pattern might be reinforced by a claimed association with a boar tusk at Muckle Geddes. Certainly, their labour-intensive aspect, seen most clearly in the frequent use of especially hard rock, would be appropriate to this.

The occurrence of prestige objects in 'domestic' contexts deserves further consideration. Fragmentary stone mace-heads were found casually at Rinyo and Skara Brae but their perceived status is unknown: there is a strong cult component at both sites to which we shall return. In England there is an increasing awareness of the special role of pits with organized formal deposition of selected objects and associations. A few examples will suffice: at Eynesbury an edge-polished axe made on site and placed within half of a Mortlake bowl (inf Herne), at Down Farm axes and antlers arranged on slabs of Grooved Ware (inf Bradley), at Fengate the separation of Grooved Ware flintwork and pottery into adjacent pits (Pryor 1978). On this basis the circumstances at sites such as Brackmont Mill (Longworth 1967) or the enigmatic Mye Plantation (Mann 1902) clearly require active reassessment.

It would seem that an earlier Neolithic, whilst hardly egalitarian, was essentially founded on a series of interlocking communities in which relative precedence was recognized but not institu-

tionalized. A fundamental shift in the mid-later third millennium adjusted this to a more familiar pyramidal structure. Although not necessarily vested in the institution of chieftainship, it is nevertheless clear that communal attributes were now formally assumed by particular social elements. The format and deposition of special artefacts is a recognizable sign of control over material and human resources devoted to the establishment and maintenance of centralized power.

Other components might be adduced to this re-structuring. Allowing for the vagaries of retrieval and excavated contexts there is every reason to see the establishment of Grooved Ware as a genuinely national ceramic style. The bases for a detailed chronology are questionable but a broad span of c 2500–1800 bc seems likely. In form and decoration it represents a significant contrast with preceding and contemporary traditions. Particularly clear is the hierarchy of design structure by the organization of chosen motifs, thus far tested only at the partially-excavated site of Durrington Walls (Richards & Thomas 1984). This approach promises much for in-site analysis of behavioural patterns as a practical and quantifiable method, and the formation of such a data-base should become a standard test for the social circumstances now perceived.

The view of Grooved Ware decoration as an encoding of role and status echoes the depositional circumstances outlined above. It encapsulates motifs which were already current in particular contexts. The most obvious in terms of relative survival is passage grave or Boyne art, but elements of the repertoire are known widely on portable objects (Shee Twohig 1981, 126–8). The formalization of these into a widespread ceramic style with recurrent control of use and deposition and accompanying individual symbols of power argues for the usurpation by one social set of authority previously expressed on a communal basis. The use of ‘art’ as a signalling device is fundamental to an understanding of the organization of space in and outside chambered tombs, and the transference of this message to the personal level is a further demonstration of real change. In the communal tombs the *causa* and continuity was provided by the ancestors who provided mediation between temporal and spiritual powers. It would seem now that this ancestral role was usurped by the dynastic, and here the detailed Orkney case-studies by Sharples (1984, and forthcoming) are relevant in providing a plausible micro-sequence which might stand as a key to the wider scene.

In Orkney communal tombs with Unstan pottery form the early pattern. Only one settlement is known (Knap of Howar) but, if typical, this would accord with the dispersed homestead pattern familiar for the early Neolithic elsewhere. Coincident with Grooved Ware are fewer and grander chambers of Maes Howe style and the appearance of village clusters. Progressive shifts in hierarchical control saw the modification of the communal monuments to new circumstances: the Quoyness cairn was encased and a platform added, Maes Howe was re-defined by a platform and enclosing ditch, Pierowall was levelled to a platform occupied by structure(s) with organized deposits, and at Quanterness the chamber contents were thoroughly disturbed and a single grave inserted. Even in the marginal zone of South Ronaldsay, where traditional practices survived, formal closure at Isbister was succeeded by the insertion of a group of material containing some symbols of the new power (Hedges 1983, 45–6). As Hedges implies, the jet button, of inappropriate early Bronze Age date, must be excluded from this mace–axe–knife association, and, just as at Greenbrae (Kenworthy 1977), we must remain aware that the enforced addition of extraneous material is counter-productive, however desirable at the time (Hedges 1983, ill 67).

At the same time, this iconoclasm was emphasized by the emergence of a new monumental form. The need for distinct precincts dissociated from the ancestors was realized by the emergence of henges. This had clear advantages. Continuity was implicit in the circular format and the use of large stones as external signals, both familiar in passage graves. Building still involved communal effort; this is a truism for all monuments but none the less worth consideration of the aspects of how much effort and why. Using the deduced figures crudely – as they must be – it can be postulated that the

average Orkney tomb involved less than 25000 man-hours, Maes Howe probably double this and Stenness double again (Hedges 1984). This hierarchy of commitment is diachronic and coincident with perceived change in the nature and purpose of monuments.

The adaptation of Maes Howe-style cairns to henge format provides a clear base for the assessment of the new monuments. Their chief characteristic is the provision of a bank external to the ditch, a practical and plausible definer of 'ritual' as opposed to 'domestic' function. This exclusive arena might have internal stone or wooden enclosures but is normally devoid of traces of activity. Henges thus represent the classic counterpointing of open:exclusive and communal:selective principles. There is no reason to believe that Orkney is the source of the henge concept, any more than it saw the formulation of Grooved Ware. The point is simply that the microcosm here is better-documented than most, and that the internal mechanics are visibly simpler and clearer.

Orkney is valuable also in delineating the social circumstances of settlement. The pattern for the latter fourth and earlier third millennium in Britain and western Europe argues for dispersed farmsteads. Population agglomerations, on current evidence, exist only in a few highly-specialised circumstances, all within *defended* enclosures (Hambledon Hill, Crickley Hill, Carn Brea) and hence of undue status. In most of Britain the settlement record for the later Neolithic is, at best, fragmentary so that the Orkney villages still exist out of context. It would be possible to claim that these are a purely insular development but this does not alter their internal role, whether relevant to the outside or not.

Settlement aggregation would seem to echo the centralizing processes already apparent. Further information must be sought in internal structuring. The available records for Rinyo and Skara Brae allow of little progression in this direction although the detailed information in the excavator's field note-books offer real prospects (Childe archive, Institute of Archaeology: inf Richards). One accessible example must suffice for the present: the occurrence of decorated slabs at Skara Brae. The *in situ* carvings are confined to the western half of the village, notably in the main passage and in and around huts 7 and 8 (Shee Twohig 1981, figs 286–90). Stylistically the motif range compares closely with that for the local Grooved Ware. The slabs in question are normally of a size and shape standard to construction. The possibilities of reuse from original chambered tomb settings are limited, although a few blocks (Shee Twohig 1981, nos 42–5) might be considered here, along with the recent discovery at Pool. Such a circumstance, although unproven, would provide an appropriate analogy to transforms in the early Neolithic of Brittany (La Roux 1985; L'Helgouach 1983).

Generally, the transference of symbolic sets to a new role is clear. More specific function might emerge with detailed consideration of all finds and contexts within the settlement. Even on current information, it is striking that huts 7 and 8 are exceptional. Hut 7 might have had two storeys, depending on interpretation of a possible first-floor doorway above the ground-level entrance, and had the 'foundation burial' of two women. Hut 8 is a separate structure outside the midden-covered cluster and lacked the standard internal fittings: finds suggest a role as specialist workshop.

In closing this section, some consideration should be given to the end of the Neolithic. This is characteristically associated with the appearance of Beaker potters and concomitant metallurgy. Whilst continuity is apparent in occupation densities, not surprising for agricultural communities, in activities around monuments and, perhaps, in the circumstances of burial and hoard deposition, the perspectives of an international *Kulturkreis* and the increasing importance of metal resources enforced change. In absolute terms the contrasts are clear by comparison: the ritual landscapes of the third millennium are a very different affair from the practical land-holdings a thousand years later. Whether Beakers were opportunistic (Burgess & Shennan 1976), induced (Thorpe & Richards 1984) or currently inexplicable (Case 1977; Kinnes 1979; Whittle 1981) is fortunately outside the notional terms of reference of this paper.

APPENDIX 1

NEOLITHIC POTTERY IN SCOTLAND (illus 10)

(Cross-reference to other categories in brackets after site-names)

A: Simple bowls

Definition

Simple bowls and cups, including lugged forms; decoration rare and limited to rim or upper body; mainly categorized by negative attributes or limitations of small assemblages.

1	NF	976	913	Northton (E, G)	Scatter	Simpson 1976
2		800	668	Unival (C, G, J)	Hebridean CT: chamber	Scott 1948
3		85	73	Eilean an Tighe (E, G)	Occupation: structures	Scott 1951
4		749	713	Cletraval (C, G)	Clyde CT: chamber	Scott 1935
5		768	713	Geirisclett	Clyde CT: chamber	Henshall 1972, 516
6	NJ	274	627	Urquhart (E)	Scatter	Henshall 1983
7		838	661	Cullykhan	Scatter	Henshall 1983
8		946	503	Knapperty Hillock	NMLB: ?mound	Henshall 1983
9		702	272	Easterton	Scatter	Henshall 1983
10		714	267	Ferniebrae	Scatter	Henshall 1983
11		731	264	Pitcaple	Scatter	McInnes 1969
12		737	261	Leggatsden	Scatter	Henshall 1983
13		748	288	Loanhead of Daviot	Scatter	Kilbride-Jones 1935
14		47	24	Den of Craig	?? cist	Henshall 1983
15	NM	797	472	Croft Moraig	Scatter	Piggott & Simpson 1971
16	NN	928	163	North Mains (H)	Pit; scatter	Barclay 1983
17		783	023	Barbush (J)	Scatter	Barclay 1983, 253
18	NM	929	363	Achnacreebeag (F)	PG: chamber	Ritchie 1970
19	NR	978	973	Crarae	Clyde CT: chamber	Scott 1961
20	NN	058	050	Barmore Wood	Clyde CT: chamber	Henshall 1972, 322
21	NS	005	852	Ardacheranbeg	Clyde CT: chamber	Henshall 1972, 329
22	NR	768	261	Ardnacross 2	Clyde CT: chamber	Inf Scott
23		692	433	Beacharra (F)	Clyde CT: chamber	Scott 1964
24		949	211	Clachaig (F)	Clyde CT: chamber	Henshall 1972, 391
25		955	211	Torlin	Clyde CT: chamber	Henshall 1972, 389
26		942	237	Sliderry Water	Clyde CT: chamber	Henshall 1972, 393
27	NS	043	246	Giants Grave	Clyde CT: chamber	Henshall 1972, 385
28	NR	997	705	Glenvoidean (C)	Clyde CT: chamber	Marshall & Taylor 1977
29	NS	060	604	Bicker's Houses (F)	Clyde CT: chamber	Henshall 1972, 416
30		088	648	Townhead (F, J)	Occupation: features	Marshall & Taylor 1977, 27
31		08	53	Dunagoil	Scatter	Ritchie & Adamson 1981, 185
32		506	712	Knappers (J)	Scatter, pits	Ritchie & Adamson 1981, 185
33	NT	148	743	Catstane	Scatter, pits	Cowie 1978
34		27	63	Roslin	Scatter, pits	Stevenson 1948, 294
35		63	77	Hedderwick (H, I, J)	Scatter, pits	Callander 1929, 68
36		89	59	Blackburn Mill	Scatter, pits	McInnes 1969
37	NY	130	832	Kirkburn (J)	Pits	Cormack 1964
38	NX	187	609	Mid Gleniron 2(H)	Clyde CT: old surface	Corcoran 1969a

B: Carinated bowls

Definition

Bowls with well-defined necks and sharp shoulders, normally of fine burnished fabric; fluting of rim and neck common in eastern examples, assemblages often contain simple bowls.

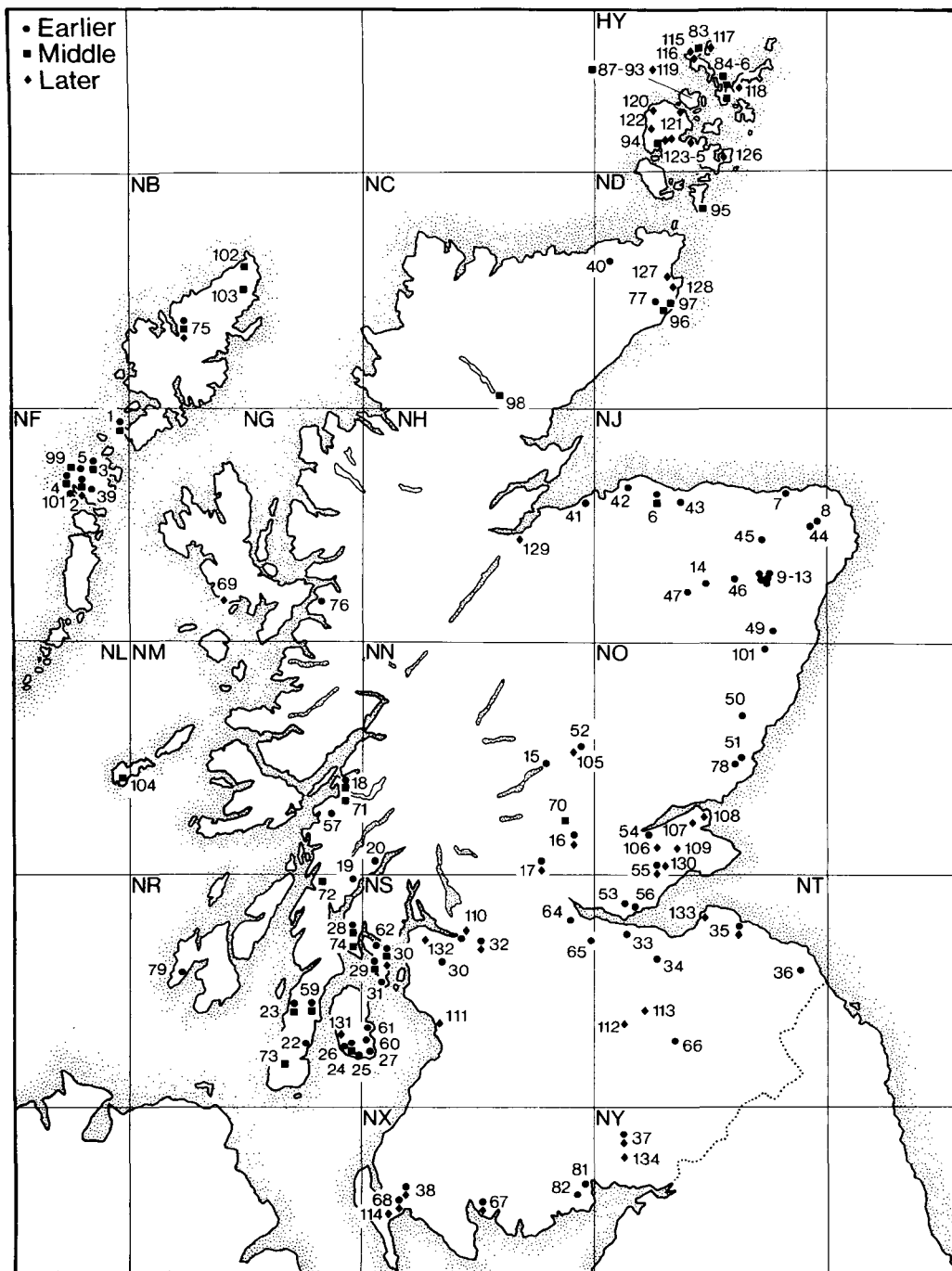
39	NF	838	657	Barpa Langass	Hebridean CT: chamber (?)	Henshall 1972, 502
40	ND	068	618	Tulloch of Assery B	Cromarty CT: old surface	Corcoran 1967
41	NH	95	62	Culbin Sands	Scatter	Henshall 1983
42	NJ	144	650	Easterton of Roseisle	Pits	Henshall 1983
43		359	592	Boghead	NMRB: old surface/ mound	Burl 1984
44		927	497	Atherb	NMRB: mound	Henshall 1983
45		702	435	Midtown of Pitglassie	NMRB: mound	Inf Shepherd
46		595	253	Binn Hill	Scatter	Henshall 1983
47		40	20	'Clova Estates'	?	Henshall 1983
48	NH	90	10	Spey Valley	?	Henshall 1983
49	NJ	764	042	East Finnercy	NMRB: old surface/ mound	Henshall 1983
50	NO	627	673	Dalladies	NMLB: mound	Piggott 1972
51		62	49	Boysack	Scatter	Cowie 1978, 197
52	NN	928	533	Pitnacree	NMRB: old surface	Coles & Simpson 1965
53	NT	13	87	Calais Muir	Scatter	Watkins 1982, 113
54	NO	244	178	Clatchard Craig	Scatter	McInnes 1969
55		281	032	Balfarg (J)	Pits, scatter	Inf Barclay
56	NT	178	842	Dalgety	Pit	Watkins 1982
57	NM	880	267	Dalineun	Clyde CT: chamber	Ritchie 1972
58	NS	002	843	Auchategan	Occupation: features	Marshall 1978
59	NR	794	418	Brackley (F)	Clyde CT: chamber	Scott 1956
60	NS	017	288	Monamore	Clyde CT: forecourt	MacKie 1964
61		026	330	Dunan Beag	Clyde CT: chamber	Henshall 1972, 376
62		067	685	Hilton	NMRB: chamber	Marshall 1976
63		43	73	Whitemoss	Scatter	Inf Piggott
64		90	80	Bantaskine	Scatter	Callander 1929, 57
65		987	717	Cairnpapple	Scatter	Piggott 1948
66	NT	35	28	Yarrow	Scatter	McInnes 1969
67	NX	517	539	Cairnholy 1	Clyde CT: old surface	Piggott & Powell 1949
68		17	56	Luce Sands (H, I, J)	Scatter	McInnes 1964

C: Rothesay/Achnacree Style

Definition:

Simple and bipartite bowls with heavy and ornate rims; extensive fluted and incised decoration (Scott in Marshall & Taylor 1977; Henshall 1972, 100).

2				Unival (A, G, J)		
4				Clettraval (A, G)		
28				Glenvoidean (A)		
30				Townhead (A, J)		
69	NG	393	163	Rud'h an Dunain (E)	Hebridean CT: chamber	Scott 1932; 1934
70	NN	892	234	Cultoquhey	Clyde CT: chamber	Henshall 1972, 476
71	NM	922	363	Achnacree	Hebridean CT: chamber	Henshall 1972, 356
72	NR	828	979	Nether Largie	Clyde CT: chamber	Henshall 1972, 338
73		677	176	Balloch Hill	Occupation: features	Peltenburg 1982
74	NS	007	682	Glecknabae	Clyde CT: chamber	Henshall 1972, 412



ILLUS 10 Neolithic pottery in Scotland

D: Pottery of unknown affiliation

Definition

Information not available (normally recent excavations).

75	NB	213	330	Callanish (G, J)	Scatter	Inf Ashmore
76	NG	845	166	Balvraid	Hebridean CT: chamber	DES 1964; 1965
77	ND	260	442	Camster Long	PG/Cromarty CT: old surface	Inf Masters
78	NO	610	480	Douglasmuir	Structure	Inf Kendrick
79	NR	247	575	Port Charlotte	Clyde CT: chamber	Inf Pierpoint
80	NS	341	628	Newton	Pit	DES 1984, 22
81	NX	968	651	Lochhill	NMLB: forecourt	Masters 1973
82		924	614	Slewcairn	NMLB: forecourt	Inf Masters

E: Unstan

Definition

Normally shallow collared or cordoned bowls with zoned decoration by channelling or stab-and-drag (Sharples 1981).

1				Northton (A, G)		
3				Eilean an Tighe (A, G)		
6				Urquhart (A)		
69				Rud'h an Dunain (C)		
83	HY	483	518	Knap of Howar	Occupation: structures	Ritchie 1983
84		560	329	Sandyhill Smithy	Tripartite CT: chamber	Calder 1938
85		562	377	Huntersquoy	Tripartite CT: chamber	Calder 1938
86		577	387	Calf of Eday Long	Stalled CT: chamber	Calder 1937
87		437	325	Bigland Round	Tripartite CT: chamber	Henshall 1963, 183
88		422	317	Kierfea Hill	Tripartite CT: chamber	Henshall 1963, 208
89		419	315	Knowe of Craie	Tripartite CT: chamber	Henshall 1963, 209
90		425	276	Taversoe Tuick	'Bookan' CT: chamber	Grant 1939
91		415	276	Blackhammer	Stalled CT: chamber	Callander & Grant 1937
92		373	298	Knowe of Rowiegar	Stalled CT: chamber	Henshall 1963, 214
93	HY	371	306	Midhowe	Stalled CT: chamber	Callander & Grant 1934
94		282	117	Unstan	Stalled CT: chamber	Henshall 1963, 240
95	ND	469	843	Isbister	Stalled CT: chamber	Hedges 1983
96		310	408	Kenny's Cairn	Cromarty CT: chamber	Henshall 1963, 276
97		32	41	Skitton	Scatter	Stevenson 1946
98	NC	573	056	Ord North	Cromarty CT: chamber	Sharples 1981
99	NF	75	75	Loch Olavat	Scatter	Henshall 1972, 177
100	NO	733	959	Balbridie	Structure	Ralston 1982; 1984

F: Beacharra

Definition

Bipartite closed-mouth bowls with zoned channelled or incised decoration; fine burnished fabric (Scott 1964).

18				Achnacreebeag (A)
23				Beacharra (A)
24				Clachaig (A)
29				Bicker's Houses (A)
30				Townhead (A, J)
59				Brackley (B)

G: Hebridean

Definition

Jars, collared and shouldered bowls with elaborate incised and jabbed decoration (Henshall 1972, 153).

1				Northton (A, E)		
2				Unival (A, C, J)		
3				Eilean an Tighe (A, E)		
4				Clettraval (A, C)		
75				Callanish (D, J)		
101	NF	824	783	The Udal	Occupation: structures	Inf Crawford
102	NB	50	60	Pygmies Isle	Scatter	Stevenson 1946
103		50	50	Toristay	Scatter	Henshall 1972, 174
104	NL	98	39	Hynish	Scatter	Henshall 1972, 174

H: Decorated Styles

Definition

Bowls, usually simple, with elaborate rims and a wide variety of incised and impressed decoration (McInnes 1969).

16				North Mains (A)	Scatter	
35				Hedderwick (A, I, J)		
38				Mid Gleniron 2(A)		
68				Luce Sands (B, I, J)		
105	NN	925	527	Grandtully	Pits	Inf Simpson
106	NO	288	118	Kinloch Farm	? enclosure	Barber 1982
107		436	224	Brackmont Mill	Pits	Longworth 1967
108		48	24	Tentsmuir (J)	Scatter	Longworth 1967
109		361	108	Scotstarvit	Pits	Stevenson 1948, 262
110	NS	44	74	Old Kilpatrick	Scatter	Callander 1929, 61
111		332	367	Shewalton (J)	Scatter	Atkinson 1962
112	NT	135	353	Drumelzier	Food vessel cist	Craw 1931, 363
113		205	404	Meldon Bridge	Pits	Burgess 1976a

I: Peterborough

Definition

Necked bowls with heavy rims and decoration by a variety of techniques, notably impressed (Smith 1974).

35				Hedderwick (A, H, J)		
67				Cairnholy 1 (B)		
68				Luce Sands (B, H, J)		
14	NX	105	535	Mye Plantation	Pits	Mann 1902

J: Grooved Ware

Definition

Normally bucket-shaped and flat-based with incised or applied zoned decoration (Wainwright and Longworth 1971).

2				Unival (A, C, G)		
17				Barbush (A)		
30				Townhead (A, F)		
32				Knappers (A)		
35				Hedderwick (A, H, I)		
37				Kirkburn (A)		
55				Balfarg (B)	Henge(s)	Mercer 1981b

68			Luce Sands (B, H, I)		
75			Callanish (D, G)		
107			Tentsmuir (H)		
110			Shewalton (H)		
115	NY	428	493 Links of Noltland	Occupation: structure	Clarke & Sharples 1985
116		438	488 Pierowall	Occupation: structure	Sharples 1984
117		504	522 Holm of Papa Westray N	Occupation: structure	Inf Ritchie
118	HY	615	376 Pool/Lambaness	Midden	Inf Hunter
119		440	321 Rinyo	Occupation: structure	Childe & Grant 1939; 1947
120		24	27 Saevar Howe	Scatter	Clarke & Sharples 1985
121		38	26 Sands of Evie	Scatter	Stevenson 1946
122		230	187 Skara Brae	Occupation: structures	Childe 1931; Clarke 1976
123		307	125 Stones of Stenness	Henge, stone circle	Ritchie 1976
124		308	126 Barnhouse Farm	Occupation: ?structures	Inf Richards
125		417	129 Quanerness	'Maes Howe' CT: chamber	Renfrew 1979
126		57	06 Dingieshowe	Scatter	Stevenson 1946
127	NO	36	67 Freswick Sands	Scatter	Atkinson 1962
128		35	61 Keiss	Scatter	Clarke & Sharples 1985

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