The neolithic of the Western Isles

Volume 1

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Abstract

An understanding of a neolithic of the Western Isles is developed through an examination of ceramics, incorporating both domestic and mortuary assemblages, from a variety of sites in the region. This empirical focus, exploring alternative explanations of the surviving evidence, demonstrates the interpretive potential of archaeological ceramics, in which the artefactual evidence is employed to establish a more comprehensive understanding of social discourse. A regional history of the Western Isles during the neolithic, encompassing both the artefactual and monumental evidence, is developed.

Explanatory Notes

The ceramic illustrations, following the trenchant criticisms of Longworth (1990:77; cf. Zienkiewicz and Hamilton 1990:79), are consistently reproduced at a scale of 1:2. The illustrations of the Eilean an Tighe, Pygmies Isle, Geirisclett, Bharpa Langass, South Clettraval, Loch Glen na Feannag, and Airidh nan Seilicheag assemblages were all drawn from the original pottery. The illustrations of the Clettraval, Unival, Allt Chrisal, and Northton assemblages were all reproduced from drawings illustrated in previously published sources. Additional vessels, from other assemblages outwith the Western Isles are also illustrated on occasion, to augment the written argument where necessary.

The site illustrations were either redrawn, in the case of plans relating to Clettraval, Unival, Eilean an Tighe, Rubha an Udail Site 6, and Northton, or else reproduced, in the case of plans relating to Bharpa Carinish and Eilean Domhnuill a Spionnaidh, from previously published sources.

Radiocarbon dates are quoted as uncalibrated radiocarbon years (BP), and as a calendar date range (BC), expressed at a 2σ level of confidence, calibrated using Oxcal (v2.18).

Chapter one

Introduction: a neolithic of the Western Isles

> "Proceeding from the centres of civilisation on the east of Scotland towards the north and west, the cottages of the peasantry become still more simple in form and poor in comfort, until on the shores of the Atlantic there are dwellings so primitive, that we appear to reach backward to the Stone period almost at once..."
>
> F.W.L. Thomas (1868)
> *On the primitive dwellings and hypogea of the Outer Hebrides*

1.1. Introduction

In contemporary archaeological parlance, it is fashionable to emphasise the indefinite, rather than the definite, article, in deference to the envisaged plurality of the past. This research then, refers to a neolithic, if not the neolithic, of the Western Isles, and focuses upon one particular, even peculiar, aspect of then contemporary material culture in this region, namely pottery. Each successive chapter concentrates on one particular aspect of the period, with respect to an appropriate ceramic assemblage, and attempts to elucidate the integral and reflexive relation envisaged between material culture and discursive social action. A chapter summary is presented in Section 1. 6. elsewhere below. Figure 1.1. conveys the geographical relation of the Western Isles to the Scottish mainland; Figures 1.2. to 1.4. illustrate the locations of sites in the Western Isles mentioned subsequently in the text.

1.2. Inventions in history

The decline of a traditional historiography, to which all conventional archaeological narrative conforms, and its replacement with alternative conceptions of history and historical writing, ensure the usurpation of historical synthesis with historical particularism (eg. Barrett 1994:155-72; Shanks and Hodder 1995: *passim*; Thomas 1996b:234 *ff.*). The focus of this research, which attempts to encapsulate something of the latter, is confined to certain, necessarily

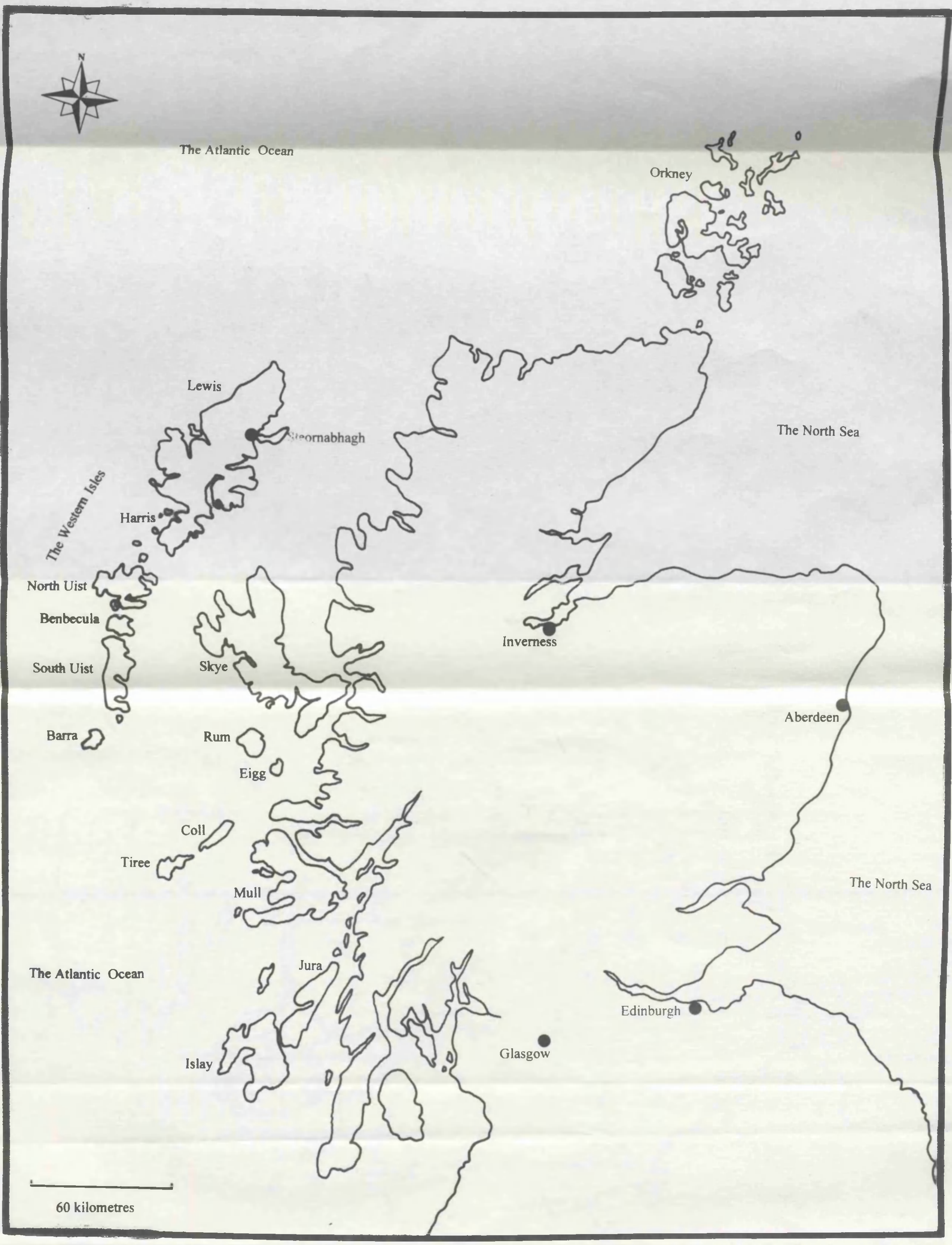


Figure 1.1.: Location Map of the Western Isles

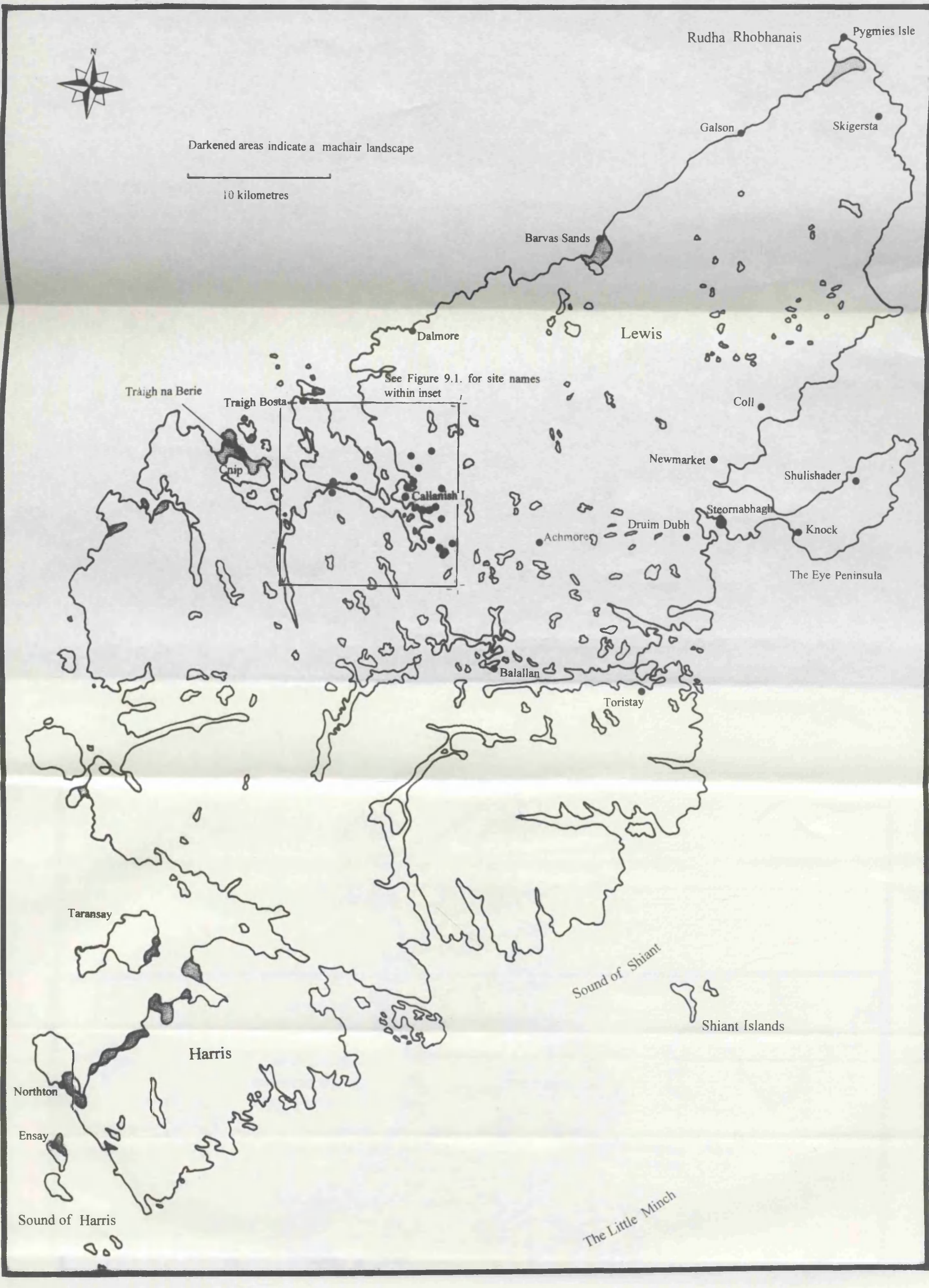


Figure 1.2.: Sites in Lewis and Harris, mentioned in the text

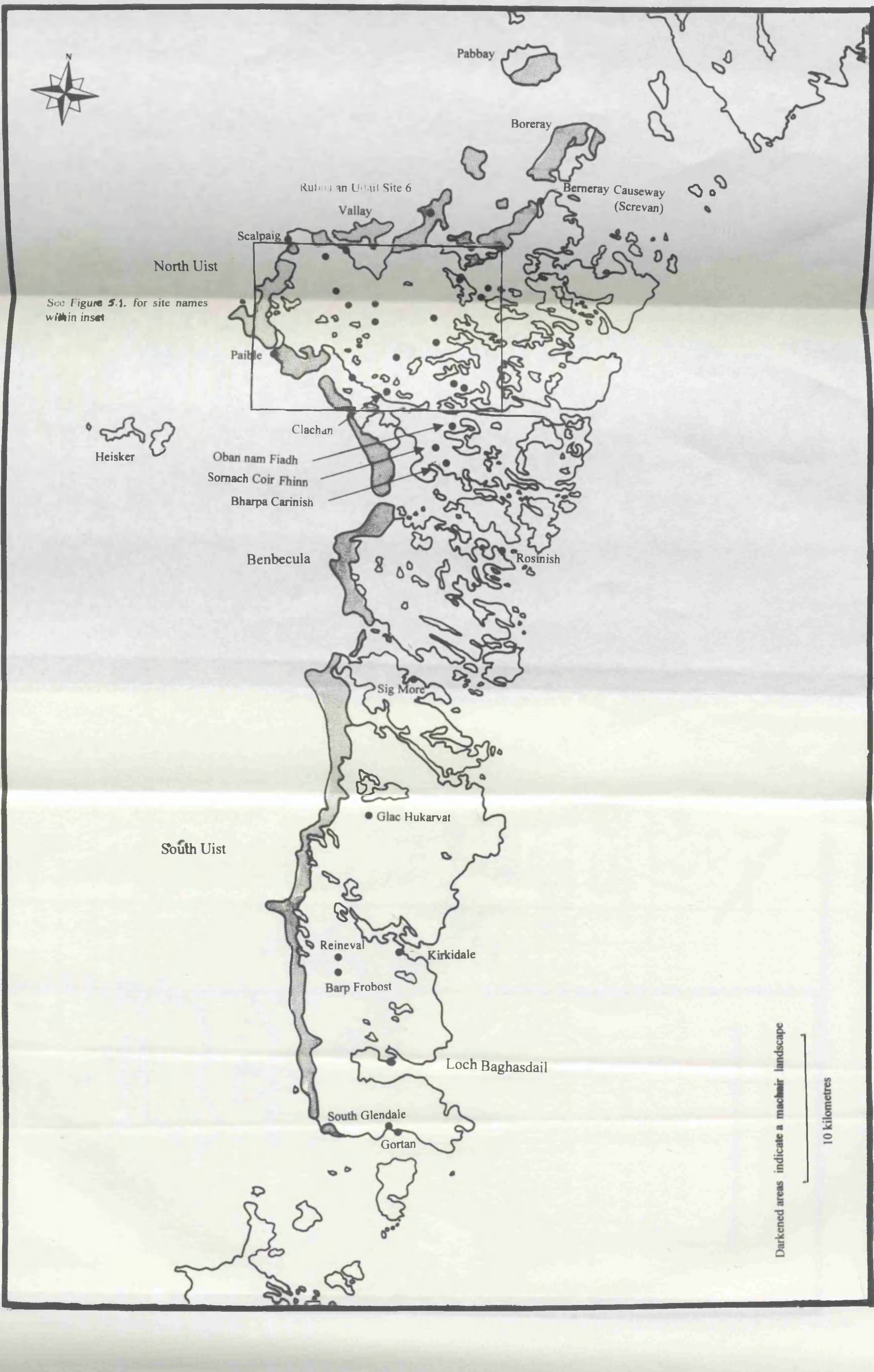


Figure 1.3.: Sites in North Uist, Benbecula and South Uist, mentioned in the text

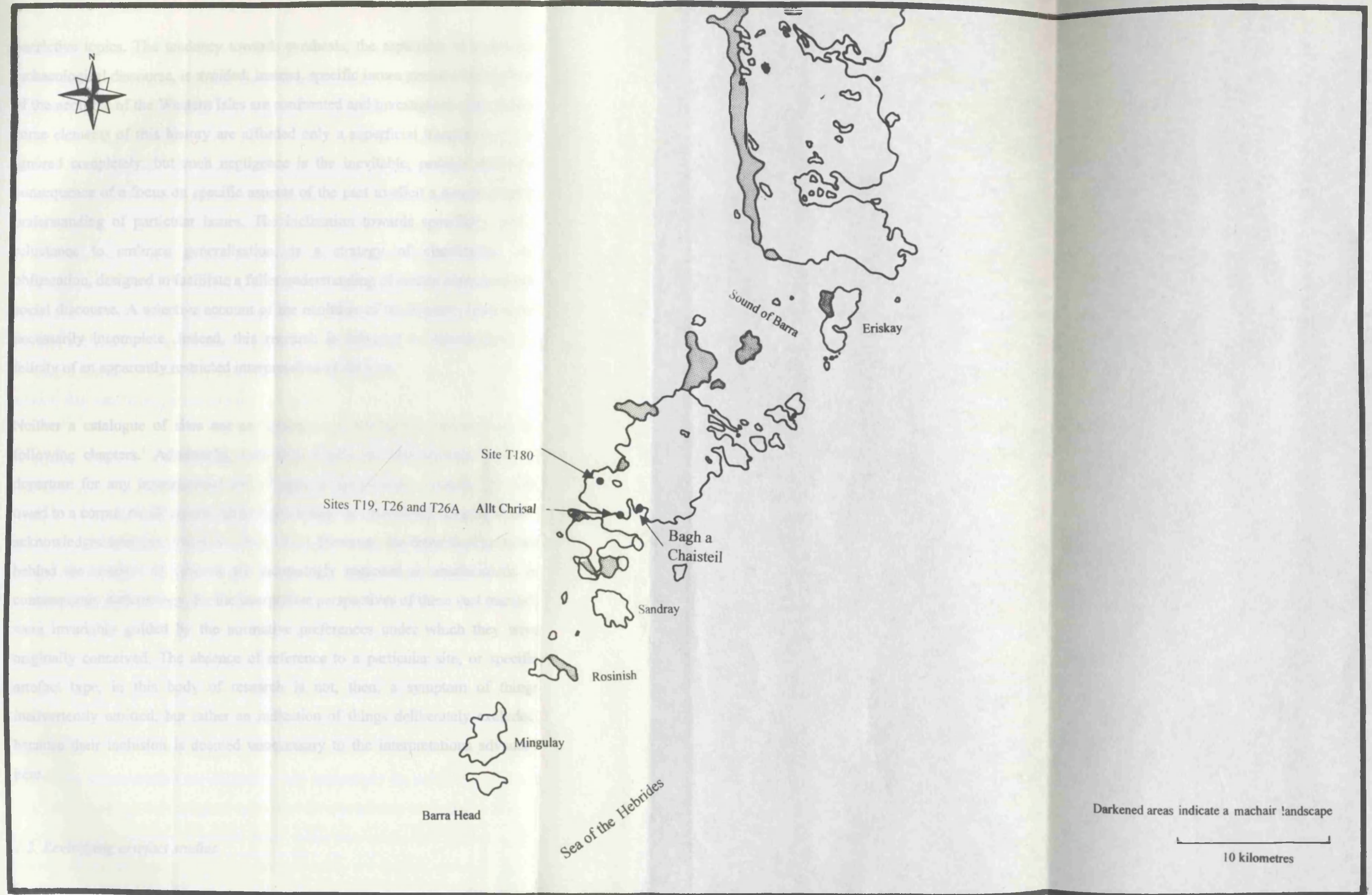


Figure 1.4.: Sites in Barra, mentioned in the text

restrictive topics. The tendency towards synthesis, the aspiration of traditional archaeological discourse, is avoided. Instead, specific issues germane to a history of the neolithic of the Western Isles are confronted and investigated. Admittedly, some elements of this history are afforded only a superficial treatment, or else ignored completely, but such negligence is the inevitable, perhaps desirable, consequence of a focus on specific aspects of the past to elicit a comprehensive understanding of particular issues. The inclination towards specificity, and a reluctance to embrace generalisation, is a strategy of clarification, not obfuscation, designed to facilitate a fuller understanding of certain aspects of past social discourse. A selective account of the neolithic of the Western Isles is not necessarily incomplete. Indeed, this research is intended to demonstrate the felicity of an apparently restricted interpretation of the past.

Neither a catalogue of sites nor an inventory of artefacts is included in the following chapters.[1] Admittedly, such lists remain an indispensable point of departure for any investigation into a regional archaeology. Indeed, the debt owed to a corpus on all aspects of the archaeology of chambered cairns is readily acknowledged here (see Henshall 1963; 1972). However, the theoretical premises behind the concept of corpora are increasingly regarded as anachronistic in contemporary archaeology, for the interpretive perspectives of these vast manuals were invariably guided by the normative preferences under which they were originally conceived. The absence of reference to a particular site, or specific artefact type, in this body of research is not, then, a symptom of things inadvertently omitted, but rather an indication of things deliberately excluded, because their inclusion is deemed unnecessary to the interpretations advanced here.

1.3. Revivifying artefact studies

A central purpose to which this study aspires is to reveal the interpretive potential of thorough artefact analysis, to demonstrate the efficacy of alternative approaches to material culture. The considerable literature that has accumulated on materiality as a social, rather than empirical, phenomenon seldom translates into a practical engagement with the artefactual evidence that these theoretical dalliances contrive to explain. A recognition of categorisation, for example, as a discursive social procedure (eg. Lakoff 1987), and the implications of this fluidity of category for the study of material culture in archaeology (eg. Boast 1990; Barrett 1991), has largely failed to influence artefact studies in mainstream archaeological practice, where artefactual categories, retaining a tangible exuberance, happily defy inimical theoretical developments. The reasons for such intransigence in practical archaeology, despite the challenge of mature theoretical argument, are examined in more detail in Section 3.2.. A confrontation with specific collections of materiality, in this case several ceramic assemblages, to develop a narrative, inevitably assailed by contingency and subjectivity, able to explain this materiality, is the aim of this research.

A detailed focus on several ceramic assemblages is an essential prerequisite of any critique of traditional interpretations of the neolithic in the Western Isles. Indeed, the level of detail embraced in those chapters dealing explicitly with each assemblage is perhaps tiresome. Yet the information elicited from such analysis is sufficiently useful to merit this intricate engagement with material culture. This research hopefully demonstrates the utility of a re-evaluation of assemblages previously published. These renewed empirical encounters with an apparently familiar material culture facilitate the development of new avenues of intellectual enquiry. The laborious and often monotonous nature of artefact studies ensures that material long since accessioned into museum catalogues, and wholly established in the archaeological record, is seldom examined subsequently. Successive commentators are obliged to rely exclusively on published accounts and, usually, accept the collegiate opinion of the disciplinary mainstream. It is, of course, the impracticality of artefact study, rather than intellectual indolence, that ensures artefacts, particularly unremarkable ones, are seldom examined more than once.

1.4. The nature of the evidence

The nature, distribution and frequency of neolithic archaeology in the Western Isles, comprising a meagre number of excavated sites, a substantial corpus of artefacts, usually without context, and an eclectic variety of frequently arcane monuments, are as much a consequence of environmental changes or differential recovery, as a genuine reflection of an original archaeological reality. Both the machair of the western coastline, providing a fertile calcareous soil encouraging agriculture and settlement (see Armit 1996:27-30; Crawford 1978a:54; Hudson *et al.* 1982:54-8; Mills 1993:377; Owen *et al.* 1996; Ritchie, W. 1968), and the featureless peat bogs of the interior, inhospitable and largely impenetrable (see Hudson *et al.* 1982:31-3; Ritchie, W. 1968:20), have been forming since later prehistory and, presumably, obscure a considerable quantity of evidence relating to prehistoric archaeology (cf. Armit 1996:24, 66; Brayshay and Edwards 1996:17; Edwards 1996:34; Gilbertson *et al.* 1996b:3). The continuous concentration of successive populations on the machair contrasts with a dearth of people occupying the interiors of the islands. The differing history of land use in these contrasting landscapes, leading to an exaggerated archaeological presence in the more densely settled and intensively used machair, probably creates, for the neolithic anyway, a misleading indication of landscape use and settlement distribution. However, an inane concern with the distribution of various archaeological phenomena, for example stone circles, is eschewed, and, as a consequence, no distribution maps, cataloguing the spatial extent of successive ceramic styles and monumental classes, accompany this research.[2] A resume of previous work, and the nature of the neolithic archaeology thus discovered, is given below.

A knowledge of the neolithic archaeology of the Western Isles derives variously from antiquarian endeavours of varying quality (eg. Beveridge 1911; MacKenzie, W.C. 1905; Thomas 1868), a survey by the Royal Commission, relying considerably on earlier studies (RCAHMS 1928), the remarkable research of Sir W. Lindsay Scott, marked by meticulous excavation and an enviable interpretive perspicacity (Scott, W.L. 1932; 1934a; 1934b; 1935; 1948; 1951a; 1951b), a corpus of chambered cairns and their contents (Henshall 1963; 1972), the tireless endeavours of several amateur archaeologists (eg. Ponting and Ponting 1984a), and, more recently, by wide ranging research projects conducted under the auspices of the Universities of Edinburgh (see Harding 1996) and Sheffield (see Branigan and Foster 1995a).

The malign effects of tidal and aeolian erosion on the shifting machair ensure a profusion of archaeology, either already dislodged or increasingly threatened by these natural processes, along the western coastline (eg. Gilbertson *et al.* 1996c; Lane 1990:108). Unsurprisingly, numerous midden deposits, containing a considerable quantity of environmental and artefactual material, including pottery, are known from these ephemeral machair landscapes (cf. Pollard 1996:198). The continuity of potting traditions, frequently making ceramics from different periods indistinguishable, and the absence of secure contexts, deprive many of these ceramics of any meaningful interpretive value. Regrettably, attempts to identify neolithic pottery from a consultation of the accessions catalogue for pottery held in the National Museums of Scotland (NMS) in Edinburgh were unsuccessful. Given the vast quantity of material under discussion, it was deemed impractical to examine systematically these ceramics to extract pottery of potential relevance to this study.

The monumental remains, including, for example, chambered cairns and stone circles, feature prominently in the archaeological record because of their size and permanence. The distribution of these monuments, extending into the interior and upland areas of the Western Isles, probably provide a more accurate reflection of the use of landscape during the neolithic. It is premature to assume that the concentrations of chambered cairns on North Uist and around the Eye Peninsula in Lewis are genuine, given that vast tracts of the Western Isles lie effectively submerged under substantial accumulations of peat (*pace* Henshall 1972:118, 120; Sharples 1992:326).

The salience of recognisable monument types in the literature, effectively chambered cairns, stone circles, stone alignments, solitary standing stones, and short cists, obscures the abundance of indeterminate monumental evidence remaining in the Western Isles. The use of the same raw materials for building, and the invariable elision of organic substances, contrive an archaeological record composed largely of indeterminate, and indiscriminate, drystone remains, including, for example, cairns and other enigmatic stone settings. The physical uniformity of much of this evidence almost certainly belies its cultural and chronological diversity. Essentially, a conventional archaeological terminology is unable to classify adequately many of these structures and features. Attempts to interpret many of these sites relies upon previously formulated classifications of shape, methods of construction, and positions in the local landscape. The potential of detailed field survey, to identify archaeology in a landscape apparently lacking in such remains (eg. Armit 1988:35-6; Armit and Dunwell 1995:108; Branigan and Foster 1991:15; Branigan and Foster 1995b:31-2; Coles and Burgess 1994:96; Fleming 1991:5; Harding 1996:106; Parker-Pearson 1995:109-10), provides a sobering reminder that empirical research is a necessary prerequisite to informed interpretive speculation. That survey is able to recognise sites is undeniable, but excavation, desirable if impracticable, is frequently necessary to elucidate fully the nature of the observable archaeology. Interpretation predicated on comprehensive survey and selective excavation is able to afford a reasonable, if provisional, understanding of the surviving monumental remains.

Any excavated neolithic sites, whether domestic or funerary, are often highly complex in structural terms, immensely rich in artefactual terms, and frequently contain an abundance of evidence for ritual practices. The quantity of archaeology recovered, whether during rescue excavation of material eroding out of disintegrating middens and depleted sand dunes, or during research excavation of sites protruding from beneath the peat in the interior, suggests an extremely rich archaeological record with immense interpretive potential. The ceramic assemblages analysed in this research derive from sites such as these.

The importance of depositional practices to the nature of the archaeological record, in marked contrast with the formative effects of taphonomy and environment, is seldom recognised. That the artefactual evidence displays *structure*, suggesting a consistency of depositional practices, is frequently overlooked. Similarly, the general absence of copper and bronze is more likely a consequence of recycling due to a scarcity of local ore sources, or even depositional proscription, than chemical taphonomy. The pumice pendant, emulating a copper flat axe, from Unival (Armit 1996:75; Megaw and Simpson 1961:69-70; Scott 1948:23, 29, no. 4, Plate IX: following page 24), and the solitary indeterminate fragments of copper or bronze known from Dalmore (Armit 1996:87; Ponting 1984c:235) and Northton (Armit 1996:87; Simpson 1976:224), attest to the original presence, and eventual archaeological absence, of metalwork during in the late neolithic and early bronze age (cf. Scott 1948:30; 1951b:38).

1.5. The significance of environment

A comprehensive consideration of the environment in the Western Isles during the neolithic is eschewed. This omission does not, of course, indicate a disregard for then contemporary environmental conditions. The significance of floral and faunal resources, whether terrestrial or marine, and of prevalent pedological and meteorological conditions, to an understanding of the period cannot be overestimated (see Edwards and Ralston 1997a). In temperate zones, such as north west Europe, where the ravages of taphonomy ensure that the archaeological record invariably comprises only inorganic remains, an understanding of the natural organic resources readily available to past societies becomes an invaluable interpretive facility. At any rate, the growth of environmental archaeology, and the amount of related research that has recently taken place in the Western Isles (eg. Bennett *et al.* 1990; Birks and Madsen 1979; Bohncke 1988; Gilbertson *et al.* 1996a; Mills 1993; Newell 1988), means that any cursory treatment of the evidence would be both inadequate and inessential.

However, it is necessary to convey the radical nature of the differences between environmental conditions in the neolithic and those prevailing today. Documentary sources (eg. Callander 1929:319), place names (eg. Beveridge 1926:24), archaeological excavation (eg. Crone 1993) and environmental sampling (Coles 1990) provide some evidence of environmental conditions, at varying times in the past, unrecognisable today in the Western Isles.[3]

The fertility of the soil on various islands is attested in documentary sources (Beveridge 1911:vi-vii; Crawford 1978a:55; Henshall 1972:115; see Dodgshon 1996). A deterioration in the fertility of the soil, due to mismanagement of the land, occurred in the historical period (Henshall 1972:115; see Dodgshon 1996). Much of the contemporary landscape of the Western Isles, typically undulating peat bog interspersed with numerous lochans, was probably grassland, lightly wooded, and suitable for pasturage during the neolithic (Henshall 1972:115).

There is, despite the superficial uniformity of much of the contemporary landscape of undulating peat bogs, no reason to suppose a uniformity of vegetation cover in prehistory in the Western Isles (Bennett *et al.* 1990:281). There is both macrofloral and microfloral evidence to indicate the variable presence of woodland in numerous locations across the Western Isles at varying times in the past (eg. Bennett *et al.* 1990:293-95; Beveridge, G. 1926:24-5; Edwards 1996: *passim*; Newell 1988:87; see Armit 1996:24-7). In terms of macrofloral evidence, excavations at Eilean an Tighe, Bharpa Carinish, Unival and Clettraval in North Uist, and Allt Chrisal in Barra, recovering charcoal from hazel, birch, oak, willow, rowan, and pine, suggested the use of wood for fuel, and indicated, assuming such species grew locally, a previously unsuspected diversity of woodland during the neolithic (see Armit 1996:65; Brayshay and Edwards 1996:16-7; Crone 1993:376; Henshall 1972:115; Mills 1993:376-78; Scott 1951a:24). Similarly, macrofloral remains, lying below the peat in Lewis or submerged offshore, primarily along the west coastline of South Uist, Benbecula, and North Uist, provide a graphic illustration of extinct woodland (see Bennett *et al.* 1990:294; G. Beveridge 1926:24-5; Birks and Madsen 1979:827; Von

Weymarn 1974:121-4, Plate 29: following page 123). In terms of microfloral evidence, several pollen analyses suggest a considerable tree cover during the mesolithic and neolithic, more likely scrub than closed woodland, with a sporadic rather than continuous distribution, variously comprising birch, hazel, oak, elm, pine, ash and aspen (eg. Birks and Madsen 1979; Bohncke 1988; see Brayshay and Edwards 1996: *passim*; Edwards 1996: *passim*; Newell 1988:87-89; Tipping 1996:43). Other sources of evidence, for example mollusca, confirm this interpretation (Armit 1996:25, 56, 90; Burleigh *et al.* 1973:63; Dinnin 1996:166-67; Evans 1971b:62-3). Woodland decline, preceding the neolithic in certain locations, began at different times in different places (Brayshay and Edwards 1996:20).

The absence of peat beneath the chambered cairns of Clettraval and Unival (Chrisp 1990:11; Henshall 1972:115; Scott 1935:480; 1948:1), and the stone circle complex at Callanais (Ponting and Ponting 1984a:7), confirm the construction and use of many monuments germane to this study prior to ombrogenous peat growth. Ombrogenous peat probably began forming in the 6th millennium BP, although it was already locally established in some areas by the 9th millennium BP (see Bennett *et al.* 1990:294). Many neolithic or early bronze age monuments were subsequently obscured by overwhelming accumulations of peat. The stone circles at Callanais, Achmore, and Druim Dubh, the two latter sites toppled in antiquity, were largely concealed by subsequent peat growth (see Ashmore 1984:14; Curtis and Curtis 1992:84; 1996:99; Innes 1858:111; Ponting and Ponting 1981c:50; 1984a:7). Some structures, such as the enclosure walls abutting Caravat Barp chambered cairn at Bharpa Carinish, were completely concealed beneath the peat (Crone 1993:361). The continual accumulation of these organic soils, generally 2 m deep, but up to 6 m deep in places (see Coles 1990:24; Hudson *et al.* 1982:33), has resulted in substantial alteration of local topographies, concealing mesolithic and neolithic land surfaces.

The presence of neolithic settlement on islets at Eilean an Tighe and Eilean Domhnuill a Spionnaidh suggests the existence of contemporary settlement on other islets elsewhere in the Western Isles (Armit 1987:30; 1992:318-19; 1996:52). The abundance of archaeological evidence datable to later periods on the innumerable islets that litter the lochs and lochans of the Western Isles suggests that several neolithic sites may lurk unrecognised beneath later evidence (Armit 1996:52; Chrisp 1990; Harding 1990:8-9). Similarly, many settlement sites, for example Bharpa Carinish (Crone 1993:361) and sites T26/T26A at Allt Chrisal (Foster 1995:64), previously lay unrecognised beneath the peat. Significantly, all of these sites required excavation before a neolithic date was recognised. Such work demonstrates the archaeological potential of the landscape sealed beneath the peat (Sheridan and Sharples 1992:2). More work is required in the interior, on non-machair landscapes, before any statements on settlement focus can be evaluated, let alone vindicated. Yet the absence of commercial peat cutting in the Western Isles (Hudson *et al.* 1982:112), whilst preserving any archaeology surviving, ensures relatively few sites are discovered.

Various strands of evidence indicate that a substantial marine transgression, forcing shell sand deposits from the sea floor onto the western shores of the Western Isles, occurred during the Holocene (Crawford 1978a; Ritchie, W. 1968). Notably, the initial neolithic occupation at Northton and Rubha an Udail Site 6, lying on the boulder clay, occurred prior to the development of machair (see Evans 1971a:13). Although no neolithic machair survives, it is probable that machair began forming during the neolithic period (Crawford 1978a:54). At any rate, submerged peat deposits, frequently identifiable lying within, or immediately below, inter-tidal zones, occur in several locations around the coastline of the Western Isles (see Coles 1990:26; Ritchie, W. 1968:24; Von Weymarn 1974:116-27, Figs. 5.1, 5.2: following page 16, Table III: following page 125). Some chambered cairns, for example Geirisclett and Sig More on North and South Uist respectively, are sufficiently low lying to incur tidal inundation, suggesting a considerable rise in sea level since the neolithic (Callander 1929:318-19; Henshall 1972:116). Much of the shallow coastal waters on the west side of the Western Isles, particularly around the machair strands of South Uist, Benbecula, North Uist, and South Harris, were probably dry land during the neolithic. The original neolithic coastline, and any concomitant archaeology situated there, preceding eustatic rise and the development of machair, is obscured by vast quantities of sand and sea across much of the west coast of the Western Isles (cf. Armit 1996:28; Crawford and Switsur 1977:128; Harding 1990:10).

In conclusion, then, a much lower sea level, an absence of machair on the western coasts, an absence of ombrogenous peat from the island interiors, and a moderate amount of woodland cover typified the Western Isles during the neolithic. Presumably, these favourable environmental conditions provided then contemporary communities with an extensive range of natural resources and raw materials readily available for exploitation. Essentially, fundamental environmental changes, precipitating a decline in the availability of many natural resources, suggest that the Western Isles enjoyed a radically different topography, fauna, flora, and overall appearance, in the neolithic.

1.6. A chapter summary

The following succinct chapter summary provides a schematic outline of the overall structure of this research.

Chapter two reviews the various ceramic styles germane to a neolithic of the Western Isles. The purpose of such a resume is to introduce the concept of categorical biographies of different types of neolithic pottery. These biographies provide a concise history of the interpretive motivations and aspirations behind the invention, and subsequent development, of these categories. The various pottery types dealt with, including carinated bowls, grooved ware and beakers, are conceptualised as contingent theoretical devices, and not reified as inviolate material entities. The neolithic assemblages from the Western Isles is introduced and discussed.

Chapter three is a critical evaluation of approaches to ceramic studies in archaeology. The interpretive aspirations of culture historical, processual and post processual archaeologies, with respect to ceramic studies, are discussed. The sterility of contemporary ceramic studies in Ireland and Britain, still largely dependent on traditional normative archaeology, is emphasised. Many of the innovative methodological developments motivated by processual theoretical precepts are applauded, as analytical methods, although the interpretive agenda responsible for these procedures are discounted. This extended discussion of methodology anticipates the presentation of the analytical procedure used in the empirical component of this research.

Chapter four describes the methodology employed to evaluate and catalogue the various ceramic assemblages examined during the course of this research.

Chapters five, six, seven and eight form the empirical core of the research. The opportunity is taken to focus upon a different interpretive issue, using a different ceramic assemblage, in each of these chapters. In chapter five, the assemblages from the chambered cairns are utilised to reassess the significance of monumentality and the mortuary practices enacted at these sites. In chapter six, an apparently domestic assemblage from an alleged settlement site is investigated from a contextual perspective in an attempt to elicit something of the ways in which these vessels were used and deposited. In chapter seven, an exclusive focus on decoration in an assemblage apparently divided by a fundamental categorical dichotomy demonstrates a stylistic continuity between its seemingly irreconcilable components. In chapter eight, the detailed contextual evidence, unfortunately something of a novelty for neolithic ceramic assemblages in the Western Isles, is employed to reveal the complex interplay between ritual and domestic practices within the restricted confines of successive phases of a single settlement site. The four empirical chapters demonstrate that the interpretive potential of pottery, stretching beyond dubious stylistic comparison, extends to an understanding of discursive social practice on the sites from which these assemblages originate.

Chapter nine, a conclusion, declines the temptation of synthesis, to examine briefly aspects of the neolithic of the Western Isles largely disregarded in the preceding chapters. A revised concept of the neolithic is employed to explain the advent of ceramics with reference to symbolic efficacy rather than functional utility. The various monuments, ranging from the concentration of chambered cairns on North Uist, to the cluster of sites around East Loch Roag, are briefly investigated. The meagre evidence for neolithic settlement and economy are reviewed. The ambiguity surrounding a neolithic chronology is demonstrated. Finally, this body of research, despite its modish theoretical aspirations, is interpreted as another example of conformity to a conventional archaeological practice, succumbing to an incontrovertible disciplinary hegemony.

1.7. Conclusion

To bemoan the intrinsic quality of the evidence is a relatively common occurrence in the archaeological literature. However, the nature of the neolithic archaeology from the Western Isles *should be* sufficiently rich to allow an interpretive indulgence of a kind frequently impossible elsewhere. Unfortunately, the inadequacy of contextual control for artefactual assemblages means that many of these interpretive approaches, discussed in more detail in chapters three and four, are rendered more ineffectual than was originally hoped. An appeal for further fieldwork is, then, based more on an informed evaluation of the extant evidence, than blind faith in a defunct empiricism. The following chapters embody an attempt to ascribe meaning to, rather than elicit meaning from, an archaeological record.

[1] The advent of computerised versions of National Monuments Records (NMRs), and the development of relational database software ensure that the compilation of corpora are no longer considered as a laborious task. An inventory of sites, structures and artefacts, either potentially or definitely datable to the neolithic, from the Western Isles, was obtained from the computerised NMR at the Edinburgh offices of the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS). This inventory, subsequently transferred to a relational database, was consulted constantly during this research.

[2] Traditional distribution maps, often collating a series of unique artefacts or sites as a unitary phenomenon, and presenting this now seamless archaeological category at a scale meaningless to the people responsible for the construction, use and abandonment of such a material culture or architecture, embody a theoretical approach incongruous with the interpretive aspirations of this research (cf. Fraser 1996:52, 62).

[3] Admittedly, many of these observations refer to environmental circumstance in the historical period. It is, however, the *difference* between past and present environmental conditions that requires emphasis, and no linear development of environmental conditions, whether ameliorative or inclement, is envisaged.

Chapter two

Categorical biographies of some neolithic and early bronze age pottery styles

2.1. Introduction

A critique of conventional ceramic classification, and the writing of several categorical biographies for various ceramic styles germane to the neolithic of the Western Isles, is intended to demonstrate a familiarity with the evidence, an understanding of previous research, and a need for alternative approaches to the interpretation of prehistoric pottery. The vessel types invented, compared, contrasted and pursued amongst the various ceramic assemblages that comprise the archaeological record are examined below. A critique of these numerous ceramic styles is not an empirical survey of assemblages known to contain these various styles, but rather a critical investigation into the interpretive issues that motivated the invention, and sustained the development, of these same styles in the archaeological literature. Importantly, these protracted typological anecdotes, written as critique, neither seek nor secure solutions to the many categorical conundrums encountered within the pages of interminable archaeological bumf. Instead, they demonstrate the changing definitions and interpretations advanced to explain each ceramic type, where the meanings inherent within any given categorical label vary as further discoveries and changing theoretical priorities instigate differing interpretations. This indulgence in the existing literature demonstrates the futility of a traditional approach, and develops a conventional familiarity with the traditional typological vocabulary employed to described the ceramics dealt with in chapters five through eight.

The castigation of a culture historical categorical terminology requires a secure theoretical basis. The following resume of ceramic classification is presented as a concise preparatory exercise in advance of the critique of ceramic styles given in Section 2.3. below.

2.2. A critique of ceramic classification

It is a truism to concede that the archaeological concept of ceramic, identified by its constituent raw material, is an entirely arbitrary category of analysis (Thomas 1991:80). Yet the priority consistently afforded to pottery, or, more precisely, to the plethora of ceramic types, in archaeological practice requires explanation. The intrinsic malleability of clay, the raw material, readily translates into a predictable mutability of ceramic, the resultant morphology. It is this innate promiscuity of style, peculiar to this type of material culture, that is the source of the interminable speculation beloved of typological debate. The authenticity of alleged stylistic connections, frequently distorted by typological development, remains always controversial, and serves only to perpetuate, rather than resolve, these endless disputes on the origins and relations of various ceramic styles.

The categorical narratives given below demonstrate the arbitrary, and frequently inappropriate, priority afforded to intrinsic style during interpretation. This reliance on typology is a direct consequence of a now defunct culture historical conception of material culture. Numerous ethno-archaeological studies of ceramic classification demonstrate the complexity of the criteria employed to categorise pottery (eg. Barley 1994; Braithwaite 1982; Kempton 1981; Sterner 1989; Welbourn 1984). These studies confirm that material culture, as a social resource, embodies a mutability and ephemerality alarming to conventional archaeological conceptions of classification. Essentially, the categorical identity of material culture, negotiated according to social circumstance, exudes a contingency and ambiguity that a cumbersome archaeological typology is unable to capture adequately. The same vessel may be afforded, usually implicitly, numerous, perhaps contradictory, categorical identities, by social agents during discursive social interaction. A typological treatment of pottery, attempting to identify the cultural origins and relations of an assemblage, is almost certainly misconceived. Essentially, innate style is not necessarily a determinant of categorical identify, nor an indication of original cultural affinity.

2.3. Categorical biographies of neolithic and early bronze age pottery

The ceramic styles chosen for review are those types known from the Western Isles in the neolithic or early bronze age. These styles, occurring with varying frequency, are variously considered as either regional, national or international types, broadly identifiable with, and occasionally defining, either early neolithic, late neolithic or early bronze age ceramic traditions. The ceramic styles evaluated successively below are western neolithic ware, beacharra ware, hebridean ware, achnacree or rothesay ware, unstan ware, hebridean ware, impressed ware, grooved ware, fine beaker ware, and, finally, coarse beaker ware. An eclectic variety of interpretive issues relate to these different ceramic types. Predictably, these separate styles have attracted differing degrees of inquiry, generated differing levels of controversy, and endured varying amounts of scrutiny. The styles restricted to western Scotland, namely achnacree ware, beacharra ware, and hebridean ware, have attracted relatively little attention outside the appropriate excavation reports. Unstan ware, concentrated in the Orkney Isles, and confined largely to northern Scotland, has attracted considerably more attention, due, firstly, to the overt visibility of a neolithic archaeology in the islands, and, secondly, by virtue of its intriguing relationship with grooved ware. Both grooved ware and fine beaker ware, exhibiting national and international distributions respectively, have drawn repeated comment. It is inevitable, given the unequal attention afforded to these various ceramic types, that the following biographies focus differently on varying aspects of categorical development. The scope of these categorical biographies extends beyond north western Scotland, to encompass material germane to interpretation from other regions, when necessary. Unfortunately, categories biographies for the numerous ceramic styles identifiable in neolithic ceramics in Ireland, many of which are germane to the interpretation of contemporary pottery in north western Scotland, particularly the Western Isles, are excluded from this study due to constraints of space. The significance of the overt stylistic similarities between various types of neolithic ceramics in western Scotland and northern Ireland remains uncertain (Herne 1988:11; see Sheridan 1995:6).[1] Successive attempts to explain or review the stylistic fecundity of neolithic pottery in Ireland are readily available elsewhere (see Case 1961; 1963; Herity 1982; Herne 1988:10, 21-3; Sheridan 1985; 1995). The relevance of assemblages from elsewhere to the research topic in question is always discernible in the following discussion.

2.3.1. Early neolithic ceramic styles

An initial attempt to classify Scottish neolithic pottery, identifying 12 vessel types on the basis of morphology, effectively isolated several styles subsequently incorporated into the western neolithic tradition (Callander 1929a:76-84). Many of these vessel types were subsequently renamed as, for example, unstan or beacharra ware, and retained as viable ceramic categories, but others were considered superfluous, and subsequently forgotten.

The dependence of early neolithic ceramic styles in Scotland on styles from southern Britain, exemplified by J.G. Scott's statement on the external origins of all ceramic styles in Scotland (1977b:26), probably reflects more the poverty of the evidence, than the typological ancestry of the actual ceramics (Herne 1988:10). The identification of insular styles, for example rothesay or achnacree ware, betrays an implicit assumption that early neolithic society in Scotland was stranded on a cultural periphery (Herne 1988:11). The continual appeal to external sources obscured the regional nature of these ceramics, recognisable at an intuitive level, and was ultimately detrimental in effect (Kinnes 1985:23). The resort to a generalised vocabulary, and a retreat into ceramic categories relating to specific vessel types rather than replete assemblages, was the response to the bewildering diversity of styles, the array of unsatisfactory interpretations to explain them, and, significantly, an unhelpful radiocarbon chronology (Herne 1988:11,12; cf. Henshall 1972:166). The diversity of apparently contemporary styles made the identification of a typological sequence for this material unlikely (Henshall 1972:166). The stylistic idiosyncrasy displayed by much neolithic pottery in Scotland was explained as a consequence of regionalisation, exacerbated by isolation (Kinnes 1985:23).[2] At any rate, the identification of the western neolithic ancestry of these assemblages, apparently marooned at the far edge of Europe, and containing both deviant and derivative styles, was inevitable (see Henshall 1963:106; 1972:166, 177; Scott 1951b:51; Smith 1974:110). These assemblages were incorporated into existing classification schemes, developed initially with respect to allegedly contemporary pottery from southern Britain, only with some difficulty. Arguably, the concept of western neolithic is sufficiently catholic, in typological terms, and, subsequently, in interpretive terms, to be meaningless. Such redundancy is amply demonstrated by the inclusion of both hebridean jars and beacharra bowls within a western tradition, despite the complete absence of plausible typological origins for either of these regional ceramic styles within this general context (see Henshall 1972:174). Indeed, the neolithic pottery from northern and western Scotland embodies many distinctive regional characteristics that impede any attempts to identify external influences.

Many of the early neolithic ceramic styles discussed below derive consistently from specific depositional contexts. Unstan ware, beacharra ware, and achnacree ware, for example, derive predominantly from chambered cairns (cf. Kinnes 1985:22). The significance of depositional context was frequently overlooked in traditional typological debate, because the archaeological record was taken to reflect accurately the diversity and frequency of material culture types and styles extant in the past. Although the possibility of deliberate depositional practices or removal were readily acknowledged (eg. Henshall 1963:96), the implications of such selectivity were presumably ignored as unwelcome, and certainly intractable, complications to interpretation. At any rate, the impoverished quality of contextual information regarding many assemblages precluded any profitable evaluation of context.

2.3.1.1. A categorical biography of western neolithic ware

An eclectic variety of early neolithic pottery was subsumed under the term western neolithic ware. This broad range of vessel styles, consolidated by a normative conception of culture, variously represented the ceramic assemblages of early neolithic societies. The extensive distribution, and stylistic homogeneity, of western neolithic pottery in Britain, and its general similarity with contemporary ceramics in western continental Europe, was attributable to the common cultural connections, and rapid expansion, of early neolithic societies across much of Europe (Childe 1931:37, 46; 1935:73-9; Piggott 1931:75-6,85; 1954:97-101). Specifically, the stylistic similarities discernible in early neolithic pottery across northern Britain, and extending into northern Ireland, subsequently enshrined in the concept of grimston-lyles hill ware (Smith 1974:108), were notable (Piggott 1954:116-17, 167). The following discussion, necessarily alluding to ceramic styles covered elsewhere in this chapter, focuses specifically on early neolithic bowls, many of which were carinated, but excluding the beacharra and unstan styles.

Piggott, following Leeds (1927:459)[3], initially labelled the entire range of early neolithic pottery from southern Britain as windmill hill ware or, alternatively, as neolithic A ware (1931:71). Nine distinctive vessel profiles were identified (Piggott 1931, Figure 1:75; cf. Childe 1931, Figure 1:40). The stratified and substantial assemblage from Windmill Hill, replete with all identifiable styles, was used to subdivide further the pottery into A1 and A2 wares. The gradual transition from A1 to A2 wares, identifiable on the basis of form alone, was characterised by an elaboration of rim morphology and an increase in decoration (Piggott 1931:83-4). The veracity of this dichotomy was attested at other sites containing early neolithic pottery, particularly in southern Britain (Piggott 1931:84-5).

A gradual realisation of the diversity of early neolithic pottery in Ireland and Britain, and a desire to recognise the cultural connections between these various styles, prompted a return to the already familiar term western neolithic ware to describe them (Piggott 1954:66-7). The dichotomy between neolithic A1 and A2 wares was forgotten. Instead, an alternative series of regional ceramic groupings was introduced to articulate the previously unanticipated stylistic diversity discernible in early neolithic pottery. In southern Britain, windmill hill, hembury, abingdon, east anglian (or mildenhall), and whitehawk wares were identified (Piggott 1954:67-75; Smith 1956). Importantly, these ceramic categories, each designed to encapsulate the serviceable assemblage of an early neolithic community, referred to a variety of vessel styles. In northern England, grimston ware and heslerton ware, categorised on the basis of vessel profile, were established (Piggott 1954:114-17). In northern Ireland and western Scotland, lyles hill ware and beacharra ware, categorised on the basis of morphology and decoration, were defined (Piggott 1954:167-73). These various ceramic types, together embodying a bewildering diversity, and, indeed, complexity of styles, each retained a mutual typological affinity to the western neolithic tradition.

The various generic labels, initially used to describe early neolithic pottery, effectively windmill hill ware, western neolithic ware, or neolithic A ware, each unable to articulate the stylistic diversity of these ceramics, were subsequently dismissed as misleading (Smith 1974:106). However, the typological vocabulary used by Piggott to elicit the stylistic and cultural relations between early neolithic pottery retained a descriptive, if not entirely interpretive, currency. Mention of the abingdon style, or allusions to a hembury influence, statements apparently requiring no further explanation, occurred regularly in the literature, decades after the interpretive utility of such terms was superseded (eg. Scott, J.G. 1977a:241; Sheridan 1985: *passim*). Interpretive developments relating to such early neolithic pottery from, firstly, southern Britain, and, secondly, Ireland and northern Britain are reviewed below.

The eventual consolidation of these numerous early neolithic styles, into south western, eastern (or grimston-lyles hill) and decorated, styles, was merely a simplification of the preceding plethora of styles (see Smith 1974:108; Thomas 1991:87; Wainwright 1972:71-5; Whittle 1977:77 *ff.*). Essentially, there was a general consensus identifying three main styles of early neolithic pottery in southern Britain (Whittle 1977:94). The south western (or hembury) style incorporated the hembury and windmill hill styles; the eastern style, equivalent to grimston-lyles hill ware in northern Britain, incorporated undecorated vessels from eastern England; and the decorated style was, unsurprisingly, the decorated pottery, extrapolated from the preceding styles, and incorporating the whitehawk and east anglian (or mildenhall) styles, in southern Britain (see Smith 1956; 1974:106-08; Whittle 1977:77, 82-3, 85, 94, 95). The interpretive efficacy of this simplified classification of early neolithic pottery, disregarding the confusing nomenclature, requires comment. The south western and eastern styles, identifiable on morphological and geographical criteria, and the decorated style, identifiable by decorative criteria, each retained a regional emphasis. These regional styles, incorporating vessels of differing size and morphology, referred primarily to assemblages rather than singular vessel styles, recalling, despite Whittle's protestations to the *contrary* (1977:95-6), the culture historical inspiration behind the original classification on which these simplified categories were based. The discovery of undecorated styles and grimston-lyles hill styles in south eastern Britain confounded the regional interpretation of early neolithic ceramic types (Herne 1988:11-12; cf. Wainwright 1972:73). The significance of stylistic variation in early neolithic pottery in southern Britain remained controversial.

More satisfactory attempts to explain this stylistic variation focused on the possibility of ceramic exchange. Both Smith (1974:110-11) and Whittle (1977:95-6), equating ceramic styles with the arcane concept of potting traditions, rather than the familiar concept of cultural groupings, envisaged fine quality vessels with distinctive inclusions, allegedly the product of specialist potters, circulating widely across southern Britain, and complementing locally made coarse wares, in the assemblages of different communities during the early neolithic. The diverse array of styles, and the wide variation in quality, of the gabbroic wares in the assemblage from Carn Brea in Cornwall complicated this otherwise attractive theory (see Peacock 1988:303-04; Smith 1984:178-79). Unfortunately, the reasons, if not the mechanisms, behind the specialisation of ceramic manufacture, and the circulation of finished vessels, remained unexplained (Herne 1988:11). Thomas, acknowledging the inconclusive radiocarbon chronology for these styles, avoided a culture historical interpretation, and explained such stylistic variation with respect to the exchange of ceramics and specialised vessel functions (1991:87). The undecorated styles, directly paralleled in continental Europe, were perhaps earlier than the decorated styles, indigenously developed (Thomas 1991:87). Undecorated ceramics, stylistically similar and widely dispersed, were manufactured or circulated within early neolithic communities to facilitate the preparation and consumption of food (Thomas 1991:87). The stylistic ambivalence of these vessels readily translated into cultural adaptability (Thomas 1991:89). Decorated ceramics, displaying a regional diversity, were employed for a variety of unspecified functions (Thomas 1991:89). A definite relation between vessel profile and depositional context, with, for example, open vessels more suitable for feasting prevalent at causewayed enclosures, suggesting a broad functional differentiation between assemblages, confirmed the plausibility of the overall interpretation (see Thomas 1991:89, Figure 5.7:91). This understanding of the evidence effectively incorporated the concept of a carinated bowl, clarified by Herne (1988), into the original suggestions of Smith (1974), as reiterated by Whittle (1977).

In northern Britain, the grimston style, originally defined as a specific vessel type (Piggott 1954:114), was extended to encapsulate instead a replete assemblage (Manby 1958:226-27, 233, 235-36; 1963: 187-90, 197-200; 1975:26-31, 48-50; see Herne 1988:11). This expansion of the grimston ware concept required a denial of the typological integrity of heslerton ware, also originally defined by Piggott (1954:114), and the invention of towthorpe ware (Manby 1964:200-01; 1975:31-3; 50-1; see Herne 1988:11; Wainwright 1972:73).[4] Such typological casuistry, motivated by a desire to transform ceramic categories from specific vessel styles into the definitive artefactual representatives of traditional archaeological cultures, legitimated the categorical integrity of grimston-lyles hill ware as the ceramic assemblage of an early neolithic culture in northern Britain (Herne 1988:11). Appeals for the discontinuation of the term grimston-lyles hill ware (eg. Herne 1988:11-16; Kinnes 1985:22; Scott, J.G. 1977b:27, 36), for different reasons perhaps, were not entirely successful. Ironically, the vague chronological and geographical implications of the concept of grimston-lyles hill ware persuaded Henshall to retain the term subsequently: "...as a flexible general label..." (1991:83; cf. Davidson and Henshall 1991:69, 74). Admittedly, the term neatly encapsulated the similarities between a considerable body of pottery distributed sporadically across much of Ireland and northern (and even southern) Britain (see Atkinson 1962:8-10; Henshall 1984:61-2; Kinnes 1985:22-3; Manby 1975:48; McInnes 1964:42-7; Wainwright 1972:73-4; *pace* Scott, J.G. 1977b:27, 36-7; 1978:58).

Variations in early neolithic pottery styles in northern Britain, whether previously identified or then anticipated, were, and are currently, explained as a consequence of regional idiosyncrasy (eg. Cowie 1993:16; Henshall 1972:170; 1984:61; 1991:83; 1996:31-3; Kinnes 1985:22). As a corollary, the validity of typological debate relying on prototypical, rigidly defined vessel forms, is questionable.[5] At any rate, in northern Britain, early neolithic pottery was broadly separable into carinated and uncarinated round based vessels (Henshall 1972:166). Carinated bowls, despite variations in fabric and form, are the most distinctive, but, importantly, not the only, ceramic style represented in assemblages of early neolithic pottery in Scotland (Cowie 1993:15). Fine carinated bowls in eastern and western Scotland, despite the imperceptible differences between them, were apparently influenced by similar styles from eastern England and Ireland respectively (Henshall 1972:170, 171). Some of these relations, by virtue of

Callander's corpus (1928), were recognised long previously (Henshall 1972:170). Cowie, writing more recently, confirmed the stylistic salience of carinated bowls in assemblages of early neolithic pottery in Scotland, but emphasised that other styles, including simple, hemispherical bowls, and heavy bowls, also accompanied carinated bowls in these assemblages (1993). The hemispherical cups and uncarinated, frequently lugged, bowls from various sites in western Scotland were frequently considered to derive from the south western (or hembury) style (Henshall 1972:166). Indeed, lugs, according to Piggott (1962:8-10) and Henshall (1972:166), were a typological derivation from this southern source (Smith 1974:111, 116). More generally, these neutral bowls, of varying size, representing a substantial proportion of the pottery deposited in chambered cairns, were sufficiently unremarkable and widespread to confound typological comparison (Henshall 1972:167-68). However, a certain consistency of fabric in simple, hemispherical bowls from east central Scotland possibly suggested functional specialisation (Cowie 1993:16). Cowie identified the presence, and demonstrated the categorical integrity, in terms of fabric and form, of a heavy bowl tradition, possibly equivalent to towthorpe ware, in these early neolithic assemblages (Cowie 1993:18).

Herne, in a critical evaluation of early neolithic pottery styles in Ireland and Britain, argued persuasively against the categorical integrity and interpretive utility of the concept of grimston-lyles hill ware (1988:9-16). Essentially, the grimston-lyles hill series, introduced by Smith (1974:106) to accommodate previous research, new discoveries, and an unanticipated radiocarbon chronology, was an amalgam of normative ceramic styles, enjoying an unprecedented stylistic heterogeneity, contextual promiscuity, and chronological longevity (Herne 1988:14). Herne, attempting to supplant this erroneous concept, and displaying considerable typological erudition, introduced, and formally defined, the carinated bowl and the shouldered bowl, as specific ceramic styles (1988:15).[6] However, these apparently innovative vessel types were effectively reincarnations of previously superseded ceramic styles. Essentially, carinated bowls replicated grimston ware, and, presumably, albeit more tenuously, shouldered bowls incorporated heslerton ware (see Piggott 1954, Figure. 17:115; Wainwright 1972, Figures. 15-34:25-45).[7] The radiocarbon chronology suggested that undecorated carinated bowls, datable to the early neolithic, preceded shouldered and decorated bowls, datable to the middle neolithic (Herne 1988:12, 15, Table 2.1:13). Any evidence of chronological concurrence, or typological influence, between the former style and the latter styles remained obscure (Herne 1988:16, 23). The carinated bowl, a novel item of material culture, with considerable implications regarding the preparation, cooking and consumption of food, embodied and exuded a symbolic significance (Herne 1988:25-6). At any rate, the categorical, and resultant chronological, integrity of the carinated bowl supplanted the use of the misleading concept of western neolithic pottery (Sheridan 1995:17). Yet the concept of the carinated bowl, and, more ambiguously, the *carinated bowl assemblage*, as developed by Herne (1988), the latter especially implying cultural and chronological homogeneity, requires cautionary use. The assemblage from Broome Heath, rejected as a carinated bowl assemblage, on both stylistic and chronological grounds, by Herne (1988:14-6), contains several vessels akin to the grimston style, epitomising the carinated bowl (see Wainwright 1972, P15, Figure 16:26; P87, Figure 18:28; P112, Figure 19:29; P310, Figure 30:41, P369, Figure 32:43, *pace* Herne 1988:15). Indeed, open carinated bowls comprised approximately fifteen percent of the vessels sufficiently complete to allow identification of overall profile in the assemblage (Wainwright 1972:30). Furthermore, the assemblage from Broome Heath is derived predominantly from truncated negative features (see Wainwright 1972, Table 2:46), effectively unrelated in stratigraphic terms. The stylistic uniformity alleged for the assemblage is more likely an indication of depositional prescription than a guarantee of its chronological longevity or cultural unity (*pace* Wainwright 1972:22, 70). Indeed, to anticipate an argument addressed fully in chapter three, the acceptance of the concept of a replete assemblage is a dangerous assumption inherited from the optimism of culture history.

2.3.1.2. A categorical biography of beacharra ware

The categorical salience of the distinctive bipartite, closed bowl, subsequently classified as beacharra ware, was guaranteed, due to its immediately recognisable morphology and decoration (see Bryce 1902:102-09, 135 *ff.*). These vessels, initially afforded a distinct categorical identity on the basis of morphology (Callander 1929a:79), were subsequently identified as beacharra ware, a group of ceramic styles readily identifiable as a regional variation of western neolithic ware, on the basis of cultural affinity (Childe 1935:67; Piggott 1931:104, 107-08; 1954:170-3). Piggott, analysing ceramic assemblages from chambered cairns in northern Ireland and western Scotland, identified three types of beacharra ware on the basis of morphology and decoration. The beacharra A style comprised undecorated, frequently lugged, bag shaped, round based, vessels; the beacharra B style comprised the distinctive bipartite, closed bowl with incised decoration; similarly, the beacharra C style comprised these same distinctive bipartite, closed bowls, but with cord impressed, rather than incised, decoration (Piggott 1954:171-72; *pace* Scott, J.G. 1964:150). Such a definition of beacharra ware, representing a rigorous conception of this typological entity, contrasted with the more informal understanding of beacharra ware developed previously by Childe, who also considered the gently carinated bowls from the Western Isles as beacharra ware (1935:66). Admittedly, Piggott conceded that the stylistic affinities of many hebridean styles with beacharra ware, particularly in decorative terms, was ostensive (Piggott 1954:229, 231). The presence of cord impressed decoration on other vessel forms in northern Ireland alluded to additional categorical fecundity within the beacharra tradition (Piggott 1954:172-73).

J.G. Scott, following re-excavation of the chambered cairn at Beacharra on the Kintyre peninsula, dispensed with the classification of beacharra ware into styles A, B and C (1964:152). Instead, identifying beacharra styles I, II, III, and IV, he developed a more elaborate classification of this same pottery, designed to explain the typological variability and affinities of the many regional styles identifiable in western Scotland (Scott, J.G. 1964:150-58; 1969:199-222). These revised categories, contrasting with Piggott's earlier classification (1954:171-2), encapsulated several vessel styles, rather than solitary vessel profiles. This classification, focusing on the chronological development of a cohesive beacharra assemblage, was integral to an unambiguously culture historical interpretation of the evidence. The typological sequence is predicated, firstly, on several tenuous reconstructions of the depositional order of ceramics in various chambered cairns, and, secondly, on a highly subjective assessment of the allegedly temporal significance of stylistic variation amongst the pottery (see Scott, J.G. 1964:152-58; cf. Smith 1974:116). A feature of this classification, retained subsequently by Henshall (1972:152), was the extension of the concept of beacharra ware to incorporate many vessels displaying stylistic similarities in the Western Isles. However, the concept of beacharra ware was unable to articulate effectively the bipartite or shouldered vessels reputedly displaying a beacharra influence in the Western Isles (Brown nd.).

The detail incorporated into J.G. Scott's resultant interpretation, based on a close scrutiny of the evidence, remained plausible but unverifiable. Yet the complicated typological machinations incurred in this scheme were effectively an unnecessary complication of the evidence. Henshall, arguing that the ceramics deposited in the chambered cairn at Beacharra were contemporary, used the term beacharra ware to refer specifically to the bipartite closed bowl, in a welcome clarification of the terminology (1972:102; 1991:84; cf. McInnes 1969:27-8). However, J.G. Scott, questioning the wisdom of naming specific ceramic types after particular sites, reasserted the concept of a beacharra ware incorporating a series of vessel styles (1977a:241; 1977b:26). Similarly, the concept of rothesay ware was expanded from a single vessel style to encompass a range of vessel types, including both carinated and uncarinated vessels (Scott, J.G. 1977b:29, 32, Figure 12:28, Figure 13:30) The validity of these arguments, with an interpretive emphasis on entire assemblages rather than individual vessel styles, relied upon subscription to a normative understanding of the evidence, in which the cultural homogeneity of ceramic assemblages was usually assumed, if not always assured.

Different categorical labels were employed to identify the various bipartite closed bowls, distinguished by minor differences in morphology or decoration, from northern Ireland and western Scotland. The typological relations subsequently identified between many of these various categories, due to the arbitrary nature of the connections, are basically specious. At any rate, ballyalton bowls from northern Ireland, though displaying a greater elasticity of style, are the equivalent of, and possibly derived from, beacharra bowls in south west Scotland (Case 1961:186-189; 1963:11, 14; Henshall 1972:173, 174; McInnes 1969:27; Smith 1974:116; Sheridan 1995:6). However, the typological origins, as opposed to the stylistic affinities, of beacharra bowls remain obscure. Recourse to early neolithic pottery from southern Britain (see Henshall 1972:174) or north western France (see Sheridan 1985:107, 202; 1995:8), in this regard, are more astutely interpreted as an admission of defeat, than as the identification of plausible precursors, in the pursuit of stylistic analogies for these beacharra bowls.

The more traditional concept of beacharra ware, as a ceramic assemblage encompassing markedly different vessel styles, is undeniably a construct of culture history, misleading in both interpretive and descriptive terms. Consequently, following Brown (nd.) and Henshall (1972: 102; 1991:84), the concept of beacharra ware is dispensed with, and replaced with the term beacharra bowl, referring to a specific vessel profile, namely the distinctive closed, bipartite bowl, regardless of decorative characteristics.

2.3.1.3. A categorical biography of achnacree or rothesay ware

The achnacree bowl, a ceramic category invented by Henshall (1972:100-1), and effectively extrapolated from the previously devised concept of beacharra A ware (Piggott 1954:228), represented a distinctive vessel style. Achnacree ware was a duplicate categorical label for rothesay ware (see Scott, J.G. 1964:156-58; 1977b:26; *contra* Gibson and Woods 1990:235). These vessels, characterised by externally expanded or hooked rims, a neutral profile, burnishing, occasional lugs, and a subtle carination, frequently imperceptible, separating vertical sides from a rounded base, were explicitly identified as a regional variation of the grimston-lyles hill style (Henshall 1972:100-01, 171). The substantial rim morphology and rippled decoration suggested that these vessels were late examples within the grimston-lyles hill series (Henshall 1972:172). Internal typological development was apparently discernible within achnacree ware, with a movement from neutral vessels, with vertical sides, in early examples, to open vessels, with splayed sides, in late examples (Henshall 1972:172).

The concept of rothesay ware, effectively identical to achnacree ware, played a central role in one of the typological sequences suggested for beacharra ware (Scott, J.G. 1964:150, 155-58). To reiterate, rothesay ware incorporated aspects of morphology and decoration inspired by early neolithic styles originating in abingdon ware in southern Britain and towthorpe ware in northern Britain (see Henshall 1972:174; Manby 1975:50-1; Scott, J.G. 1964:150, 156-7; 1969:205, 217-18; 1977b:27 *ff.*; 1978:60; Sheridan 1985:194-95; cf. Smith 1974:116). The physical presence, or at least typological influence, of rothesay ware was identifiable, particularly in the form of lugged bowls, in numerous assemblages from western Scotland, including, for example, Beacharra in Kintyre, and Unival and Clettraval in the Western Isles (Scott, J.G. 1964:150, 155-57; 1969:218-22; 1977b:37). Unsurprisingly, then, these lugged bowls were also considered to exude similarities to certain early neolithic styles from southern Britain (see Sheridan 1995:8, 18). Importantly, rothesay ware in south west Scotland, modified by towthorpe ware and local inspiration, allegedly developed simultaneously with, but independently from, grimston-lyles hill ware in northern Ireland (Scott, J.G. 1969:217-18; 1977b:27, 31, 35; *pace* Sheridan 1985:194-95). The typological integrity of beacharra and rothesay styles, the latter concept subsequently extended to incorporate several vessel types (see Scott, J.G. 1977b:29), was apparently confirmed by their mutually exclusive typological derivation from the hembury and abingdon styles in southern Britain respectively

(Scott, J.G. 1977b:29). However, the early appearance of grimston-lyles hill pottery, and the eclectic variety of styles in the assemblage from Machrie Moor, suggested a reassessment of the rothesay style was necessary (Henshall 1991:83). Certainly, the occurrence of open carinated bowls, closely paralleled in northern Ireland, in south west Scotland, cloyed with Scott's interpretation regarding the separate typological derivation of his rothesay style assemblages (see Scott, J.G. 1977b:27*ff.*).

The failure of the term 'achnacree ware' to achieve a general acceptance in the archaeological literature, was largely because it duplicated, and probably complicated, the existing terminology referring to early neolithic undecorated and uncarinated bowls. The term, always an interpretive superfluity, was of little explanatory import beyond an interminable debate on an intractable regional typology.

2.3.1.4. A categorical biography of hebridean ware

Much of the neolithic pottery from the Western Isles displays stylistic features reminiscent of, but not identical to, stylistic elements considered diagnostic of more readily recognisable styles established elsewhere in northern, western and south western Scotland. That these various ceramics are related, in stylistic terms anyway, is indubitable. This admirable eccentricity of style, in the pottery from the Western Isles, was explained as a forlorn typological deviance, inevitable in the material culture of isolated communities living on a cultural periphery during the neolithic. By way of example, the decoration, if not the morphology, typical of the distinctive bipartite, closed bowls, included in the definition of beacharra ware, was immediately recognisable in the neolithic assemblages of the Western Isles (Piggott 1954:183). This pottery, displaying recognisable, but distorted, elements of the beacharra style, apparently betraying the direction of typological influence, and confirming its derivative nature, was entirely indebted to beacharra ware from south west Scotland for stylistic inspiration (see McInnes 1969:20, 28; Megaw and Simpson 1961:69; Scott, J.G. 1964:154).

The derivative and degenerate status of neolithic ceramic assemblages in the Western Isles, adequately described using categorical types formulated previously, discouraged the invention of new categories specifically designed to facilitate the interpretation of this pottery. Yet the neolithic ceramics from the Western Isles together exude a distinctive, if indefinable, mutual resemblance affirming them as a unified local potting tradition. A hebridean ware, comprising an eclectic miscellany of ceramic styles, is an ambiguous typological, and disingenuous interpretive, construct (cf. Armit 1987:25; 1996:57, 59). Many vessels, embodying unusual or unpredictable stylistic features, exemplified by a flat based vessel from Eilean Domhnuill a Spionnaidh (Armit 1987:15) and the vessel from Clachan (see Section 2.5.2.3.; Atkinson 1953), confound typological expectation (Armit 1996:59). Ironically, the stylistic diversity of the pottery, collated using the concept of hebridean ware, lends itself to typological analysis (Armit 1987:30). Yet, for reasons of descriptive convenience, if not interpretive accuracy, this awkward array of nebulous styles is still interpreted as a unitary ceramic tradition (see Armit 1993:372; Brown nd.). Many vessels, effectively unclassifiable, intuitively recognisable as hebridean ware, merely display a vague 'family resemblance', of abstruse interpretive significance. Only certain vessels styles, namely the deep, necked bowl, the flanged bowl, and the hebridean jar, are sufficiently distinctive and numerous to merit an individual categorical identity (see Henshall 1972:153). These three styles, firmly entrenched within a hebridean tradition, are discussed briefly below.

Various vessels, in the terminology of Henshall (1972:104, 153-54), are adequately described as deep, necked bowls, or collared jars, with any decoration usually confined to the upper part of the vessel exterior above the cordon, carination or shoulder, and a neutral or closed profile. Essentially, the deep, necked bowls, with a gentle carination or shoulder embodying a slightly closed or neutral profile respectively, were of varying size. These vessels, regarded as larger and deeper versions of beacharra bowls, represented varying stages in a typological sequence developing from a typological liaison between the closed, bipartite beacharra bowl, plain lugged bowls, rothesay ware from south west Scotland (cf. Henshall 1972:154, 173; Scott, J.G. 1964:150, 155-6), and even murlough bowls from Ireland (Smith 1974:116). The vessels with a gentle carination, closed profile, and constricted orifice, occupied an intermediate stage of typological development, between the initial beacharra bowls, and the resultant deep, necked bowls, with distinctive shoulders, neutral profile and splayed orifice (Henshall 1972:153-54).

The category of flanged bowl, essentially a round based bowl with an externally expanded rim and an open profile, was introduced by W.L. Scott, following his excavations at Eilean an Tighe (1951a:29). This ceramic type, though distinctive, was apparently confined to the Western Isles and, as a consequence, was a stylistic curiosity of the region. Given the propensity of the externally expanded rim forms to detach at the juncture between the rim and the body of the vessel, a consequence of the forming method, the presence of flanged bowls, as a particular form of open bowl, was probably under represented in the Western Isles. However, given that externally expanded rim forms occurred on numerous other ceramic styles, it was impossible to estimate the number of possible flanged bowls represented in the region.

The search for the early neolithic equivalent of fine carinated pottery, typically undecorated, burnished, and smudged, in the Western Isles, where such vessels, immediately recognisable, are curiously absent, has perhaps been impeded by the formative categorical influence attributed to decoration in the classification of neolithic pottery in the region. Flanged bowls, a series of fine open bowls, often gently carinated, and intricately decorated on the upper side of an external rim expansion, and less frequently across the exterior, deserve especial mention in this regard. These vessels, usually interpreted as merely another stylistic curiosity attributable to hebridean ware, embody the quality, colour and stylistic consistency typical of fine carinated bowls.

Similarly, the open bowl with fabric, profile, and dimensions typical of an unstan bowl, but with an externally expanded rim morphology unprecedented on unstan bowls, from Ord North in Sutherland (see Henshall and Ritchie 1995:65, no. 7), suggests that the flanged bowl is perhaps a regional idiosyncrasy related, in some unspecified way, to unstan bowls. Admittedly, the expanded rim on flanged bowls, contrasting with the simple rims typical of unstan bowls, infers that these equally distinctive vessel types were handled, and therefore possibly used, in entirely different ways. It is, anyway, likely that both the flanged bowl and the unstan bowl were regional versions of the undecorated fine carinated bowl.

The hebridean jar, or, alternatively, ridged jar, is essentially a deep, bag or barrel shaped, round based, and vertical sided vessel. This ceramic style merited a specific categorical label because it embodies an elaborate rim morphology and profusely decorated cavetto zones on its exterior surface (Gibson and Woods 1990:178). Strangely, the hebridean jar, restricted to the Western Isles, and largely ignored in the archaeological literature, is the most salient vessel style within the muddled stylistic nexus of hebridean ware.

The contextual recurrence of undecorated bowls, whether carinated or uncarinated, with unstan bowls, and hebridean bowls and jars, prompted various commentators to incorporate these undecorated vessels into the concept of a hebridean assemblage (eg. Armit 1993:372; Brown nd.; Gibson 1995a:104). Essentially, this amalgam of ceramic styles, an enhanced version of the concept of hebridean ware, was allegedly a typical regional example of an early neolithic ceramic assemblage in the Western Isles.

2.3.1.5. A categorical biography of unstan ware

The unstan type was formally identified by Callendar, in his corpus of neolithic pottery from Scotland, as a wide, carinated, shallow bowl, with an everted or vertical rim form (see Callander 1929a:40-46, 82-83; cf. Henshall 1983:40). The unstan type, although apparently confined to northern Scotland, was identifiable as western neolithic ware (Childe 1935:67; Henshall 1972:177; Piggott 1931:104). Indeed, the distinctive unstan bowl was allegedly derived from carinated bowls, as defined by Herne (1988), although the considerable stylistic differences between these two ceramic types remained unexplained (Henshall 1983b:72). This vessel category originally related exclusively to the distinctive open bowl, known especially from the chambered cairn of Unstan in Orkney. This restrictive definition, endowed with an enviable degree of categorical clarity, by virtue of the distinctive style of the bowls to which it refers, was essentially descriptive. The definition, in a categorical development subsequently forgotten, was later extended by Callander and Grant (1934:335) to include all round based bowls from Britain (D.V. Clarke 1983:45). The unconvincing typological sequence, developed by Henshall for the distinctive open bowls, was, in the absence of stratigraphy, based on a qualitative assessment of style (1963:107-8, 118). Attempts to derive unstan bowls from bipartite closed bowls in the Western Isles were equally speculative (McInnes 1969:21). Similarly, the conception of unstan bowls as early neolithic ceramics, based on the quality and morphology of these vessels, embellished with late neolithic decoration, based on decorative parallels on peterborough ware and cremation urns, was an unsatisfactory compromise attempting to explain this distinctive style (see Henshall 1972:177-79). Henshall, initially describing other carinated bowls not in an unstan style as aberrant unstan bowls, effectively afforded the concept of unstan ware a previously unanticipated typological leniency (1983a:40).

The modern expansion, in categorical terms, of the unstan type was motivated by a desire to invest the concept with an interpretive, not simply descriptive, essence. A revised concept of unstan ware, incorporating two distinct vessel forms, defined, firstly, an undecorated bowl, with a simple rim, a neutral profile, and a round base, and, secondly, a shallow bowl, with a simple rim, an open profile, and a vertical, usually decorated, collar, and a round base (Piggott 1954:248). The recurrence of these different vessel forms in chambered cairns in

Orkney and, probably to a much lesser extent, Caithness (see Davidson and Henshall 1991:75, 78), and the absence of any unequivocal contextual association with grooved ware, ensured the retention of the concept of unstan ware, despite some disagreements over its homogeneity (Clarke, D.V. 1983:46, 49; MacSween 1992:259), as a type of assemblage, rather than as a singular style of vessel (eg. Davidson and Henshall 1989:64; Henshall 1963:106; 1985:88, 108-09; Henshall and Ritchie 1995:63). MacSween, in an attempt to resolve the categorical ambiguity incurred by this overly generous definition of unstan ware, advocated instead the notion of a 'round-based pottery tradition'. Yet to label unstan ware a 'round-based pottery tradition' serves only to distinguish these ceramics from grooved ware, effectively a 'flat-based pottery tradition', and perpetuates the inimical dichotomy between these two ceramic styles (see MacSween 1992:259-60).

The concept of unstan ware generated typological controversy because it effectively attempted to classify a *cultural*, rather than *stylistic*, entity (cf. Sharples 1981:39). Basically, unstan ware, as defined by Piggott (1954:248) and accepted by Henshall (Davidson and Henshall 1989:64; Henshall 1963:106; Henshall and Ritchie 1995:63), was a partial inventory, specifically the mortuary component, of the ceramic assemblage of an unstan people (cf. Clarke, D.V. 1983:46). It was not, then, contrary to the original definition given by Callendar (1928:82-83), a specific vessel type. Significantly, the assemblage from the Knap of Howar, on Sanday, reputedly the only known settlement site of the unstan ware culture, contained several stylistic features unparalleled in unstan assemblages from chambered cairns (Davidson and Henshall 1989:77; Henshall 1983b:70; Ritchie A. 1985:49). However, the elastic concept of unstan ware, readily expandable to encompass stylistic adversity encountered in newly discovered assemblages, was redefined subsequently to include both domestic and funerary ceramics (Ritchie, A. 1983:54; 1985:50). Evidently, the ceramic styles from chambered cairns, including unstan bowls, represented a special selection taken from the wider range of vessel types available in domestic assemblages (Henshall and Ritchie 1995:63). The differences between unstan ware assemblages from domestic and mortuary contexts were readily explained as a consequence of function, chronology or, notably, the probability of deliberate depositional practices at chambered cairns (Davidson and Henshall 1989:78; Henshall 1983b:72). However, the possibility of intentional deposition, of which the inevitable corollary was distorted assemblages, effectively unrepresentative of an archaeological culture, threatened to confuse the comfortable assumptions of culture history.

The stylistic connections between Orkney and the Western Isles, intimated by unstan bowls, are indubitable (Piggott 1954:248-9), but the significance of this relation remains uncertain (Kinnes 1985:22, 23). At any rate, unstan bowls are an integral component of early neolithic assemblages in the Western Isles (Gibson 1995a:110; McInnes 1969:21-2). Unfortunately, the concept of unstan ware, as a unitary assemblage, is unsustainable in the Western Isles, because assemblages containing unstan bowls also contain many more vessel styles (cf. Davidson and Henshall 1991:75; Henshall 1983a:42; Henshall and Ritchie 1995:63). The significance of the association of classic (sic) unstan bowls with other ceramic styles, and the complete absence of unstan bowls from chambered cairns, with the exception of the vessel represented at Geirisclett (Johnson 1997:14), complicates, and possibly confounds, the concept of unstan ware as the replete assemblage of a unitary culture. The contextual complications arising in the Western Isles confirm that unstan ware is neither integral to a unitary assemblage, nor necessarily diagnostic of an archaeological culture. The implications of the disintegration of the concept of unstan ware in the Western Isles are largely ignored, partly because the concept adequately explains many of the ceramic assemblages from Orkney, and partly because the comparable material from the Western Isles is sufficiently meagre to suggest a derivative status.

The concept of unstan ware, as an assemblage of differing vessel styles, is rejected here (*pace* Armit 1996, Figure 4.7.a:58), but the term unstan bowl, referring to the distinctive open bowl previously included within the unstan tradition, is retained for its descriptive felicity, rather than interpretive alacrity (cf. Brown nd.; Sharples 1981:38-9).

2.3.2. Late neolithic ceramic styles

The late neolithic styles dealt with in this Section, grooved ware, impressed ware, fine beaker ware, and coarse beaker ware occur throughout Scotland. These ceramic styles, in the Western Isles anyway, are interpreted as parochial examples of abstract categorical types, due to their extensive, apparently ubiquitous, distribution elsewhere. That the quality of, and decoration on, for example, fine beaker pottery recalls directly those of early neolithic wares in the Western Isles is obscured by the apparently extraneous characteristics of beaker pottery. The pervasive distribution of such ceramic types does not preclude a regionalisation of styles.

2.3.2.1. A categorical biography of grooved ware

2.3.2.1.1. Introduction

Grooved ware, known from approximately 350 sites, is a distinctive ceramic style in Britain, and also perhaps in Ireland, dating from the mid fourth to early second millennium BC (Kinnes 1995:49; Sheridan 1995:15). It was initially interpreted as a relatively minor ceramic type:

> "At the most we can consider the grooved-ware episode as a minor cultural individuality" (Piggott 1936:197).

The irony of Piggott's early statement is readily understandable to the wearisome reader. Despite an exhaustive debate in succeeding years on the significance of grooved ware and its sub-styles, in arguments motivated by the discovery of new assemblages, the original purposes of this ceramic remain elusive. The following commentary focuses on selected aspects of terminology, typology, and function.

2.3.2.1.2. The terminology of grooved ware

Piggott, rejecting any label based on a type site, due to its misleading geographical connotations, provisionally labelled this newly recognised ceramic type as grooved ware (1936:191). At any rate, the label 'grooved ware' was itself a misnomer, since a variety of decorative techniques, including applied and rusticated methods, in addition to the eponymous grooving, were also permissible within this enduring ceramic category (Clarke and Sharples 1985:56). Piggott's subsequent identification of a rinyo-clacton culture (see Piggott 1954:321-46) encapsulated a curious reversal of his earlier interpretive position, and was presumably attributable, firstly, to the continual accumulation of evidence, and, secondly, to the desire to write a culture historical archaeology of synthesis. This liaison of two type sites, each geographically remote from the other, united by the presence of grooved ware, yet simultaneously divided by the absence of grooved ware over much of the intervening distance, effectively demonstrated the inability of cultural history to facilitate satisfactory *localised* interpretations of the grooved ware phenomenon.

Clarke, reviewing succinctly the concept of a rinyo-clacton culture, in a disdainful statement adumbrating the work Wainwright and Longworth (1971), reached a derisory conclusion regarding its archaeological veracity

> "At the moment then, there seems increasing evidence for suspecting that the Rinyo-Clacton 'culture' is a fiction composed of two independent Neolithic traditions, linked only by beaker influence. Nevertheless, it still remains possible for the intrepid manipulator to derive the later Southern group from the Northern group across a void of hundreds of miles and years. The Grooved Ware tradition remains an open question awaiting proper research" (Clarke 1970:269-70).

Wainwright and Longworth (1971:236, 268), following Smith (1956:291-97; cf. Clarke 1970:269-70), and answering the pleas of Clarke quoted above

(1970:269-70), dispensed with the concept of a rinyo-clacton culture, an unsustainable interpretive construct, given the diversity of non-ceramic associations and variety of contextual affiliations of this pottery (eg. Clarke and Sharples 1985:56, 78, 81; MacSween 1992:260), and reverted to the original term grooved ware. Essentially, the unity of the rinyo-clacton culture, relying exclusively on the stylistic regularity of the pottery for definition, was overly dependent on only one aspect of material culture (Clarke, D.V. 1976:238, 240). Wainwright and Longworth considered grooved ware to represent a sub-culture, rather than a replete culture, a nexus of people cohered by a common tradition of ceramic manufacture and mutual interest in overt ritual practice, an interpretation based on the unitary style of grooved ware and its contextual associations with henges in southern Britain respectively (Wainwright and Longworth 1971:268). Indeed, this sub-culture:

> "...forms one strand of a complex society, whose other manifestations include users of Peterborough ceramics and Beaker groups... (Wainwright and Longworth 1971:268).

Yet the notion of a culture, or even sub-culture, contributed little towards a meaningful interpretation of grooved ware (Thomas 1991:100). The social significance of grooved ware, as a ceramic tradition or category of materiality, remained obscure within the interpretive confines of such a terminology (Clarke and Sharples 1985:56; Richards 1993a:170).

2.3.2.1.3. A typology of grooved ware

The recovery of a distinctive ceramic at Lion Point, near Clacton, in Essex motivated the initial formal identification of grooved ware (see Piggott 1936:191). Sparse amounts of this ceramic type, recovered previously, but not yet afforded a distinct categorical identity, were known from elsewhere in southern Britain (see Piggott 1936:193-6). Many examples of grooved ware from northern England languished unrecognised in museum collections before explicit categorical identification (Manby 1974:1).

An initial classification of grooved ware, using the assemblage from Skara Brae in Orkney, and focusing on decorative technique, distinguished three categories based on incised or applied decoration (see Clarke, D.V. 1983:46; Piggott 1954:327). The assemblage from Rinyo apparently conformed with, and therefore confirmed, the ceramic sequence from Skara Brae (see Clarke, D.V. 1983:45; Piggott 1954:327;). This classification, allowing the identification of categorical equivalents of rinyo I and II in southern Britain, was apparently valid beyond the immediate confines of Orkney (see Piggott 1954:340).

Discernible differences in the styles of grooved ware from various assemblages in southern Britain encouraged its further classification. Smith identified three separate sub-styles, based on various decorative criteria, and labelled these according to the sites from which these exemplary assemblages came, namely Clacton in Essex, and Woodlands and Woodhenge in Wiltshire (see Smith 1956). Successive excavations, adding to a growing corpus of grooved ware, essentially confirmed the categorical integrity of the original sub-styles (Wainwright and Longworth 1971:236). However, Wainwright and Longworth, working with a considerably enlarged collection of material (Gibson and Woods 1990:175), revamped these existing sub-styles, primarily from southern Britain, and added a fourth, the rinyo sub-style, predominantly from northern Britain (1971:236-243). Many features, for example parallel linear grooves or incisions in a horizontal alignment, transcended the stylistic boundaries between sub-styles (Wainwright and Longworth 1971:237). Common stylistic traits, rather than conveying the unsatisfactory nature of the sub-styles, instead confirmed the categorical integrity of grooved ware:

> "Such shared traits are to be expected in sub-styles belonging to a single tradition" (Wainwright and Longworth 1971:237).

That certain features are apparently exclusive to specific sub-styles served only to consolidate the integrity of this classification (see Wainwright and Longworth 1971:240). Various, preferably unique, stylistic features, considered diagnostic of each sub-style, facilitated the identification of each type in any grooved ware assemblage (Wainwright and Longworth 1971:237, 239-40, 242, 243). The interpretive priorities of this revised classification, which incorporated morphological, but continued to privilege decorative, criteria, remained unchanged.

None of these sub-styles exhibited any convincing degree of geographical cohesion, something Wainwright and Longworth effectively conceded (1971:243, Figure 97, facing page 268; cf. Burgess 1980:41; Cleal 1985:9, 153, 154). The empirical utility of these sub-styles, even within the interpretive armature of culture history, was frustrated by their mutual geographical incoherence. The majority of grooved ware assemblages contained examples of several such sub-styles (cf. MacSween 1995:41). The description of these assemblages, the pottery invariably representing various sub-styles, and further complicated by local peculiarities of style, became a laborious task (eg. Henshall and Mercer 1981:128-33; Manby 1974:78-83). It is, then, unsurprising that the sub-styles were received largely with indifference (Barrowman 1994:4; Gibson and Woods 1990:175-6). However, the Durrington Walls and Woodlands sub-styles, invariably from henges and pits respectively, seemingly displayed some degree of contextual coherence, intimating the validity of these categories under certain circumstances (see Thomas 1991:98).

The chronological discrepancy, revealed by radiocarbon dating, between grooved ware in northern and southern Britain effectively rendered the aforementioned sub-styles, based largely on the later southern material, redundant, when dealing with the earlier northern material (Henshall 1993:104; MacSween 1995:41-2). At any rate, the discovery of substantial collections of grooved ware unlike any of the existing sub-styles from northern Britain outside Orkney, for example the assemblage from Balfarg henge in Fife, betrayed the inadequacy of this classification scheme (Henshall 1993:104; Henshall and Mercer 1981:129, 133). That assemblages exhibited site specific peculiarities of style, forming, according to Henshall: "...very local sub-styles..." (1991:86), germane only to the assemblage in which they were identifiable (cf. Wainwright and Longworth 1971:241), conveyed something of the stylistic mutability of grooved ware. To introduce new sub-styles, based on assemblages inadequately classified by existing sub-styles, was an unsatisfactory, if inevitable, attempt to resolve these typological difficulties, because it merely deferred the fundamental problems of a conventional classification (see Henshall 1993:104).

Interestingly, MacSween, identifying separate grooved ware traditions at Pool on Sanday, distinguished by fabric, form and chronology, questioned the general categorical integrity and interpretive utility of the concept of grooved ware as a unitary ceramic type (Hunter and MacSween 1991:913). Apparently undeterred, MacSween, working afresh from an empirical examination of the pottery, but still using traditional criteria of classification, basically morphology and decoration, developed an independent series of nine sub-styles applicable to grooved ware from Scotland (1995:42-3). Unfortunately, these sub-styles, assailed by the same lack of clarity typical of the original sub-styles (see Wainwright and Longworth 1971:236-43), failed to clarify the categorical complexity of the northern material. That the interpretive utility of these sub-styles remained vague is probably an indication of the unsatisfactory nature of the criteria employed to compile the resultant classification.

2.3.2.1.4. A chronology of grooved ware

That a chronology of these various classifications of grooved ware remained obscure, possibly attributable to an absence of stratified assemblages, suggested more likely either a stylistic development too rapid for detection by radiocarbon dating, or the specious nature of the constituent categories. The relative chronology of the pre-rinyo, rinyo I and rinyo II styles, based on a confused stratigraphy, was unreliable (Clarke, D.V. 1983:45, 55). The chronology of the clacton, durrington walls, woodlands and rinyo sub-styles was poorly understood (see Wainwright and Longworth 1971:244-48). Although MacSween attributes some of the stylistic diversity discernible in the grooved ware from northern Britain to chronological variation, the available radiocarbon chronology was unable to distinguish between her revised sub-styles in temporal terms (MacSween 1995:45-6). Any pursuit of chronology was motivated by more than an inveterate archaeological desire for sequential order. The establishment of a temporal sequence lent authority to the categorical integrity of these sub-styles because they acquired a typological significance. There was, given the dubious interpretive utility of these sub-styles, no reason to expect them to conform to a meaningful chronological progression. At any rate, the radiocarbon chronology suggested the sudden introduction of grooved ware in southern Britain (Thomas 1991:85). More interestingly, the radiocarbon chronology confirmed, contrary to initial prejudice, but confirming the opinion of Clarke (1970:269-70), that grooved ware was earlier in northern than southern Britain (MacSween 1995:41).

2.3.2.1.5. The origins of grooved ware

Upon the demise of culture historicism, the sub-styles are deliberately retained as vacuous labels of descriptive convenience, rather than incisive concepts of interpretive alacrity (eg. Armit *et al.* 1994:122-24; Henshall 1993:104-08). Yet the allure of these sub-styles continues to elicit revisions of the categorical criteria by which they are defined (eg. Henshall 1993:106). The purpose of such modifications, if these sub-styles are devoid of interpretive utility, remains vague.

The sudden appearance of grooved ware, a ceramic embodying a style wholly unlike preceding or contemporary styles, in the archaeological record was a source of some disquiet. Many of the stylistic features subsequently recognised as characteristic of grooved ware, for example the distinctive morphology and decoration, and the extensive range of vessel sizes and volumes, were sufficiently unusual to provoke immediate comment. Piggott, referring to such characteristics, described grooved ware as: "...peculiar and individual"

(1936:192). More recently, Sheridan, perpetuating this notion of the burlesque, described the introduction of grooved ware into Ireland as: "...a substantial novelty adopted from Britain..." (1995:18). Indeed, the fabric, the bucket or flower pot shape, the extensive and unique use of applied decoration, the general absence of cord impressed decoration, and novel manner in which the decorative structure incorporates undecorated zones into the overall design, the eclectic array of vessel sizes and volumes, were all variously mentioned as stylistic features to distinguish grooved ware from other preceding or contemporary ceramic styles (see Barrowman 1994:1; Kinnes 1995:49; MacSween 1992:270; Manby 1974:100; Piggott 1936:191-2; 1954:322,328; Richards and Thomas 1984:192; Smith 1956:191; Thomas 1991:93, 101; Wainwright and Longworth 1971:244). Essentially, it was impossible to explain adequately the development of grooved ware from these latter styles.

Unsurprisingly, given the stylistic schism between grooved ware and other preceding or contemporary ceramic styles in Britain, initial attempts to identify the origins of the former focused on continental Europe. Piggott postulated various, often contrasting, continental origins for grooved ware (1936:197-201; 1954:344-46). Initially, the location of Clacton on the Essex coast, an ideal beachhead for continental immigrants, and the prevalence of incision in this assemblage, confirmed the typological purity of the grooved ware assemblage (see Piggott 1936:197). Unadulterated grooved ware was flat based, bucket shaped, and frequently incised. Alterations in the continental origins of grooved ware modified this initial interpretation. Stylistic traits previously attributed to insular contact in Britain, for example rustication, were also afforded a continental origin (see Piggott 1954:344-46). The colonisation of Britain by a Rinyo-Clacton culture followed predictable migration routes. Movement across the English Channel and up the Western Approaches founded the southern and northern concentrations of this putative culture respectively (Piggott 1954:345-6). The resort to external continental sources for stylistic inspiration focused exclusively on morphology and decoration. However, given the absence of convincing stylistic precursors in Europe (Wainwright and Longworth

1971:244), any typological sojourn abroad was unlikely to be successful (Gibson and Woods 1990:175). Interestingly, the effort invested in attempting to identify the origins of grooved ware was comparatively meagre compared with those expended seeking the sources of fine beakers (Cleal 1985:380).

More recently, attempts to identify the origins of grooved ware, were less inclined to pursue stylistic inspiration from foreign climes, and scrutinised domestic ceramic styles for typological influence instead. Importantly, flat based vessels occurred, though infrequently, in association with round based early neolithic pottery around Ireland and Britain (Smith 1974:119). Yet nothing disguised the profound stylistic differences that distinguished grooved ware from other ceramic types. The distinctive morphology, markedly different from the preceding necked bowls of the early neolithic (Wainwright and Longworth 1971:244), and the characteristic decoration, effectively unparalleled on coeval ceramics, remained unique in southern Britain (Wainwright and Longworth 1971:244, 246). Attempts to derive grooved ware from unstan ware in northern Britain (eg. Clarke, D.L. 1970:269; MacSween 1992; Renfrew 1979:206-07), considered more fully in Section 2.3.1.5., were unconvincing. Nevertheless, Wainwright and Longworth, relying on contextual affiliations, artefactual associations and a radiocarbon chronology, rather than intrinsic style, envisaged an indigenous origin for grooved ware (1971:268). Recourse to containers made from perishable raw materials, and particularly basketry, were invoked to explain the apparently radical differences encapsulated by grooved ware (see Piggott 1954:329; Smith 1974:119; Wainwright and Longworth 1971:247). On this basis, grooved ware, a tangible skeumorph fished from the murky depths of negative evidence, was feasibly accredited a typological origin in Britain (see Wainwright and Longworth 1971:246).

These various attempts to establish the origins of grooved ware were all united by a common subscription to an intellectual supposition that afforded morphology and decoration a cultural significance. Even the ingenuity of the interpretation of grooved ware as a skeumorph was predicated on the same fundamental principles. More edifying attempts to explain the inception of grooved ware from a social perspective in southern Britain have focused on its erudite symbolic connotations. Although both peterborough ware and grooved ware circulated in a prestige goods economy, only the former developed from preceding early neolithic pottery; the latter, originating in Orkney and later percolating south, was intrusive to southern Britain (Bradley 1984:58-9; Thomas 1991:93). This interpretation merely explained the social mechanisms responsible for the extensive *distribution*, rather than the *inception*, of grooved ware.

2.3.2.1.6. The interpretation of grooved ware

The discussion above focuses on the usual archaeological concerns for typology and chronology. The original significance of grooved ware in the late neolithic now requires some scrutiny. The purpose of grooved ware in culture historical interpretations did not extend beyond that of the material emblem of an archaeological culture able to inform upon cultural derivations (see Piggott 1954:328-29, 338-42, 343-46). However, the recognition of such pottery, often forming substantial assemblages, from settlements in Orkney, and from henges and pits in southern Britain, suggested a domestic ware employed for communal ceremonial purposes (Wainwright and Longworth 1971:249-50). Indeed, the consensus, across the theoretical spectrum, that grooved ware was a ceramic style with an especial or elevated status was notable. More recently, for example, grooved ware has been considered as exotic material culture, exclusive to specific people with erudite knowledge, for use in recondite ritual practices. These interpretations, attempting to develop a conception of grooved ware germane to a wider understanding of late neolithic society, acknowledged the possibility of deliberate depositional practices involving ceramics. These explanations are summarised briefly below.

The regular occurrence of grooved ware at henges encouraged investigations into ritual practices, and the nature of resultant depositional patterns, at these monuments (Bradley 1984:43). At Durrington Walls, for example, the contextual patterning of both faunal and ceramic deposits confirmed deliberate deposition in various contexts around the henge (Richards and Thomas 1984:195 *ff.*). More significantly, definite relations between grooved ware decoration and depositional context were discernible at Durrington Walls in Wiltshire, Mount Pleasant in Dorset (Bradley 1984:51; Richards and Thomas 1984:192; Thomas 1991:97-8; Thomas 1996b:199-205), and Balfarg henge and Balfarg Riding School enclosure in Fife (Richards 1993b:187-8). The relation between monumentality and grooved ware was not restricted to henges. The majority of grooved ware in the Yorkshire Wolds, for example, lay within five kilometres (km) of the imposing Rudston monolith (Bradley 1984:57; Pierpoint 1980:271). The association between grooved ware and apparently exotic lithic artefacts, suggesting a bountiful local economy in the Yorkshire Wolds, perhaps alluded to deliberate depositional practices (*pace* Manby 1974:100-01). The rates of deposition varied according to vessel size in the grooved ware assemblage from Barnhouse in Orkney (Richards 1993a:179). An invaluable review of grooved ware assemblages from Scotland demonstrated the prevalence of deliberate depositional practices involving this ceramic type in northern Britain (see Barrowman 1994). It is, in many instances, possible to identify the deliberate breakage and deposition of vessels, and the removal and eventual redeposition of the resultant sherds.

The previously unsuspected complexity of depositional practices alluded to the importance of pottery in the ritual practices of late neolithic societies. The fabric of society in the late neolithic, characterised by distinct regional identities, was fragmentary (Bradley 1984:40). Artefacts with extensive distributions, for example grooved ware, peterborough ware, and fine beaker ware, were not satisfactorily explained as uniform phenomena (Bradley 1984:40, 47-8). Bradley envisaged these ceramic types as examples of an exotic material culture, to which access was restricted, circulating in a prestige goods economy (1984:46 *ff.*). The structured nature of depositional practices, operating with a recognition of decorative motifs on grooved ware, suggested the manipulation of the symbolism encapsulated by these designs for ritual purposes (Bradley 1984:46; Richards and Thomas 1984:192-3). The large size and depositional contexts of grooved ware suggested use for communal rather than individual consumption during feasting (Barrowman 1994:151; Thomas 1991:93, 98; Thomas 1996b:205). That many grooved ware assemblages, in Scotland particularly those in Orkney, contained a considerable proportion of large vessels (Henshall 1993:106), was consonant with such an envisaged function. Interestingly, residue analysis on two large vessels from Balfarg Riding School, revealing traces of hallucinogenic substances (Moffat 1993: 108-10), reinforced the conception of grooved ware as material culture with an especial ritual significance (Barclay 1993:184-85).

The ideological inspiration and esoteric knowledge behind the recondite designs, if not the actual vessels, apparently circulated amongst elite groups in different regions (Bradley 1984:63; Richards and Thomas 1984:192-3). Yet the extent of deliberate deposition, frequently beyond the confines of the polities envisaged by Bradley (1984:38 *ff.*), suggested the local manufacture, use and deposition of grooved ware was more widespread than originally envisaged (see Barrowman 1994:5 *ff.*). The sporadic, and misleading, distribution of grooved ware was perhaps partly responsible for an initial reluctance to concede the ubiquity of ritual practices involving such pottery. Several late neolithic ceramic types, to which access was restricted, including grooved ware, were probably exclusive and prestigious items (Bradley 1984:48-51; Richards and Thomas 1984:192-3; Thomas 1996b: *passim*). At any rate, the longevity of grooved ware, intimated by the available radiocarbon dates, suggested a durable symbolism (Wainwright and Longworth 1971:246). Indeed, it was necessary to expand the investigation of ceramic symbolism, from a concern solely with decoration (eg. Richards and Thomas 1984; Richards 1993b), to encompass other aspects of materiality, for example fabric, form, and function (Barrowman 1994:5; MacSween 1995:46-7; Richards 1993a).

An evaluation of the spiral motifs found rarely on grooved ware, a decorative curiosity attracting considerable debate, provide a suitable coda to this particular biography. According to a disdainful Kinnes (1995:49-52), repudiating his previous opinions (see Kinnes 1985:43), the presence of spiral motifs, and the difficulties of identifying a suitable cultural source for these distinctive designs, falsely elevated this pottery to the status of exotica in the archaeological literature (eg. Wainwright and Longworth 1971:246). That spiral motifs occurred on other contemporary ceramic types, for example decorated bowls, required emphasis (Kinnes 1995:51). Similar decorative designs were variously found, for example, in passage grave art in east central Ireland, on stone balls from north east Scotland, and on the folkton drums from England (Wainwright and Longworth 1971:246-7; Thomas 1996b:156-59). The folly of investing these spiral motifs, manifest in a diversity of media, occurring in widely different places, and probably dating to differing periods, with related, even entoptic, meanings was readily apparent (Kinnes 1995:52; *pace* Thomas 1991:97-8; 1996b:156-59).

A plausible interpretation, able to explain the archaeological promiscuity of these motifs, postulated a series of disparate communities, bound by a mutual interest in a suite of exotic material culture, the procurement and possession of which was essential to facilitate the ritual practices necessary to confirm political authority (see Bradley 1984:58-9). Many of the motifs on grooved ware also occurred in supposedly liminal zones in passage graves. The presence of such motifs on portable material culture facilitated the evocation of: "...distant and hence mysterious persons or beings..." (Thomas 1991:97) in various, not necessarily ritual, contexts (Thomas 1991:97-8). The fabric, tempered with shell, and not simply the decoration of grooved ware in southern Britain also perhaps embodied exotic connotations (Thomas 1991:101). The diversity of media on which these images occurred suggest either a formidable symbolic potency (Richards and Thomas 1984:192; Thomas 1996b:150), or, alternatively, the adaptation of material culture decorated with such imagery for local purposes (Barrowman 1994:4-5; Henshall 1985:113). Indeed, that many of the motifs on grooved ware occurred on other material media suggests an elevated status, in relation to other contemporary ceramic styles, for grooved ware (Barrowman 1994:1).

2.3.2.2. A categorical biography of impressed ware

The concept of impressed ware, broadly comparable with peterborough ware in southern Britain and sandhills ware in Ireland, collated a remarkable diversity of otherwise unclassifiable, profusely decorated late neolithic pottery in northern Britain (see Cowie 1993:21; Kinnes 1985:24; Longworth 1967:73-4; Henshall 1972:180; McInnes 1969:22, 25; Smith 1974:117). Impressed wares were originally taken as either the typological consequence of the merger of an external peterborough influence, from southern Britain, with local western neolithic wares, or a clumsy attempt by local people to emulate intrusive fine beaker wares (McInnes 1964:53; McInnes 1969:22) These interpretations required the active participation of a foreign typological influence to explain the distinctive characteristics of impressed wares. Certainly, in terms of fabrics, form, and decoration, the impressed wares contrasted with preceding earlier neolithic ceramics (Henshall 1972:180). However, with further discovery, the traditional assumption that the stylistic incoherence of these ceramics was a consequence of the northern degeneration of a unitary peterborough style in southern Britain, was no longer tenable. These late neolithic decorated wares probably derived from similarly decorated, if improperly understood, early neolithic pottery, exemplified by the assemblage from Balbridie in north east Scotland (Cowie 1993:17-8, 21). This argument resurrects earlier speculation on the contribution of local early neolithic styles to the development of impressed wares (McInnes 1964:53; 1969:25).

The concept of impressed ware, an unsatisfactory category of compromise (cf. Cowie 1993:21), betrayed the inability of conventional typological analysis to address the interpretive implications of a bewildering variety of ceramic styles. The localised nature of these styles displayed by impressed wares frustrated interpretation. The uncontextualised nature of much of the pottery, derived from coastal sand dune sites, for example Glenluce in Galloway, and Tentsmuir Sands in Fife, further impeded interpretation (see Longworth 1967; McInnes 1969). Any attempt to characterise impressed wares in Scotland was obliged to adopt a regional perspective (cf. Cowie 1993:21). That the impressed wares identifiable as peterborough ware in Yorkshire (Newbigin 1937:203) and Wales (Gibson 1995b:30) exhibited regional peculiarities was significant. Interestingly, peterborough ware in southern Britain displayed a similar eclecticism of style as impressed ware in northern Britain (see Cleal 1985:145). Indeed, the stylistic complexity of peterborough ware was preferably interpreted on a regional, rather than national, basis (see Sheridan 1995:15). The extent to which the traditional, almost unimpeachable, sub-styles of peterborough ware, originally devised by Smith (1956), namely ebbsfleet, mortlake and fengate ware, and encapsulating a typological sequence (Cleal 1985:6, 145), obscured the regional characteristics of the pottery identified as this ceramic type is worthy of investigation. Certainly, none of the existing sub-styles display a regional distribution (Cleal 1985:149).

2.3.2.3. A categorical biography of fine beaker ware

2.3.2.3.1. Introduction

This Section comprises, firstly, a resume of the numerous classification schemes and adjunct interpretations advanced to explain fine beaker wares, and, secondly, a commentary on the concept of domestic beaker assemblages. Unfortunately, space precludes a comprehensive assessment of the issues germane to the interpretation of beaker pottery. The priority afforded to vessel morphology in this review is justifiable because many of the classifications examined below privilege form over, for example, decoration (cf. Clarke 1970:3-7; Boast 1990:52-6, 60, 72-3). The categorical inventions and alterations of Thurnam (1871), Abercromby (1912), Clark (1931), Mitchell (1934), Piggott (1962; 1963), Clarke (1970), Lanting and van der Waals (1972), Case (1977; 1993) and Shepherd (1986) are explored in Section 2.3.2.3.2. below.

2.3.2.3.2. A typology of fine beakers

Thurnam (1871) devised a classification, with three categories α, β and χ, to express the material variation evident in drinking cups. This classification, derived from qualitative assessments of innate style and the temporal significance of spatial provenance, failed to incorporate any available contextual information or recognise the interpretive potential of stratigraphy. A typological sequence, implicit within the Greek alphabetical labels, was discernible (Thurnam 1871:391-5). Thurnam, remarking on type χ as a degeneration from type α (1871:394), anticipated the dichotomy introduced subsequently between type β and types α and χ (eg. Abercromby 1902:376; Clark 1931:415-6). The methodology used by Thurnam (1871) was little different from modern categorical procedures (Gibson and Woods 1990:9).

Thurnam's classification (1871), evaluated by Abercromby in successive articles (1902; 1904), was finally superseded with the publication of Abercromby's comprehensive corpus (1912). Abercromby endorsed the three fundamental beaker types identified by Thurnam (1871:391), but, considering this original classification inadequate, developed a more elaborate version (1912:18). The temporary currency of the additional categories, introduced to rectify the inadequacies of the extant classification, and alleviate the difficulties incurred in its application, was in stark contrast to the longevity of the resident types A, B and C. The categorical renovations of Abercromby (1912:19-51), supplementing rather than replacing the preceding typological structure, were effectively disregarded in subsequent approaches, presumably because such typological refurbishments were interpreted subsequently as superficial improvisations.

The considerable cerebral argument devoted to the fundamental difference between α and β beakers (Abercromby 1902:376) was forgotten (Abercromby 1912: *passim*), only to be resurrected in later research and presented as a typological innovation (see Clark 1931:415-6; Piggott 1962:76). Yet the important contribution of Thurnam (1871), the recognition of categories α and β as separate types of beaker (Abercromby 1902:376), suggested an earlier origin for this distinction of category. Categories A, AC and C, contrasting with the morphological form of category B, formed a coherent morphological series. The fundamental distinction between these two essential morphologies was the nature of the juncture between the neck and the body. This typological dichotomy was also discernible in the arguments of Fox (1923:26), Childe (1929:200-1; 1935:82; 1940:91-2), Clark (1931:415-6), Piggott (1938:56-7; 1962:76; 1963:55) and Gibson (1982:65; *contra* Gibson 1984:78). Mitchell, however, divided the C category into types C(a) and C(b), the adjunct suffix in each case designed to identify the antecedent typological source of the contemporary ceramic form (1934:133-34). The advent of formal categories which transgressed the traditional dichotomy, between B beakers and A or C beakers, represented an attempt to clarify the typological differences upon which this division was sustained. Such controversial alterations, although appealing to Childe (1935:82), remained forgotten in subsequent research.

Despite a recognition of the utility of the culture concept, prior to the significant contributions of Piggott (1962;1963), most earlier research into beakers centred on those refinements of category and chronology analysed above (Boast 1990:54). By contrast, Piggott concentrated on the cultural characteristics, rather than the typological credentials of beakers, in an attempt to clarify the past social significance of these ceramics (1962; 1963). A concern with ceramics as cultural traditions, rather than as morphological curiosities, facilitated the contraction and consolidation of beaker types, from eleven to four categories (Boast 1990:55).

The classification, and accompanying corpus, compiled by Clarke (1970), superseding previous classifications, and representing the apogee of a culture historical evaluation of beaker pottery, was a seminal body of research (cf. Gibson 1982:4; Boast 1990:57; Wardle 1992:37). Clarke (1970:3) contended that an almost exclusive concern with morphology, at the expense of decoration, was a major deficiency in preceding beaker classifications (cf. Boast 1990:55). Consequently, decoration was utilised as a crucial typological resource and primary determinant of prospective category (1970:35,37). Clarke favoured a polythetic evaluation of the evidence, and the processual impetus behind his approach was readily discernible (1970:3,6-7,8,254). Yet despite the alleged superiority of a rigorous processualism over a haphazard culture historicism (Clarke 1970:32), the former methodology was abandoned (*contra* Gibson 1982:4; Boast 1990:57), and replaced with the latter procedure, to establish the final classification. The detailed explanation of the defunct processual methodology contrasted markedly with the meagre commentary on the preferred normative procedures employed to devise the actual classification. Indeed, the criteria of selection Clarke (1970) used to construct the resultant beaker categories remain imprecise (cf. Lanting and van der Waals 1972:23-4). Boast suggested that the methodological tactics Clarke employed produced a classification that:

> "...simply provided a complex reshuffling of the original cards" (Boast 1990:56).

The eventual basic categorisation framework in Clarke's corpus (1970) depended upon the combination of nine beaker shape forms, six zone styles and four motif groups. This generated a potential 216 beaker formats but only a select portion of the taxonomic space available was subsequently required (Clarke 1970:37). The resultant beaker types identified were, from a normative perspective, taken to represent either a distinct incursion into Britain from the continent, or subsequent insular typological development.

The continued use of Clarke's (1970) classification, belied its failure to offer a convincing explanation of the beaker phenomenon (cf. Harrison 1980:70). The efficacy of the classification was relegated to the efficiency of a compendium, where the categories exuded descriptive convenience rather than explanatory confidence (cf. Harrison 1980:70; Gibson and Woods 1990:15). Certainly, the decisive criticisms, and equally plausible alternative typological sequence, of Lanting and van der Waals (1972), ensured that the actual history of a beaker diaspora in Clarke (1970) was quickly forgotten.

Lanting and van der Waals' (1972) proposed a typology more able to accommodate the regional diversity of beaker pottery in Britain (Gibson 1982:6). Their classification was initiated with an incisive exposure of the inadequacies and inconsistencies, particularly the diffuse spatial distribution of many beaker types, identifiable in Clarke's (1970) typology (Lanting and van der Waals 1972:22-34). Clarke (1970), privileging decoration over provenance during classification, obscured stylistic continuity at a local level of analysis (Lanting and van der Waals 1972:29). Lanting and van der Waals, recognising seven basic typological stages in the beaker sequence in Britain, devised four regional typologies for Wessex, East Anglia and Kent, Yorkshire and northern Britain. The seven typological phases were fundamental to each regional sequence.

Unfortunately, this laudable regional sensitivity was little more than a superficial facade, behind which lurked an objectified typological structure unrelated to the contextualised regional sequences it purported to explain. In Lanting and van der Waals' classification, the evidence from the Wessex area is considered replete and provides the typological template against which the other identified sequences are compared (1972:35). The common origins of all beaker groups, the consequence of a single phase of colonisation, was attested to in the apparently ubiquitous presence of All-Over-Corded (AOC) material in each regional sequence. The diversity that existed between each regional series, in terms of morphological disparity and spatial distance, attested to the fragmentation and diffusion of the beaker colonists after their initial incursion into Britain (Lanting and van der Waals 1972:44).

The typological sequence devised for Wessex, employed subsequently to co-ordinate the typological progressions of the seemingly adjunct regional sequences, was crucially important. Typological steps 1 to 7 were not exclusively chronological, but also stylistic, entities, with an overall coherence at a supra-regional level. Lanting and van der Waals (1972) effectively managed to isolate a number of discrete typological sequences, connected through a common typological vocabulary. They attributed their failure to establish a typology for the north east of Scotland to provincial lethargy and northern stagnation (1972:41). Shepherd, employing a local rather than regional scale of analysis, attempted to develop several localised typological sequences, using Lanting and van der Waals (1972) scheme, for the north east of Scotland (1986:25-8). This commendable approach failed, in all cases but one, to establish satisfactory sequences for the different localities examined (Shepherd 1986:25). The purposes of the typological proposals advanced by Shepherd (1986), other than the inevitable investiture of chronological significance in the beakers included, remained obscure.

Unfortunately, the spatial extent of each regional typological sequence, the most attractive feature of the approach espoused by Lanting and van der Waals, and the one designed to resolve the distributional incoherence that plagued Clarke's (1970) scheme, are largely arbitrary. Similarly, the identical structure of the various typological sequences remained unexplained. The failure of Lanting and van der Waals (1972) to confront this curious coincidence represented a serious deficiency in their argument (Harrison 1980:71). Insular development was unable to explain this unanimous typological convergence (Wardle 1992:39). In their attempt to discern a *workable* typology, applicable to vast swathes of the archaeological record, but sensitive enough to recognise local stylistic trends in beaker form, Lanting and van der Waals (1972) struggled to arbitrate between the particular, as material intimacy, and the general, as material typology, for they required a solitary explanatory mechanism with the dual capacity to isolate regional variation, yet connect national similarities.

The rapid maturation of a radiocarbon chronology, subsequent to the formulation of the classification of Lanting and van der Waals (1972), failed to clarify the typological development of beakers. Case (1977), working in reponse to this interpretive tangle, developed a classification more able to accommodate the empirical miasma that once again required explanation (Gibson 1982:10-11). Case's typology, adumbrated elsewhere in a previous commentary (Case 1976:453), was a simplification of earlier classifications proposed variously by Piggott (1963), Clarke (1970) and Lanting and van der Waals (1972) (see Case 1977:72). Case was concerned to identify the broad categorical structure recognised by preceding typologies:

> "Thus an *Early style*... ..seems clearly separated from a *Late style*... ..while a *Middle style*... ..comprising all the rest, seems to lie between them" (Case 1977:72; emphases in original).

In this concocted typology of arbitration, the middle style becomes a residual category of default, defined by that which it is not, neither the early nor the late styles. Importantly, these styles articulate social differentiation, rather than cultural identities. The typology of Case (1977) instigated a departure from a preoccupation with internal ethnic divisions, and a movement towards social stratification, within the organisational confines of the beaker culture.

Case argued that this classification was more suitable than preceding typologies: "...a simple overall classification is potentially most informative..." (1977:72), given the fragmentary nature of the extant material remains, the error inherent in radiocarbon dates, and the inevitable ambiguity encountered in the interpretation of material culture. An unspecified level of detail and typological control was necessarily sacrificed to achieve a reliable interpretation (Case 1977:73). Indeed, the allure of this classification, more suitable to the arcane nature of beaker pottery in Britain (Boast 1990:60), was its simplicity. This classification implicitly conceded the failure of earlier schemes to achieve their stated aspirations. However, more complex classification schemes were considered apposite for detailed regional analyses (Case 1977:72).

Boast, attempting to disrupt the traditional relation between style and classification in archaeology (1990:10-15; 25-35, 49-60, 62-4), investigated the discursive classification of materiality, and considered categorisation dependent on the vagaries of social discourse, rather than on innate morphology (1990:16-24). Indeed, Boast, disputing entirely the validity of typology, demonstrated that variation in the shape of fine beakers was negligible (1990:74-5). Statistical assessments of morphology and decoration demonstrated that innate style, exuding a fluid, even casual, relevance in categorisation procedures, did not coalesce into a coherent typological sequence (Boast 1990:96).

The controversial British Museum (BM) radiocarbon assays, discussed more fully below, prompted Case (1993) to produce a revised classification. Case (1993) used his original beaker classification (1977) as an interpretive point of departure, but re-labelled his early, middle and late styles as atemporal styles 1, 2 and 3 respectively (1993:243). These three styles, now purged of their chronological significance, became stylistic entities founded upon exclusively morphological, decorative and stratigraphic premises. Similarly, five regional beaker groups were identified, and labelled A, B, C, D and E (Case 1993:248-64). The stylistic components of the various groups can roughly be assessed with reference to the three atemporal styles. Indeed, styles 1, 2 and 3, and groups A to E, are involved in complicated, and indeed confusing, relationships. The three styles do not combine comfortably with the regional groups. It is difficult to understand exactly why these particular styles, derived from a different classification, are used at all, given their incompatibility with the envisaged groups.

The five groups developed comprise a classification, or at least conceptualisation, of the evidence in accordance with the chronological demands of the BM dates. Case asserted that the five groups are constructed, the constituent material collated, to articulate *regional* collections, despite their often dispersed spatial properties (1993:241). The various beaker groups, with the exception of group C, all display a general geographical coherence and each group occupies a finite spatial area. However, it is unclear what these separate groups, presumably more than descriptive entities, actually represent. At any rate, these groups are decidedly reminiscent of traditional conceptions of archaeological cultures. The overt and welcome presence of beaker people in the interpretations of Piggott (1963), Clarke (1970), Lanting and van der Waals (1972) and Case (1977) contrasted with their subdued and irksome absence in the revised interpretation of Case (1993). The former studies were immersed in an explicit normative terminology that the latter was obliged to find unacceptable. With the beaker no longer the essential indication of the beaker people, the inevitable result was a series of arcane beaker groups such as those formulated by Case (1993).

2.3.2.3.3. The interpretation of fine beakers

These various typologies discussed in this Section are characterised by an escalation, and then retraction, of categorical complexity. The basic typological sequence embodied in the classifications of Clarke (1970) and Lanting and van der Waals (1972), discernible in Abercromby's corpus (1912), was largely unchanged (Harrison 1980:71). The marked proliferation of categories in the classifications of Clarke (1970) and Lanting and van der Waals (1972) were reduced in the consolidations of Case (1977; 1993), and dismissed in the critique of Boast (1990). Indeed, the numerous episodes of immigration, embarkation, and dispersal intimated by many of these studies require no further explanation (see Abercromby 1912; Case 1977; 1993; Clark 1931; Clarke 1970; Lanting and van der Waals 1972; Mitchell 1934; Piggott 1963; Thurnam 1871). Other commentators, following the demise of culture-historical approaches, denied its traditional cultural associations, but, unable to escape the interpretive limitations of the beaker concept, elevated it instead to a privileged, exotic, or luxury status (eg. Bradley 1984; Burgess and Shennan 1976; Clarke 1976; Gibson 1982; 1984; Harrison 1974; 1977; 1980; Shennan 1978; Shepherd 1986; Thomas 1991; Thorpe and Richards 1984; Whittle 1981). This transformation in the archaeological conception of beakers, from markers of ethnicity to symbols of prestige, marking a concern to interpret pottery as a formative social resource, rather than as an incidental reflection of cultural identities, inadvertently perpetuated the privileged position afforded to beaker pottery.

The failure to examine critically the interpretive ramifications of the categorical ascription that identifies beaker pottery (sic) *as* beaker pottery are serious indeed. The retention of a solitary category, that of beaker, to identify beaker pottery (sic) means the elevation of this material culture as superlative exotica is predictable, if not entirely inevitable. The distinctive form, and pervasive distribution, of beaker pottery, appear to confirm its exotic constitution, and prevent its assimilation, as familiar articles of an intimate material culture, into neolithic society (cf. Barrett 1994:90-107). Some authorities have advocated a reassessment of the significance of the actual beaker concept (eg. Barfield 1987; Barrett 1994; Boast 1990; Clarke 1976; Mizoguchi 1995; Whittle 1981). These studies are exceptional in that they have identified the concept of the beaker, rather than previous interpretations of its material form, as problematic. This has been an inevitable development, for conventional approaches to beaker pottery have exhausted the collective archaeological imagination. The problem inherent in the beaker phenomenon is effectively theoretical and not material.

2.3.2.3.4. A chronology of fine beakers

An initial acceptance of the radiocarbon technique (eg. Clarke 1970:14,47), expected to clarify and verify the favoured typologies (see Lanting and van der Waals 1972:43; Gibson et al 1983:218; Shepherd 1986:25), culminated in a violent rejection of the implications of the recent British Museum (BM) dates (eg. Lanting and van der Waals 1991:69-70; Shepherd 1991:72-3). This radiocarbon chronology, rejecting not simply the veracity of the existing typologies, but questioning the universal applicability of the typological method itself (see Ambers at al 1992:926-7; Kinnes et al 1991:38-9), failed to distinguish between any of the recognisable beaker types, something presaged by Cleal

(1985:78). The BM results would have received a more hospitable welcome from the archaeological establishment if the dates had contrived a typology, any typology, rather than a contemporaneity of styles and no typology at all.[8] Interestingly, the BM dates extended the currency of beaker pottery in Britain, truncated in the stunted estimates of traditional archaeological practices (cf. Clarke 1970:105; Mercer 1977a:2; Harrison 1980:7,71; Boast 1990:94), from some 200 calendar years (eg. Abercromby 1904:349) to around 800 calendar years (see Kinnes *et al.* 1991:39). The radiocarbon dates suggested that material style did not necessarily betray chronological difference.

Only the classifications of Lanting and van der Waals (1972) and Case (1977) remain in current use as viable and plausible typologies. Gibson considered the former the most suitable (1982:11), and, despite the contrary and inimical chronology suggested by the BM radiocarbon dates, Lanting and van der Waals remained adamant of the efficacy and veracity of their own typology (1991:70). Yet Boast considered these typologies to utilise extremes of morphology and decoration (1990:60,72-5). Indeed, the treatment of shape in all such classifications emphasised the outlandish and the extravagant, because the *consistency* of the morphology of fine beakers was unique to such pottery in Britain (Boast 1990:73). Despite the conclusions, inimical to typology, of research on category (Boast 1990) and chronology (Kinnes *et al.* 1991), the discard of the typological method is unlikely.

2.3.2.4. A categorical biography of coarse beakers

2.3.2.4.1. Introduction

The inability of successive evaluations of fine beakers to resolve the illusory beaker problem encourages an investigation of domestic pottery. The failure to recognise that the beaker concept, enshrined in the archaeological record as beaker pottery, is an interpretive, not empirical, fabrication, creates innumerable problems germane to the interpretation of domestic assemblages. Unfortunately, space precludes a full review of the evidence for domestic beaker assemblages (see Bamford 1982; Gibson 1982). Instead, a selection of issues germane to the study of domestic beaker assemblages is discussed below.

2.3.2.4.2. The diversity and ambiguity of domestic beaker assemblages

The traditional interpretation of beakers in culture history, as the residual ceramic emblems of a defunct cultural identity, presupposed the existence of domestic assemblages (Gibson 1984:78). The expectation of domestic assemblages preceded their actual discovery in the archaeological record. Early treatments of fine beaker wares, for example Thurnam (1871:338) and Abercromby (1912:41-2), anticipated the existence of a domestic equivalent. The gradual accumulation of coarse pottery, either associated with, or similar in appearance to, fine beakers, apparently confirmed the previously hypothetical concept of a domestic assemblage.

The identification of beaker settlement evidence was essential to a successful resolution of the beaker problem (Bamford 1982:55; Barfield 1977:33; Burgess and Shennan 1976:322; Clarke 1970:35,57; 1976:472; Harrison 1977:14;1980:102; Whittle 1981:306). An essential prerequisite for a successful classification of beakers was the complete comprehension of the typological and cultural significance of the domestic beaker pottery (Clarke 1970:7, 35; 1976:472; Burgess and Shennan 1976:322; Whittle 1981:306). Essentially, the domestic evidence was portrayed as the final arbiter of the validity of a putative beaker ethnicity (Whittle 1981:306).

The demise of normative explanation induced certain irresolvable interpretive difficulties. The predictable redefinition of beaker domestic sites as domestic sites with beakers (eg. Burgess and Shennan 1976:321; Whittle 1981:312; Gibson 1982:1; cf. Cleal 1985:51) did nothing to resolve the detrimental interpretive repercussions inherited from a defunct culture historicism. This approach failed to further inform upon the significance of fine beakers, the stylistic characteristics of obscure coarse pottery, or the relations between them, in these assemblages. The arcane concept of a beaker quality remained undefined, if not undefiled, in recent interpretations of domestic beaker pottery. Subsequent archaeological research attempted to resolve the difficulties the notion of a domestic site with a beaker presence incurred.

The beaker domestic assemblage, as a comprehensive inventory of utilitarian ceramics, remained supposition rather than actuality. Instances of pure (sic) domestic assemblages in the archaeological record were a rarity (Gibson 1982:74, 92; 1984:91). However, the normative postulate that is the domestic assemblage retained a putative existence and hypothetical coherence in the absence of evidence to the contrary (Gibson 1982:66). There was still a general consensus that the beakers deposited in ritual and mortuary contexts sustained a domestic equivalent in settlement contexts (Whittle 1981:306; Gibson 1984:78). The intractable diversity and ambiguity of ceramic styles within the domestic assemblage, often considered its distinctive characteristics, were as much a consequence of methodological obstinacy as empirical complexity. Diversity promoted ambiguity.

The occurrence of *fine* beakers facilitated the prognosis of a particular site as a nexus of beaker contexts (eg. Clarke 1976:461). The purpose of research became the typological assimilation of the remaining ceramics in domestic assemblages, with little requirement for further elucidation, as beaker forms adjunct to the indubitable fine wares. The fineware evidence cohered and consolidated as it suffused through the unknown and the unknowable of any given domestic assemblage. The categorical relation between fine beakers and putative domestic beakers was affirmed by their contextual, rather than stylistic, proximity. The suffusion of an entire assemblage with an exclusive beaker status was a rather presumptuous and dangerous interpretive exercise (Whittle 1981:312). The potential for an unscrupulous dismissal of the entire coarse ware component of an assemblage as domestic beaker pottery was immediately apparent (Burgess and Shennan 1976:320; Whittle 1981:312; Cleal 1985:51). At any rate, the relation between beaker and other ceramic styles recurrent in contextual association remained obscure (Gibson (1982:71; 1984:74; Cleal 1985:51). A considerable amount of the domestic material is insufficiently known as a consequence (Burgess and Shennan 1976:320; Clarke 1970:3; Whittle 1981:315).

A myriad diversity of styles, reminiscent of familiar neolithic and beaker forms, but realised in different fabrics, shapes or contexts, occurred in domestic assemblages (Burgess and Shennan 1976:320-1; Whittle 1981:312; Gibson 1982:66, Table 1:67; Cleal 1985:307). This diversity of styles and contexts, which frustrated attempts at synthesis, and demonstrated the variability of domestic assemblages, was a consequence of local variation (Clarke 1976:461; Gibson 1982:47,71-4; Bamford 1982:54). These jocular permutations of category were impossible to articulate adequately with the typological vocabulary available in contemporary archaeological practice. The domestic material remained a categorical perplexity of incongruous styles. Burgess and Shennan summarised the situation in a succinct resume:

> "...these are indigenous domestic assemblages in which Beaker is only one element, often not the largest, although it may be the most attractive and at present is certainly the most easily recognisable" (Burgess and Shennan 1976:321).

The inability to discern or develop a satisfactory typological structure in these ceramics encouraged functional classifications instead (eg. Clarke 1976: 462 *ff.*; Gibson 1982:71-4). These uncertainties of style threatened the clarity, and tarnished the integrity, of the beaker concept. The coarse pottery in these putative beaker domestic assemblages demanded, and simultaneously denied, a clarification of the beaker concept.

The failure of archaeological analyses to articulate the stylistic complexities of the domestic evidence indicated the inadequacy of conventional interpretive approaches to these assemblages. It was no surprise that attempts to analyse domestic assemblages proved unsuccessful (Lawson 1982:3). The endemic failure of the attempts of Clark (1936), Robertson-MacKay (1961), Gibson (1982) and Bamford (1982) to formulate a satisfactory classification of material from domestic sites, effectively threatened the fundamental assumption that fine beakers and coarse beakers are related facets of the same cultural phenomenon. Despite the publication of substantial corpora of domestic beaker ceramics (Bamford 1982; Gibson 1982), no typological sequence or classification of this material exists, an indication of the categorical confusion encountered in its archaeological evaluation. The limited attempts at classification of this material, successful in isolating certain traits, ultimately failed to develop a comprehensive categorical structure. One notable attempt to portray the categorical intricacies of the archetypal domestic assemblage culminated in a typological melee of some complexity (see Gibson 1982, Figure 26:341).

2.3.2.4.3. A functional classification of coarse beakers

The typological credentials of the coarse pottery in domestic assemblages were not simply unknown, but unknowable. These coarse wares embodied styles not anticipated by, and irreconcilable with, the established categorical structure of neolithic and early bronze age pottery. Gibson conceded that domestic assemblages contain:

> "...a wealth of '*unclassifiable*' pottery representing the '*grey areas*' between established pottery types and the potter's individuality" (Gibson 1982:85; emphases added).

Function replaced ethnicity as the fundamental armature that prevented the dissolution of the concept of the domestic assemblage (cf. Clarke 1970:276; Cleal 1985:305-6). Moreover, a functional caricature, able to explain and consolidate such variations of ceramic style, confirmed the utilitarian design of these domicile contexts.

Clarke introduced finewares, everyday wares and course wares as the three basic categories of beaker domestic pottery in a functional classification:

> "It seems fairly certain that these three classes of beaker ware reflect functional divisions and duties, apparently a prestige ware, a general duty ware, and a heavy duty ware. ...The beaker domestic assemblage presents, as one would expect, a variety of wares and fabrics to be used for a variety of purposes" (Clarke 1970:258).

He further developed this rudimentary classification to provide a more detailed interpretation of domestic assemblages:

> "Most peasant pottery assemblages from the earliest times onwards embrace a crudely hierarchical range of wares - fine wares, everyday wares and heavyduty wares... ...The fine ware, often of thin, carefully prepared and well-fired first quality clays, is usually elaborately shaped and burnished, and frequently lavishly decorated, encrusted or painted. ...These are the fine vessels frequently selected for burial with individuals... ...The everyday wares are usually less elaborate and more closely related to the short-lifetime duties of cooking and food preparation... ...The heavyduty wares are usually related to large storage vessels, beer brewing pots, durable vessels for special processes and so forth." (Clarke 1976:462-64, Figure 2:464).

The finewares, as prestige wares, demonstrated political position and confirmed social eminence (Clarke 1976:462). The social significance of these finewares usurped any envisaged utilitarian role (Clarke 1976:462, 471).

That the functional classification of Clarke (1970:258; 1976:462-64) was a severe simplification of the diversity apparent in domestic assemblages was indubitable. Attempts to further develop this basic categorisation, to produce functional schemes of greater complexity (eg. Cleal 1985:47, 294-303; Gibson 1982:71-4, 92, Figure 26:341), failed to recognise that this classification was designed to facilitate a processual approach to interpretation, rather than simply emulate the functional intricacies of domestic assemblages. Certainly, Clarke recognised that such a hypothetical model: "...will always be too generalised for many real situations" (Clarke 1976:465), as Gibson demonstrated (1984:95). Unsurprisingly, given the diversity and ambiguity of the domestic assemblages, attempts to apply critically this classification were largely unsuccessful (see Cleal 1985:294-303; Gibson 1982: Figure 26:341). Yet these functional categories did manage to circumscribe, if not characterise, the utilitarian diversity of the domestic assemblages. The broad functional remit of Clarke's classification, encompassing a range of pottery able to fulfil a panoply of functions, alluded to the desire for a replete functional repertoire in a domestic beaker assemblage (eg. Whittle 1981:312; Gibson 1982:71-4, 92; Cleal 1985:47, 294).

2.3.2.4.4. The impossibility of a typology of coarse beakers

The following biography of domestic pottery is intended to demonstrate the general failure of successive archaeological attempts at categorisation of this arcane ceramic resource. A classification of domestic assemblages relies almost exclusively on decoration, rather than morphology, due to their predominantly fragmentary condition. Indeed, much of the commentary below concentrates on rusticated pottery from southern Britain, and neglects to mention the substantial quantity of non-rusticated coarse pottery also worthy of consideration. This imbalance reflects the effectively unclassifiable nature of much of this coarse pottery. The stylistic categories identified below are largely unrelated to the functional types discussed previously in Section 2.3.2.4.3.

Repeated attempts at the classification of the distinctive techniques and motifs of rustication demonstrated the tenacity of the assumption that such decoration must somehow embody a fecund typological potential (eg. Robertson-MacKay 1961:101). These intimations towards the typological are notable for their failure to discern a coherent categorical structure or develop a comprehensive interpretation of the material. The apparent inadequacies of these different categorical formulations are attributable to the diverse nature of the material, which torments the inclusive tendencies of any typological method. The various attempts at the classification of rusticated beaker pottery, namely those of Clark (1936), Robertson-Mackay (1961), Clarke (1970; 1976), Gibson (1982), and Bamford (1982), are assessed briefly below.

Clark developed a tentative classification of rusticated coarse ware from Arminghall, in East Anglia, and elsewhere in south east Britain (1936:19-20). Clark (1936:19-20), distinguishing three discrete categories, arminghall ware, holdenhurst ware and somersham ware, classified on the basis of decorative motif and structure (cf. Bamford 1982:60), failed to recognise the rusticated material as beaker domestic ware (Cleal 1985:55-6), although an association with fine beakers was recognised. Inevitably, this provisional classification, developed despite the paucity of available evidence and constructed with a complete disregard for the significance of depositional context (Bamford 1982:60), was interpreted as erroneous in retrospect.

Robertson-Mackay argued that this classification, ambiguous in terms of the categorical affinities of certain decorative techniques and structures, was inadequate. He attempted a more comprehensive classification, incorporating a diversity of material unavailable to Clark (1936), and recognised eleven separate rusticated techniques or designs (1961:101-3, figure 7:103). This classification was effectively a forlorn attempt to encapsulate the decorative complexities of rustication. Robertson-Mackay neglected to explain the interpretive significance of the resultant categories. The absence of an interpretation to accompany or justify these categories ensured that the classification was superseded as further examples of rustication accumulated.

Clarke (1970:43,258) developed two general classifications, one functional, and the other decorative, of domestic beakers. These separate classifications encapsulated the decorative and functional aspects of *the* prototypical beaker domestic assemblage. The relation between the decorative and functional classifications remained ambiguous. Only the functional scheme was further developed (Clarke 1976:462-65), after the initial formulation of these separate classifications (Clarke 1970:258). Details of the functional classification, reviewed previously in Section 2.3.2.4.3., are omitted in the following discussion. The decorative classification comprised undecorated beakers, non-plastic rusticated wares and plastic rusticated wares, as the: "...three classes of beaker ware found in the accompanying domestic assemblages" (Clarke 1970:43). Clarke co-ordinated an assessment of the domestic pottery with reference to his fine beaker categories (1970: *passim*). Each fineware category retained, as a corollary of the putative ethnic significance of these types, an adjunct repertoire of domestic wares (Clarke 1970:15). The recurrent contextual association of fineware beakers and rusticated course wares demonstrated the dual categorical structure of domestic assemblages in northern Europe (Clarke 1970:58, 60). This approach recalled that of ApSimon (1961:109,112), who correlated rusticated wares with fineware beakers, to identify equivalent categories in each tradition (Bamford 1982:60). The provisional classification of domestic assemblages was consigned to irrelevance as a corollary of the unanimous rejection of Clarke's (1970) fine ware beaker typology. Indeed, many of the domestic assemblages predicated on Clarke's (1970) defunct fine beaker classification containing the same coarse pottery, were indistinguishable (Gibson 1982:69-71).

Bamford, continuing the established typological focus on the intricacies of decoration (1982: *passim*), used the fine ware categories of Clarke (1970) to co-ordinate her review of rusticated wares in southern Britain (Bamford 1982:60-6). The resultant classification represented a provisional cultural and chronological scheme for domestic pottery. No attempt was made to collate, and develop a synthesis of, the identifiable pottery types. As a consequence, a critical assessment, or even a simple identification, of the constituent categories and overall structure of this tentative typology proved impossible.

Rustication, as a decorative technique not affiliated with any specific ceramic tradition (cf. Bamford 1982:59-60), was an ineffectual criterion to employ in a classification that purported to categorise coarse beaker pottery. Some form of rustication is manifest on grooved ware, impressed wares, the fengate and mortlake styles of peterborough ware, as well as the course wares interpreted as domestic beakers (Bamford 1982:78-83; cf. Gibson 1982:62, 75). Similarly, rusticated wares occur in contextual association with, for example, grooved ware and peterborough ware (Gibson 1982:66). Notably, peterborough ware and rusticated wares were often indistinguishable (Gibson 1982:66, 75). Clarke, interpreting rusticated beakers as a typological integration of intrusive fineware beakers and certain indigenous peterborough ware traditions (1970:88), envisaged fluid stylistic interaction between a domestic beaker pottery and other contemporary ceramics (1970:215).

These aforementioned classifications of coarse pottery remained obscure because the exact interpretive significance of the resultant categories was difficult to ascertain. The different typologies of fineware beakers, now emasculated of any cultural or chronological vitality, continue to enjoy an enviable interpretive salience as categories of descriptive convenience. Contrastingly, the various classifications of coarse, especially rusticated, pottery, are unable even to devise categories of descriptive utility, and languish instead in the torpor of typological inanity. These classifications, a testament to the failure of typological method, nurture a vaudeville band of categorical curiosities, rather than a coherent battery of incisive conceptual entities. That these schemes are difficult to apply in practice reflects both the diversity of the empirical evidence and the imprecision of the constituent categories. Many ceramic reports on coarse pottery from alleged domestic sites contain site specific classifications (eg. Bradley 1970).

The above biography of coarse pottery from domestic assemblages is a rather meagre and unsatisfactory affair. The local variability and diversity of ceramic styles, the fragmentary condition of the pottery, the disturbed or residual nature of depositional contexts, and a paucity of stratigraphy, are all typical of domestic assemblages, and all conspire against a traditional archaeological attempt to develop an abstract typology of regional, preferably national, applicability. An alternative approach to these assemblages is necessary. Such is the diversity, and probably the complexity, of the material that only a detailed study of specific assemblages within a regional setting is likely to elucidate successfully the categorical structure and typological relations of the pottery.

2.4. Unstan ware and grooved ware in northern Scotland

The intriguing relation between unstan ware and grooved ware in Orkney provided much room for typological speculation (cf. Hunter and MacSween 1991:911). The mutual exclusivity of context displayed by these ceramic styles in Orkney conformed to the empirical expectations of culture history. The origins of grooved ware, and the nature of its relations with unstan ware locally, and indeed with grooved ware nationally, remained obscure (Ritchie, J.N.G. 1985:130). Such ambiguity did not preclude the development of arguments in which grooved ware and unstan ware, the significance of which is assumed, played a crucial role (MacSween 1992:259). A chronological disparity, in which grooved ware superseded unstan ware, or a cultural divergence, in which these ceramic styles represented separate communities, was usually invoked to explain the evidence (see Renfrew 1979:205-7). Many archaeologists, seemingly oblivious to alternative theoretical approaches, continued to pursue a traditional interpretation of the evidence (eg. Davidson and Henshall 1989; Renfrew 1979; Ritchie, A. 1985:50-51) This intransigence was justifiable, for a normative interpretation is certainly plausible, given the nature of the archaeology (eg. Clarke, D.V. 1983; Davidson and Henshall 1989; Renfrew 1979; Ritchie, A. 1985). The following commentary investigates aspects of the nature of the relations between unstan ware and grooved ware germane to their categorical integrity.

The distinction between grooved ware and unstan ware, intrinsic to the ceramic assemblages, and apparently vindicated by divergent depositional contexts, was less absolute than is commonly supposed. Confusion between unstan ware and grooved ware sometimes occurred in terms of fabric composition, ceramic style, non-ceramic artefactual associations, and chronology. Instances of such occurrences, effectively intimations towards categorical ambiguity, are mentioned successively below.

A coarse fabric was initially considered typical, if not diagnostic, of grooved ware because such fabrics tended to dominate grooved ware assemblages in Orkney. A close inspection revealed that grooved ware was also manifest in fine fabrics in several assemblages from Orkney and elsewhere (Henshall and Mercer 1981:129). Notably, fabrics of grooved ware and unstan ware were, in some instances, indistinguishable. Grooved ware was manifest in fine or corky fabrics reminiscent of unstan ware in the assemblages from Skara Brae, Rinyo, and Stenness (Davidson and Henshall 1989:80; Clarke, D.V. 1983:49-51; Henshall 1985:110; Henshall and Savory 1976:23). Indeed, the unstan ware at Rinyo, identified largely on the basis of fabric (see Childe and Grant 1947:36-8), was, given the diversity of fabrics in which grooved ware was manifest at Skara Brae and Quanterness, equally interpretable as grooved ware (Henshall 1979:75, 77-8; cf. Clarke, D.V. 1983:49). There was no relation discernible between fabric and vessel style in the supposedly unstan ware assemblage from Knap of Howar (Ritchie, A. 1985:49). Notably, there was a continuity of fabric composition between unstan ware and grooved ware at Pool (see Hunter and MacSween 1991:912-13; MacSween 1992:261-63). The increasing diversity of grooved ware and unstan ware fabrics indicated that there was not necessarily a reliable correlation between fabric composition and ceramic category (Henshall 1983b:73). This diversity of fabric and style was unsurprising, given the local manufacture of ceramics confirmed by several fabric analyses (eg. MacSween 1992:261, 269; Williams 1983b:90; *pace* Williams 1983a:48) and excavation at Barnhouse on Mainland (Barrowman 1994:10, Figure 3.2:11; Richards 1993a: *passim*). Such variability in grooved ware fabrics was not restricted to Orkney. An equally diverse array of fabrics were identifiable in the grooved ware assemblage from, for example, Balfarg henge in Fife (Henshall and Mercer 1981:129).

There were several examples of stylistic aberrance in both grooved ware and unstan ware assemblages in Orkney. Examples of vessels with flat bases or applied decoration, traits typical of grooved ware, occurred in various predominantly unstan ware assemblages. A flat based vessel, possibly similar to the baggy grooved ware from Pool (MacSween 1992:263), was represented by a solitary sherd at Isbister (Davidson and Henshall 1989:77; Henshall 1983:40), which Henshall interpreted as grooved ware (1983:43). Similarly, the lower part of a flat based vessel was apparently recovered from Unstan (Davidson and Henshall 1989:77). Cordons, rustication, and flat bases, stylistic features typical of grooved ware, were discernible in the assemblage from Knap of Howar (Davidson and Henshall 1989:77; Henshall 1985:110; Henshall 1983b:72-3; MacSween 1992:264). Henshall conceded that the upper parts of various bowls from Knap of Howar would probably have been interpreted as grooved ware if found elsewhere (1983b:73). Similarly, a cursory description of the assemblage from Bookan inferred that one or more vessels, now lost, were grooved ware (Davidson and Henshall 1989:77-8). Conversely, vessels with round bases, a trait typical of unstan ware, formed a minor component in the grooved ware assemblages from Rinyo and Skara Brae (Clarke 1983:48-9, Figure 8:47; Henshall 1985:110). Notably, D.V. Clarke, arguing against the unity of the concept of unstan ware in a preparatory statement, claimed that the round based bowls from Rinyo were not unstan ware, but round based grooved ware (Clarke, D.V. 1983:49, 51, 54-5). The contortions of definition and style necessary to identify these idiosyncratic grooved ware vessels were ostensive (cf. Richards 1993a:171). The purpose of such casuistry, which guaranteed the typological pedigree of the grooved ware assemblage from Rinyo, yet simultaneously demanded the typological corruption of many exclusively unstan ware assemblages, remained obscure. Admittedly, the bowls from Rinyo were not classic (sic) unstan bowls, but they were readily paralleled in the unstan ware assemblages from various chambered cairns elsewhere in Orkney (Davidson and Henshall 1989:65). These round based grooved ware bowls, little more than a speculative categorical curiosity (Clarke, D.V. 1983:49, 51, 54), all from various chambered cairns in Caithness and Orkney, were more readily interpreted as unstan ware. However, the peculiar styles of certain vessels in many unstan ware assemblages were seldom satisfactorily explained using exclusively a restricted definition of unstan ware (Henshall 1983b:73).

The non-ceramic artefactual associations of grooved ware and unstan ware failed to clarify the cultural distinction intimated by the pottery. There were no discernible differences between many of the objects associated with either of these two types of ceramic (Davidson and Henshall 1989:78; *pace* Clarke 1983:53-4; *pace* Ritchie, A. 1985:52). Numerous artefacts more usually affiliated with grooved ware, for example allegedly exotic lithic items, occurred within chambered cairns containing unstan ware (see Clarke 1983:54; Davidson and Henshall 1989:78-9; Henshall 1985:110). Similarly, certain non-ceramic artefacts from Quanterness, a chambered cairn containing a grooved ware assemblage, were known from the Knap of Howar, a settlement site containing an unstan ware assemblage (Davidson and Henshall 1989:82, 90).

The radiocarbon chronology, whilst suggesting unstan ware and grooved ware are partially coeval, is currently unable to clarify the relation between the two styles (Clarke, D.V. 1983:51-3; Kinnes 1985:23; MacSween 1992:268). The ceramic sequence established at Rinyo, in which unstan ware allegedly precedes grooved ware, is more supposition than reality (Clarke 1983:48, 55; Henshall 1985:110-11; MacSween 1992:265). However, the veracity of such a sequence is demonstrated at Pool on Sanday (Hunter and MacSween 1991:912-3; MacSween 1992:261-63). The meagre evidence to inform upon the relation between grooved ware and unstan ware at chambered cairns in Orkney suggests successive episodes of activity at various sites involving, initially, unstan ware and then, finally, artefacts frequently associated with grooved ware (Davidson and Henshall 1989:90,94; Henshall 1985:110). It is, despite the confused nature of the stratigraphy at many of these sites, particularly the chambered cairns, not always possible to dismiss these potential associations with reference to separate episodes of depositional activity, using successive ceramic styles.

Admittedly, examples of categorical confusion involving fabric, innate style, non-ceramic artefactual associations, and chronology, whilst identifying some degree of ambiguity in the criteria of classification of unstan ware and grooved ware, remain something of an empirical rarity. Yet attempts to derive grooved ware from unstan ware focus on such uncertainty. The radical morphological and decorative differences between these styles, the demonstrable contemporaneity of both styles, and the national distribution of the former style, contrasting with the regional distribution of the latter style, represent insurmountable objections to this envisaged typological development (Henshall 1985:110; Ritchie, A. 1985:52).

Essentially, any attempt to discern the typological ancestry of grooved ware in unstan ware is likely to be unsatisfactory (eg. Burgess 1980:41). Yet the desire to establish the stylistic connection between these two ceramic categories in Orkney is particularly strong, because, according to the radiocarbon chronology, the earliest examples of grooved ware occur in the region (MacSween 1992:268). An explanation of grooved ware in northern Scotland is obliged to account for the *invention*, and not simply the *introduction*, as is the case in southern Britain, of this ceramic style (eg. Bradley 1984; Thomas 1991). However, the transition from round based vessels to flat based vessels with a baggy profile, all in the same fabric, at Pool on Sanday, allegedly suggests some degree of stylistic and technological continuity between unstan ware and grooved ware (see Hunter and MacSween 1991:912-3; MacSween 1992:261-63). Yet such continuity, which remains controversial, fails to *explain* the reasons behind the transition (see MacSween 1992:269). There is, in attempts to discern a nascent grooved ware in a moribund unstan ware, no reason to suppose that the motivations behind the transition from one to the other translate directly into tangible differences in ceramic style. If the typological ancestry of grooved ware lies in unstan ware, it is entirely possible that this categorical inheritance is untraceable in purely (conventional) stylistic terms. In this respect, the attempts by MacSween (Hunter and MacSween 1991; MacSween 1992; 1995) to identify stylistic continuity to accompany the technological and, presumably, cultural continuity established at Pool on Sanday is instructive. Essentially, in this instance, the pursuit of more persuasive evidence of stylistic continuity between unstan ware and grooved ware, representative of cultural continuity, is superfluous because this cultural progression was already established. The inveterate desire for a discernible stylistic progression is understandable, because traditional archaeological commentary on culture change depends upon concomitant, and representative, alterations in material culture.

2.5. Neolithic and early bronze age pottery in the Western Isles

The following review of early and late neolithic assemblages, and the ceramic styles they contain, from the Western Isles affords an empirical familiarity with the pottery dealt with in more detail in chapters five through eight. Such a resume is inevitably written in the terminology of conventional archaeological classification. Yet across much of Scotland, the absence of large assemblages with a secure chronology, and the prevalence of such assemblages from chambered cairns, ensures that the interpretive reliability, even veracity, of these traditional ceramic types is questionable (Sharples 1981:39). Strangely, the substantial size of many assemblages in the Western Isles, further obscures, rather than clarifies, outstanding typological issues. Presumably, this is because numerous vessels, probably the majority in many assemblages, are not immediately identifiable as belonging to a specific style. Many ceramic categories, particularly hebridean ware, are unsatisfactory, because they serve only to conceal this stylistic variability. Importantly, the characteristics of ceramic assemblages in the Western Isles differ radically from those of the Northern Isles during the neolithic and early bronze age (Armit 1996:4). At any rate, a detailed characterisation of each assemblage, of the sort attempted in this research, is a necessary prerequisite of any comparative study, between discrete assemblages, and the particular styles they variously contain.

2.5.1. Early neolithic ceramic styles in the Western Isles

The stylistic and contextual similarities between the various assemblages that contain early neolithic pottery, in the Western Isles are obvious. Yet the extent of these similarities, whether they are merely superficial, or comprise something more substantial, remains unclear. The consistent morphological form and abstract geometrical decoration lend much of the pottery a highly stylised appearance. There is a conformity, even uniformity, of style to the traditional ceramic categories, for example hebridean or unstan ware, that encourages falsely an uncritical comparison of the assemblages in which they occur. At any rate, the following review of early neolithic styles makes tangible the theoretical and interpretive issues introduced in Section 2.3.1. above.[9]

2.5.1.1. Western neolithic ware in the Western Isles

Originally, the western neolithic ancestry of many assemblages in the Western Isles was readily asserted. For example, the hemispherical cups and uncarinated, frequently lugged, bowls, from Unival, Clettraval, and Eilean an Tighe, allegedly displayed a typological heritage in a south western (or hembury) style (Henshall 1972:166-67; Piggott 1931:107). The derivative nature of these assemblages was manifest, for western neolithic pottery was allegedly introduced into northern and western Scotland by a maritime colonisation from southern Britain and, ultimately, Europe (eg. Childe 1931:55; Piggott 1931:87; Scott 1951b:51). More recent interpretations have focused on fine, undecorated carinated bowls, and other undecorated, uncarinated bowls, from the Western Isles, in an attempt to establish the relation between these largely ubiquitous styles and the more arcane hebridean wares (eg. Gibson 1995a:104, Figures 4.29-4.31:101-03).

There are, according to Herne (1988:21), no carinated bowl assemblages from northern or western Scotland, with the exception of the fragmentary assemblages from beneath the chambered cairns at Camster Long and Tulloch of Assery B, and possibly the largely misplaced assemblages from, for example, Ormiegill North and Camster Round, in Caithness (Davidson and Henshall 1991:69-75; Henshall 1963:263-66, 284-85). Indeed, fine carinated bowls are sparsely represented at Allt Chrisal on Barra (Gibson 1995a:104, Figure 4.29:101), at Bharpa Langass on North Uist (Henshall 1972:170, 310, 502), and, more tenuously, at Callanais in Lewis (Henshall nd.:1). Yet coarse carinated bowls occur at Rubha an Udail Site 6 and at the Berneray Causeway in North Uist, and, of course, at Allt Chrisal in Barra (Gibson 1995a, Figures 4.29-4.31:101-03). Undecorated, uncarinated bowls occur at Eilean an Tighe, Eilean Domhnuill a Spionnaidh, Berneray Causeway, Unival, Clettraval, and Geirisclett on North Uist, at Northton on Harris (Armit 1993:372; Brown nd.; Henshall 1972: *passim*; Kinnes 1985:45; Simpson 1976:221-2; Scott 1951a:13-4, Figure 5:15), at Allt Chrisal on Barra (Gibson 1995a:100, Figures 4.29-4.31:101-03), and at Callanais in Lewis (Henshall nd.).

The tendency to identify stylistic features, in undecorated neolithic pottery from the Western Isles, comparable to largely undecorated, fine carinated early neolithic bowls from elsewhere probably obscures more than it reveals. Essentially, there is a considerable quantity of undecorated pottery, occurring in both carinated and uncarinated forms, frequently embellished with lugs, manifest in varying degrees of coarseness, in the Western Isles during the neolithic (see Figures 2.1-2.12). It is readily apparent that this particular ceramic tradition, comprising a diverse array of vessels collated on the basis of a negative criterion, that of no decoration, holds little or no resemblance to the fine, undecorated carinated bowls allegedly typical of the early neolithic in mainland Britain. Indeed, the presence of such fine carinated bowls in the Western Isles, albeit in meagre quantities, adds credence to the suggestion that the eclectic, if undecorated, series of vessels under discussion, represent a distinct regional ceramic style (cf. Brown nd.). Comparison of this style with fine carinated bowls from elsewhere, north east Scotland for example, an area where regionalisation in fine carinated bowl assemblages is explicitly recognised, or attempts to explain the stylistic vagaries of the undecorated wares from the Western Isles as a consequence of a later chronology, are unnecessary (*pace* Gibson 1995a:104). Indeed, if a categorical amnesty is declared against the typological strictures

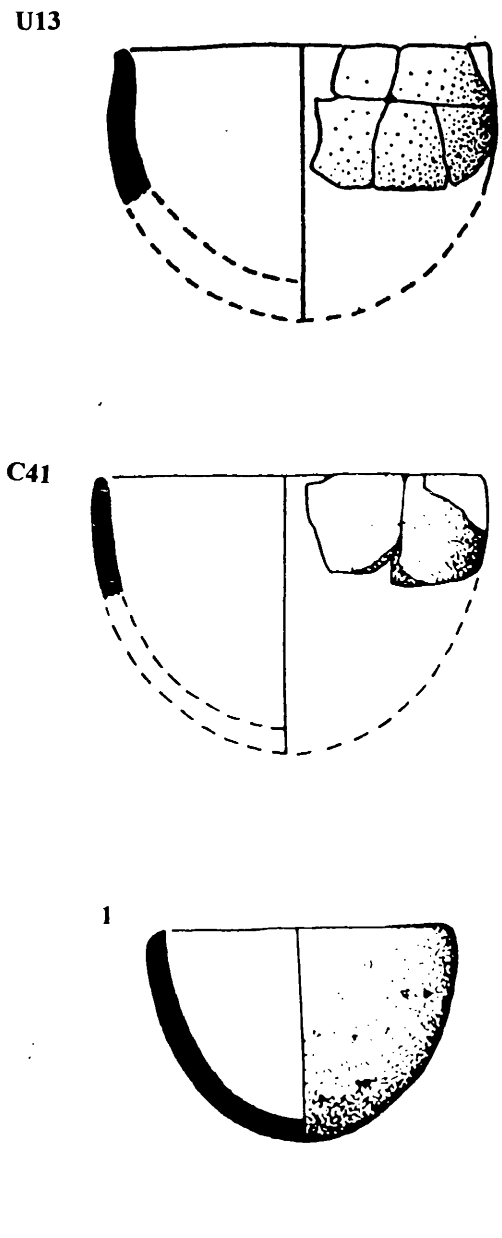


Figure 2.1.: undecorated cups from chambered cairns

U13 is vessel 1 from Unival (after Henshall 1972:309); C41 is vessel 16 from Clettraval (ibid:308); no 1 is vessel 3 from Bickers Houses (ibid:306)

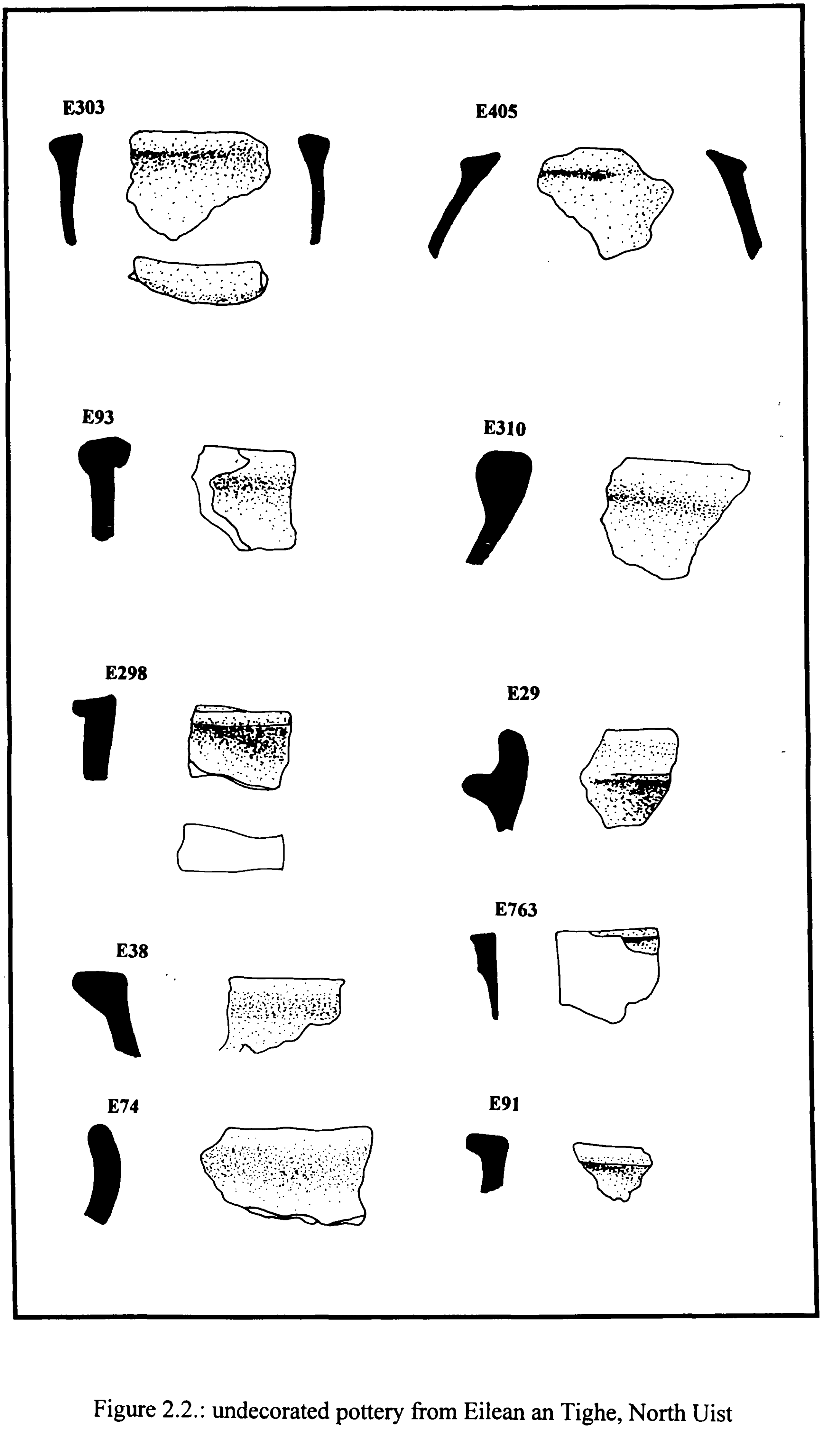


Figure 2.2.: undecorated pottery from Eilean an Tighe, North Uist

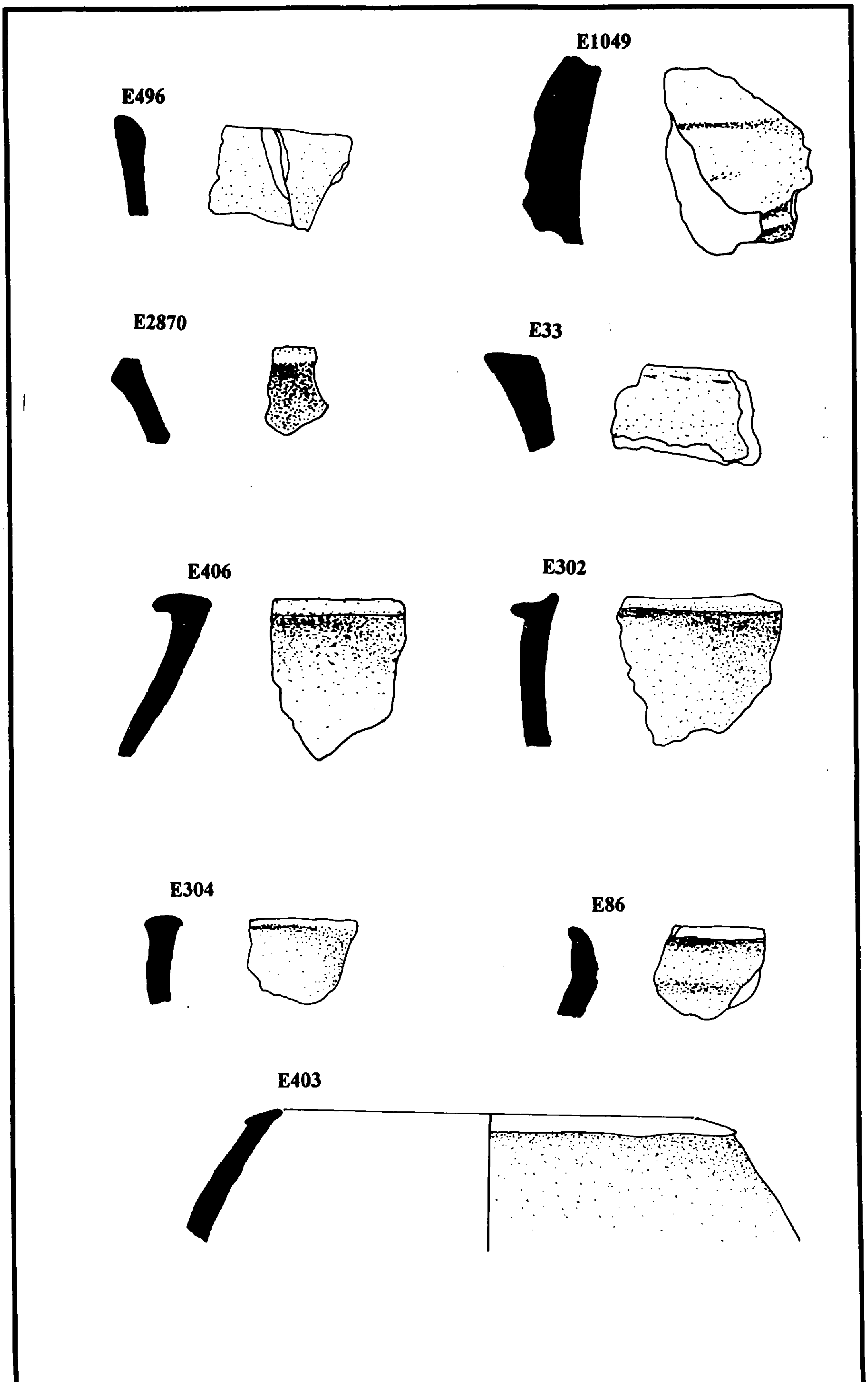


Figure 2.3.: undecorated pottery from Eilean an Tighe, North Uist

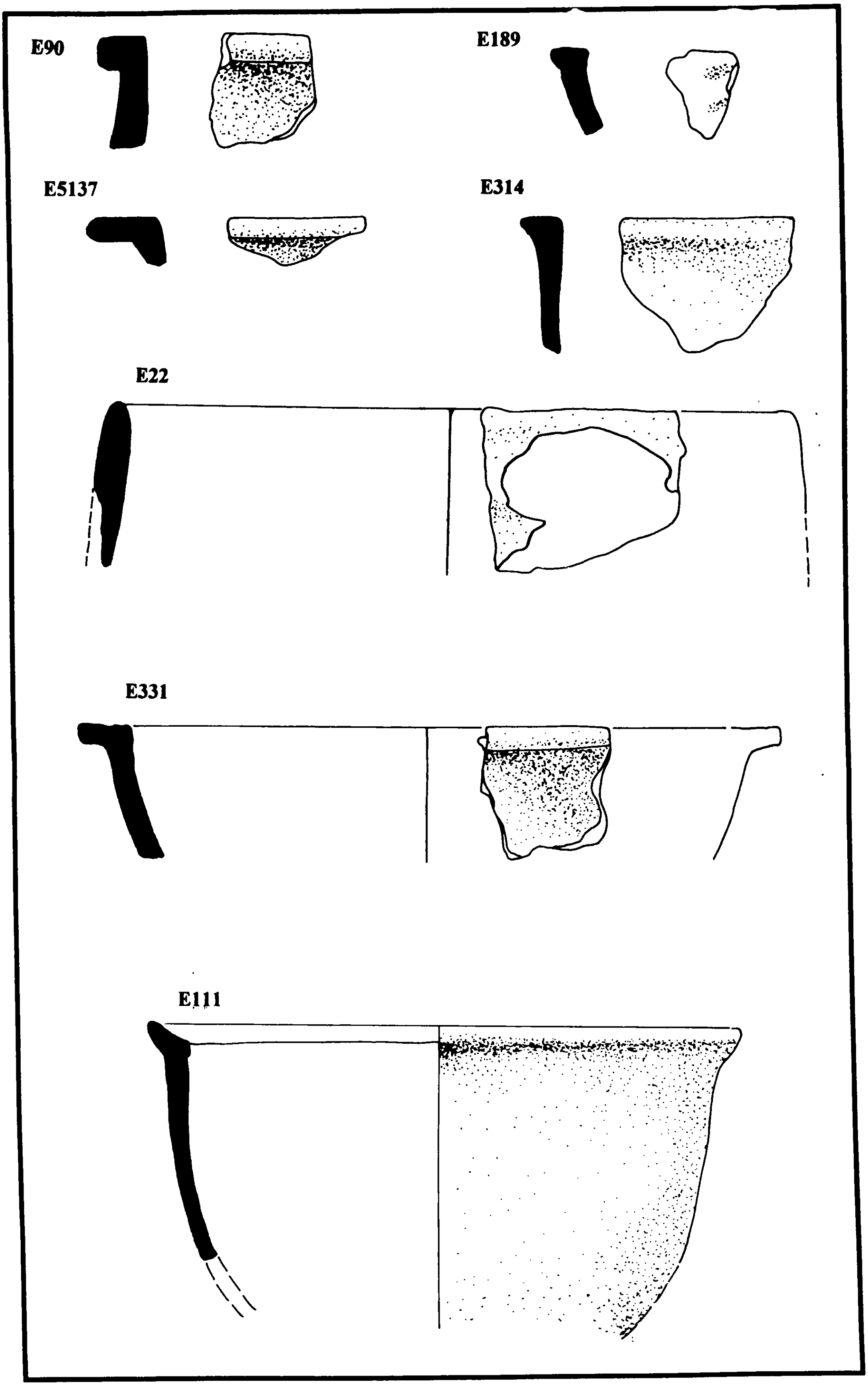


Figure 2.4.: undecorated pottery from Eilean an Tighe, North Uist

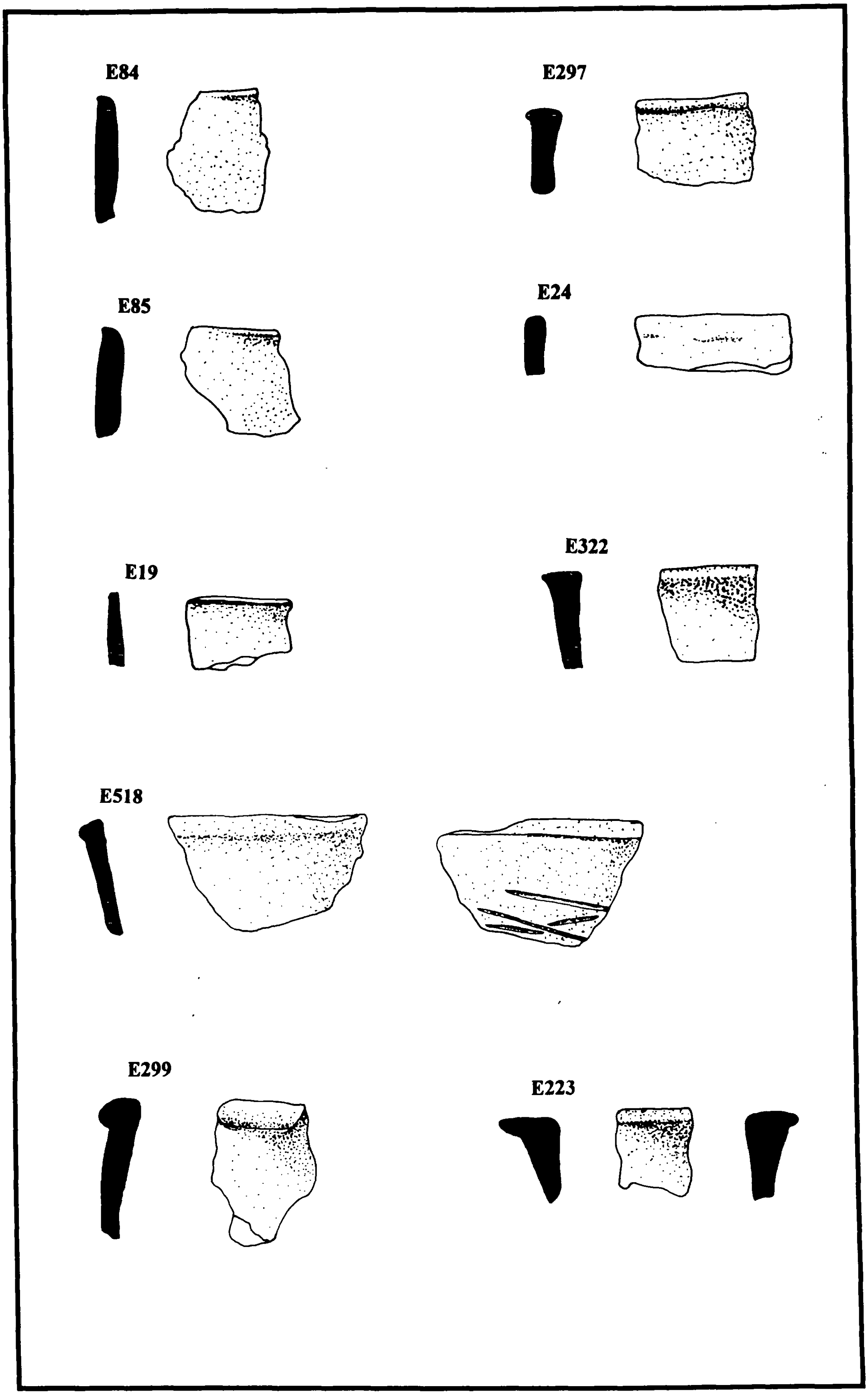


Figure 2.5.: undecorated pottery from Eilean an Tighe, North Uist

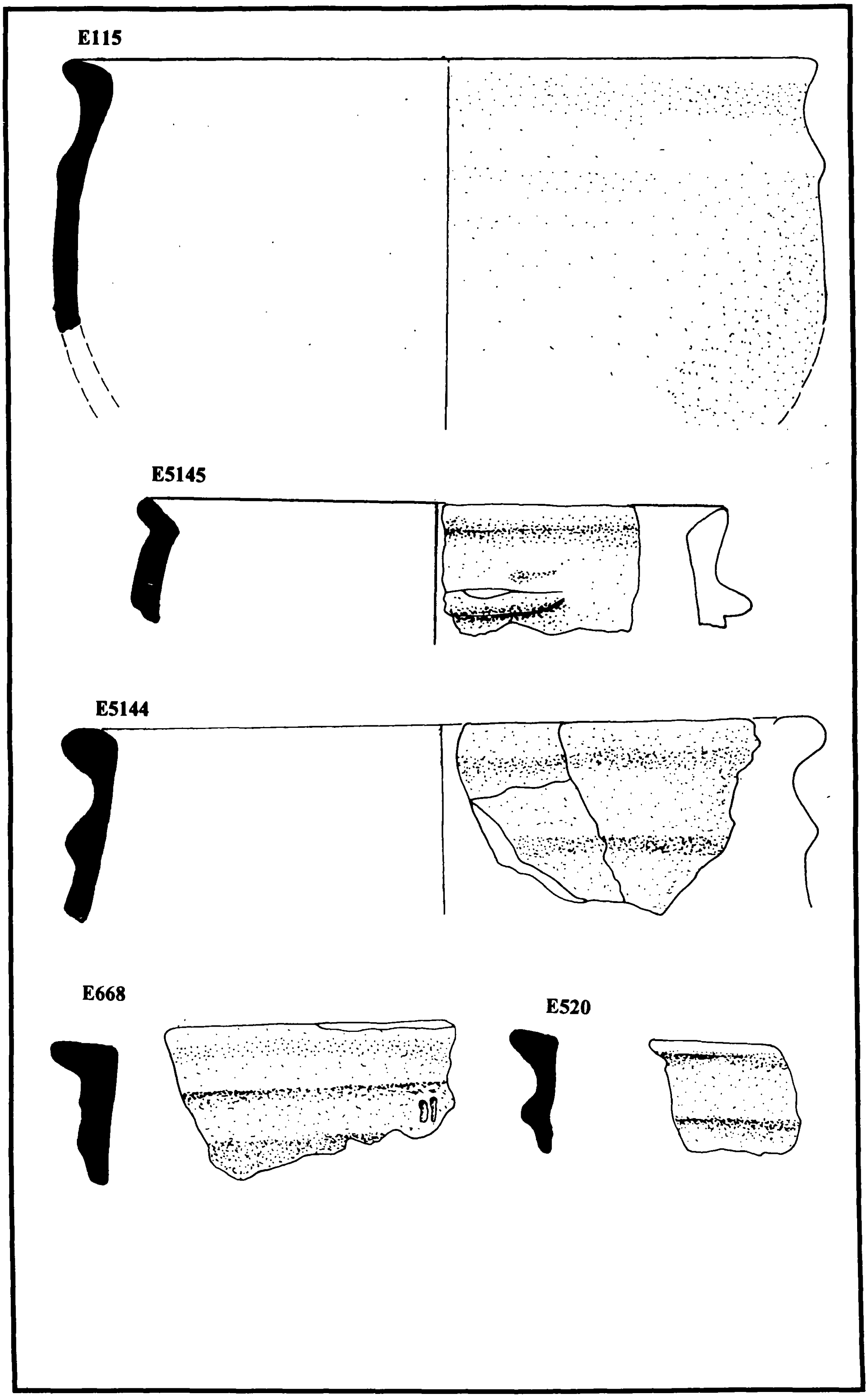


Figure 2.6.: undecorated pottery from Eilean an Tighe, North Uist

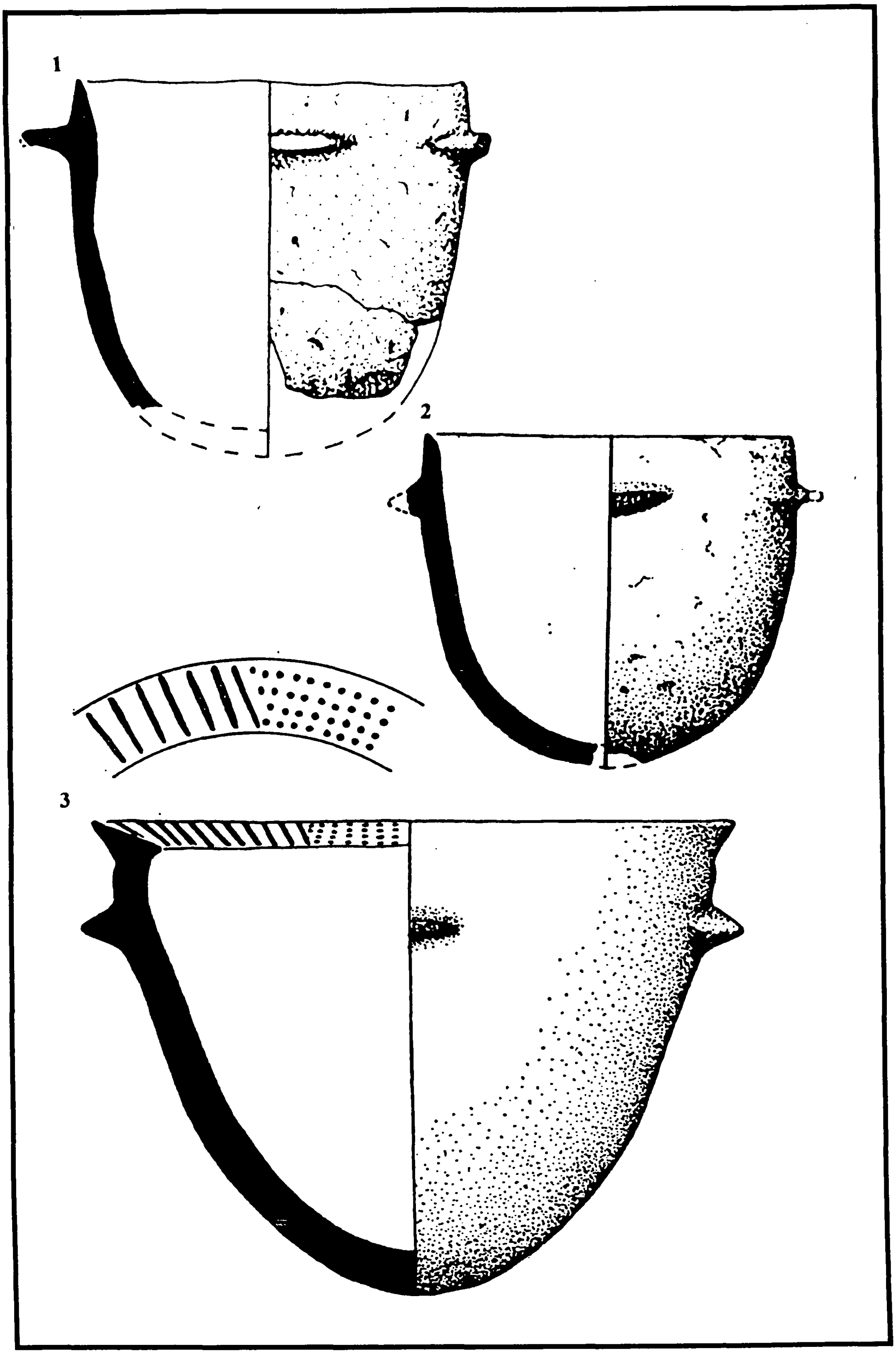


Figure 2.7.: lugged bowls from chambered cairns

No. 1 is vessel 1 from Torlin (after Henshall 1972:304); no. 2 is vessel 2 from Clachaig (ibid:305); no. 3 is vessel 6 from Beacharra (ibid:302).

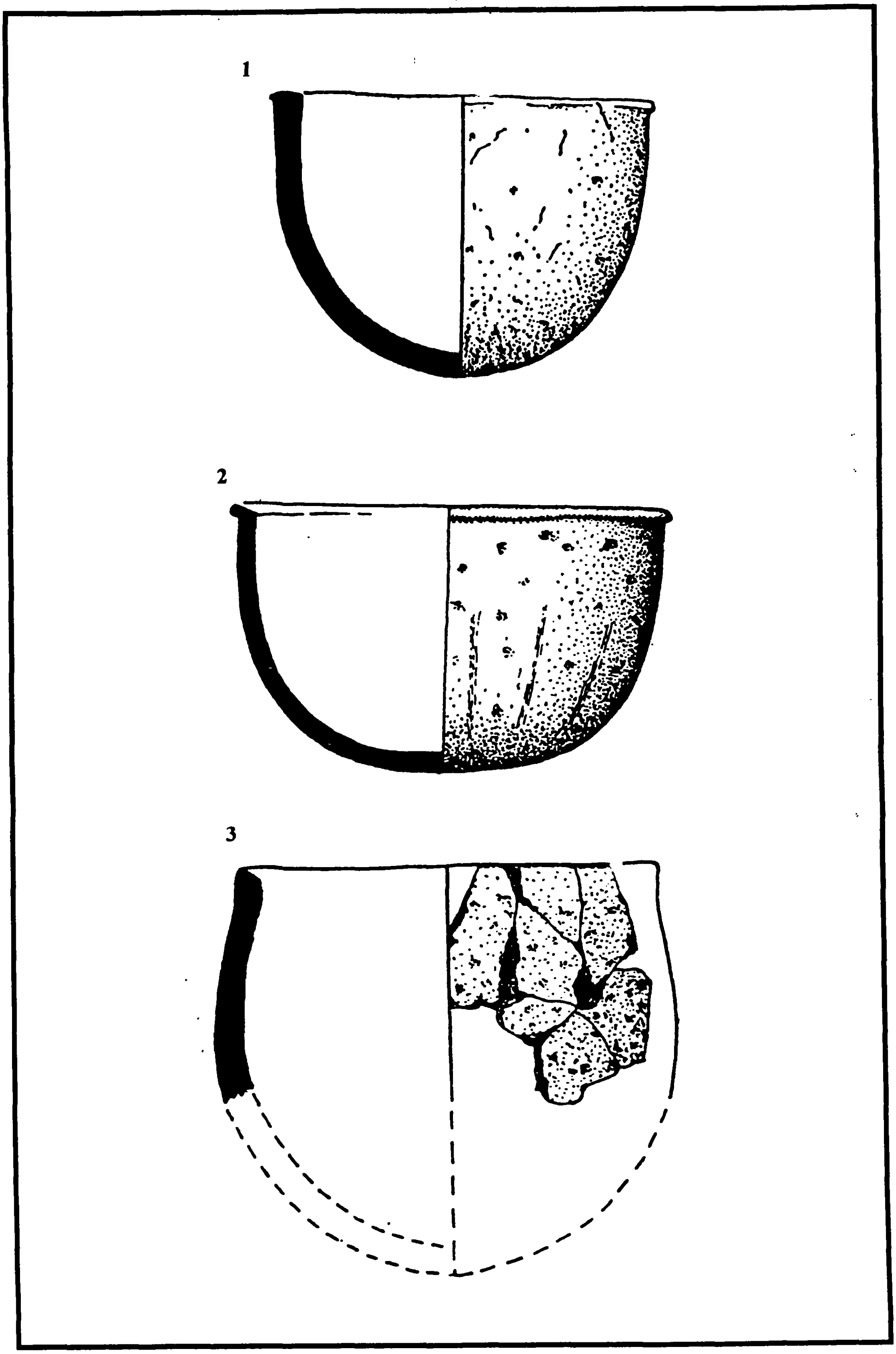


Figure 2.8: undecorated bowls from chambered cairns

No. 1 is vessel 4 from Beacharra (after Henshall 1972:302); no. 2 is vessel 2 from Bickers Houses (ibid:306); no 3 is vessel 4 from Bickers Houses (ibid:306).

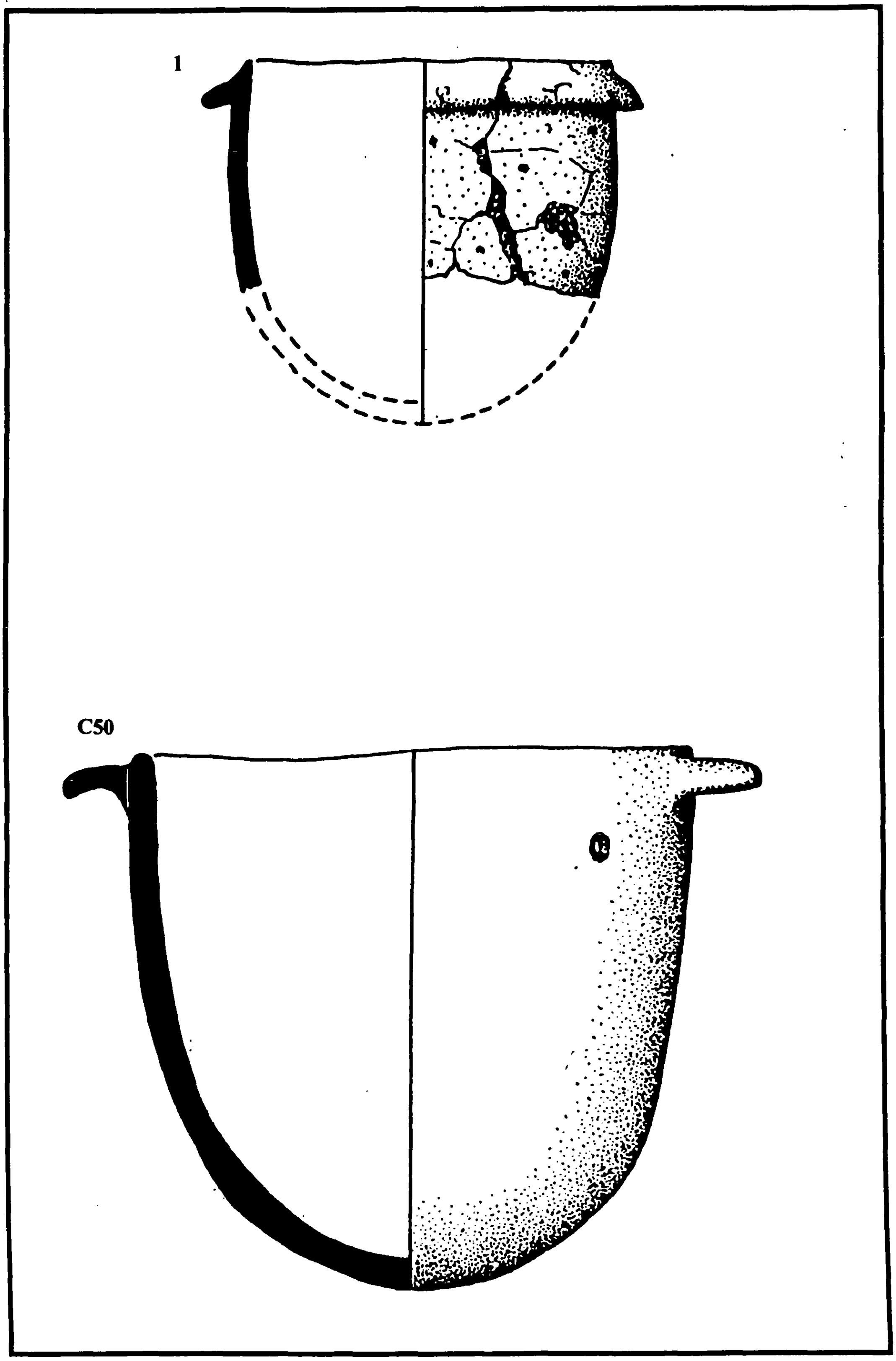


Figure 2.9.: undecorated bowls from chambered cairns

No. 1 is vessel 4 from Glenvoidean (after Henshall 1972:306); C50 is vessel 2 from Clettraval (ibid:308).

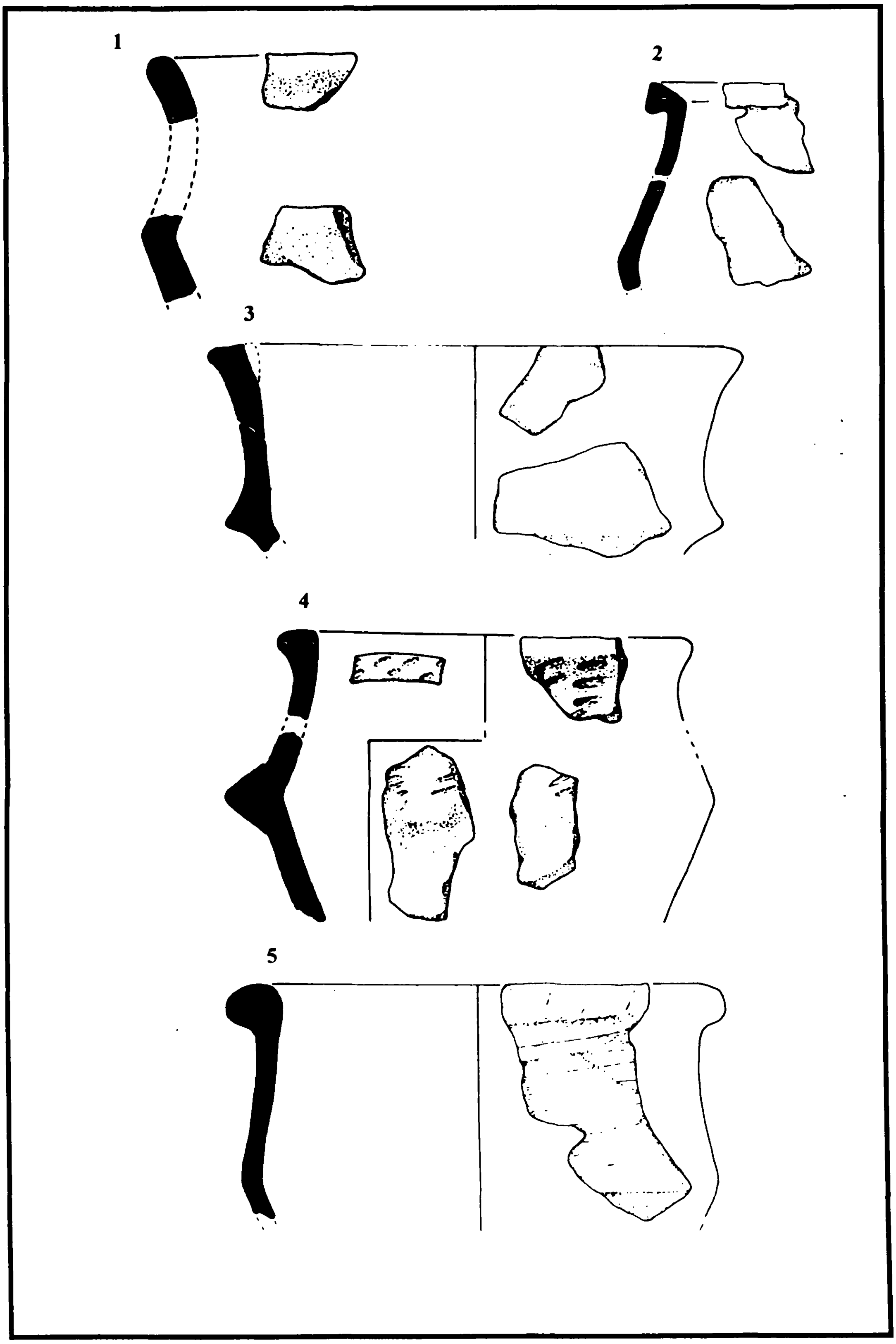


Figure 2.10.: bipartite bowls from Allt Chrisal, Barra

(after Gibson 1995a, Figures 4.29-4.31:101-03, Figure 4.33:106; no. 1 is vessel 2; no. 2 is vessel 56; no. 3 is vessel 27; no. 4 is vessel 87; no. 5 is vessel 95)

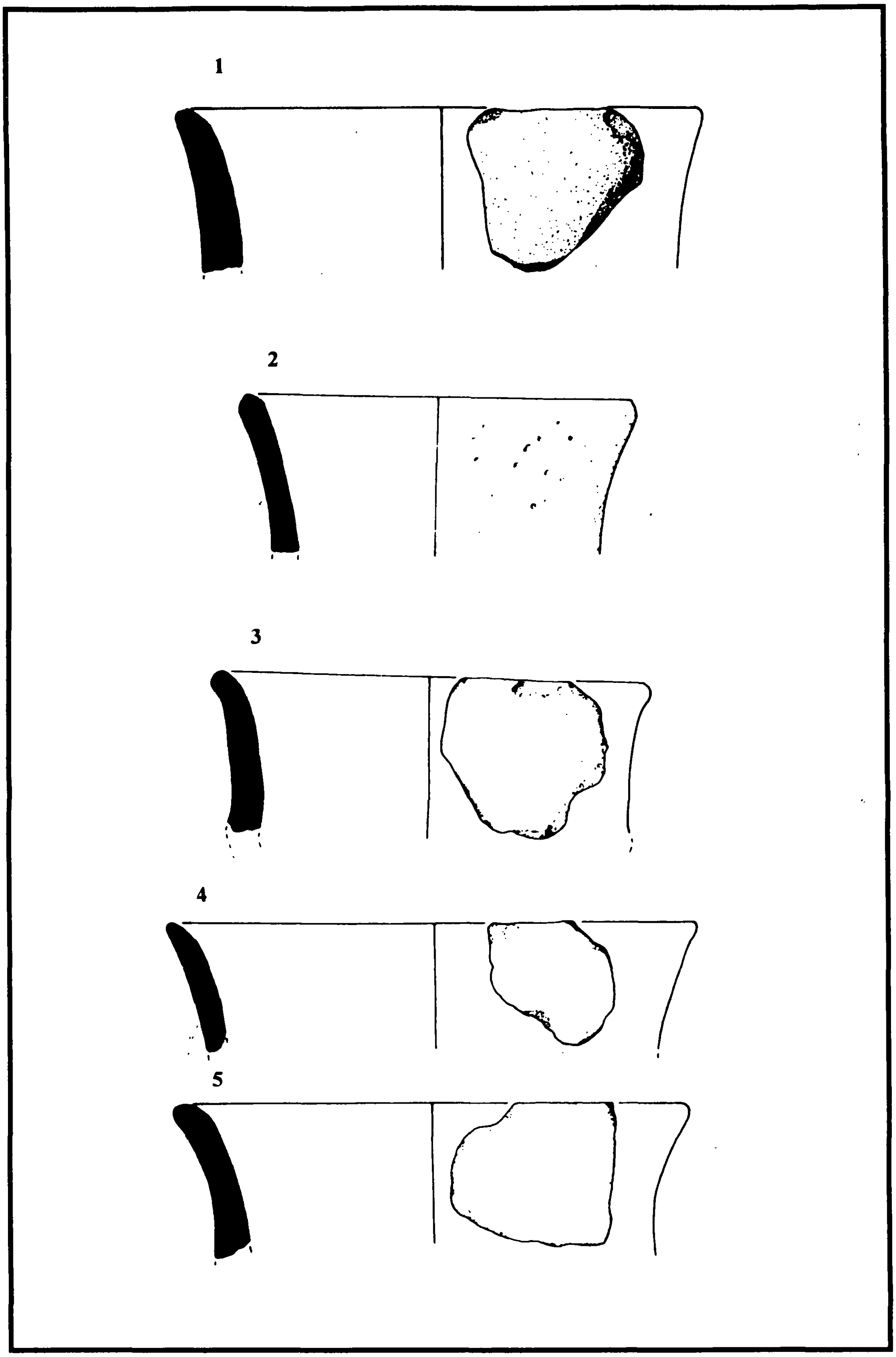


Figure 2.11.: undecorated pottery from Allt Chrisal, Barra

(after Gibson 1995a, Figures 4.29-4.30:101-02; no. 1 is vessel 6; no. 2 is vessel 28; no. 3 is vessel 32; no. 4 is vessel 33; no. 5 is vessel 34)

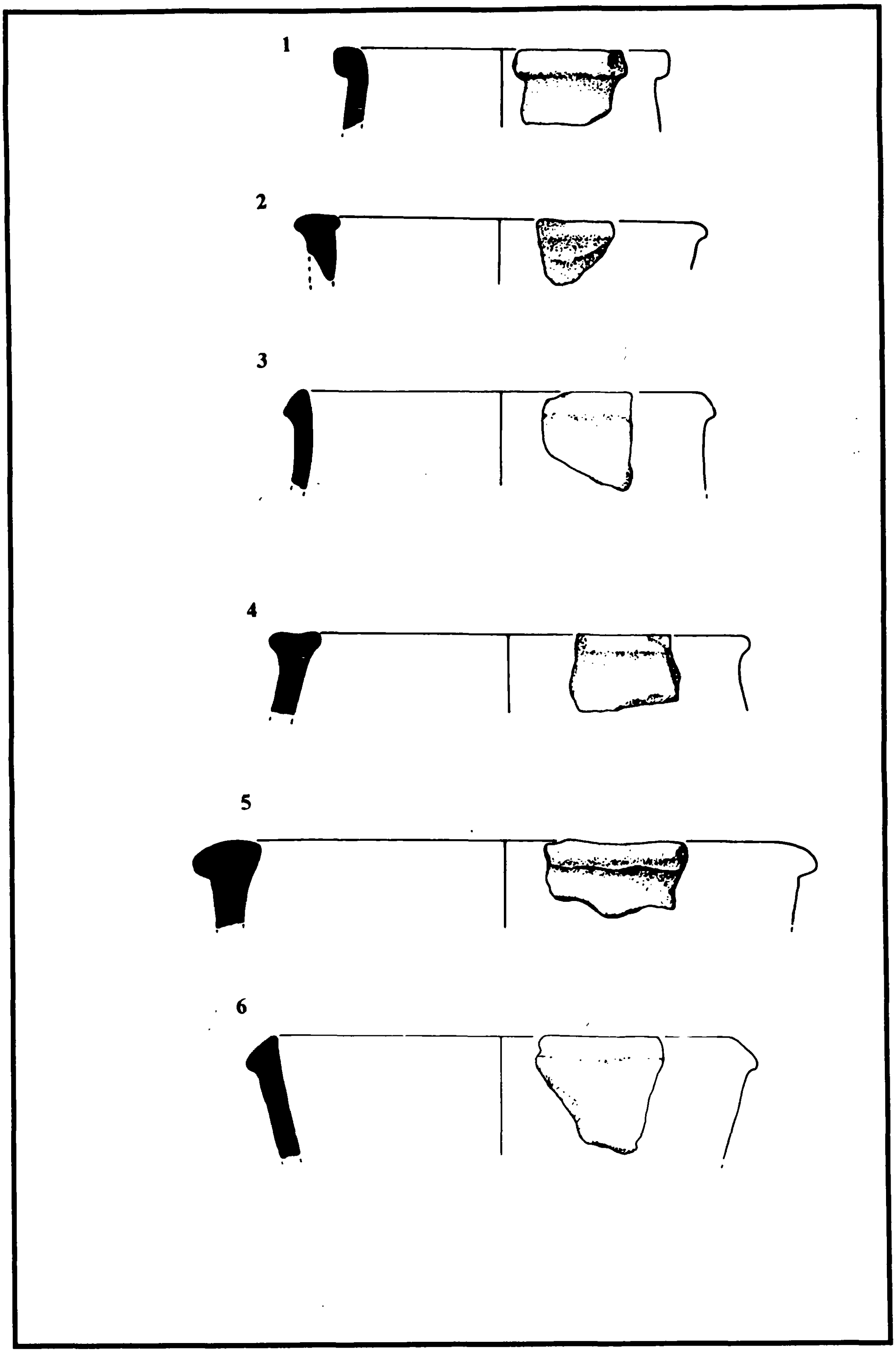


Figure 2.12.: undecorated pottery from Allt Chrisal, Barra

(after Gibson 1995a, Figure 4.31:103; no. 1 is vessel 51; no. 2 is vessel 42; no. 3 is vessel 62; no. 4 is vessel 41; no. 5 is vessel 35; no. 6 is vessel 57) imposed by the dichotomy of decoration against no decoration, either flanged bowls (see Section 2.5.1.4.) or unstan bowls (see Section 2.5.1.5.), *both profusely decorated*, offer more satisfactory parallels to the undecorated fine carinated bowls archetypal of the early neolithic in mainland Britain.

2.5.1.2. Beacharra ware in the Western Isles

Beacharra bowls, or vessels revealing a beacharra ancestry, occur in the assemblages from Clettraval, Unival and Eilean Domhnuill a Spionnaidh (see Brown nd.; Henshall 1972:150; Scott, J.G. 1964:155; Smith 1974:116). The stylistic similarities, and differences between prototypical beacharra bowls and the allegedly derivative hebridean styles are readily identifiable in Figures 2.13 and 2.14.

2.5.1.3.. Achnacree ware in the Western Isles

The stylistic diversity of achnacree bowls, and vessels probably displaying a typological affinity with such bowls, known from several chambered cairns, is readily apparent (see Figures 2.15-2.19). In the Western Isles, achnacree bowls, or vessels betraying an achnacree influence, are known from Clettraval, Unival and Geirisclett (Henshall 1972:100, 152; Smith 1974:116). Many more undecorated bowls, some gently carinated, from the Western Isles, probably betray a stylistic affinity with achnacree bowls, but the failure of this term to achieve popular acceptance in the archaeological literature mitigates against its use in relatively recent publications.

2.5.1.4. Hebridean ware in the Western Isles

The assemblages from Bharpa Carinish, Eilean an Tighe, and Eilean Domhnuill a Spionnaidh on North Uist, and Northton on Harris, are largely identical in terms of ceramic styles represented (see Armit 1986:8; 1987:22-3, 30; 1993:372; 1996:57; Brown nd.; Crone 1993:378; Simpson 1966:137). The similarity between them is exacerbated by the highly stylised appearance of the hebridean and unstan wares, and, in the case of the latter two sites also by the profuse amount of pottery surviving. Of the diversity of styles collated under the label of hebridean ware, only the three ceramic styles discussed previously in Section 2.3.1.4., and illustrated in Figures 2.20 to 2.37, are mentioned explicitly below. The eclectic variety of styles, effectively unclassifiable, encompassed by the concept of hebridean ware is amply demonstrated in Figures 2.38 to 2.45.

Deep necked bowls, including collared jars, supposedly displaying a typological ancestry primarily in beacharra ware, illustrated in Figures 2.20 to 2.26, are known from Unival, Clettraval (Henshall 1972:153-54) and the Berneray Causeway (J. Downes), all on North Uist. Flanged bowls, and other forms of open bowl, illustrated in Figures 2.27 to 2.30, occur at Eilean an Tighe (Henshall 1972:173-74; Scott 1951a Figure 5, no. XI.66:15, Figure 6, nos. Y3, Y19:17, Figure 7. no. Z34:19, Figure 9, no. 2.28:22), Eilean Domhnuill a Spionnaidh (Brown nd.), Rubha an Udail Site 6, and Unival (eg. Henshall 1972, no. 12: 309, 532) and at the Berneray Causeway (J. Downes) on North Uist, at Allt Chrisal on Barra (see Gibson 1995a: 104, 108, 110, nos. 73-76, Figure 4.32:105), and at Callanais on Lewis (Henshall nd.:2). Hebridean jars, including ridged and bag shaped vessels, illustrated in Figures 2.31 to 2.37, occur at Allt Chrisal (Gibson 1995a:104, no. 210, Figure 4.38:113), Eilean an Tighe (Scott 1951), and Eilean Domhnuill a Spionnaidh (Brown nd.), all on North Uist, at Northton on Harris (Simpson 1976:222), and at Pygmies Isle, Callanais and Toristay on Lewis (Armit 1993:372; Henshall 1972:174; nd.:3; MacKenzie, W.C. 1905, Figure 2:252; Stevenson 1946:141). Also, sherds representing vessels with morphology and decoration typical of hebridean ware, and paralleled variously at Eilean an Tighe, Rubha an Udail Site 6, and Northton, are known from Hirte in St. Kilda (Fleming and Edwards 1996:8; Johnson pers comm.). Unfortunately, the fragmentary condition of the assemblage from Bharpa Carinish precluded identification of the individual ceramic types represented, but the fabrics and

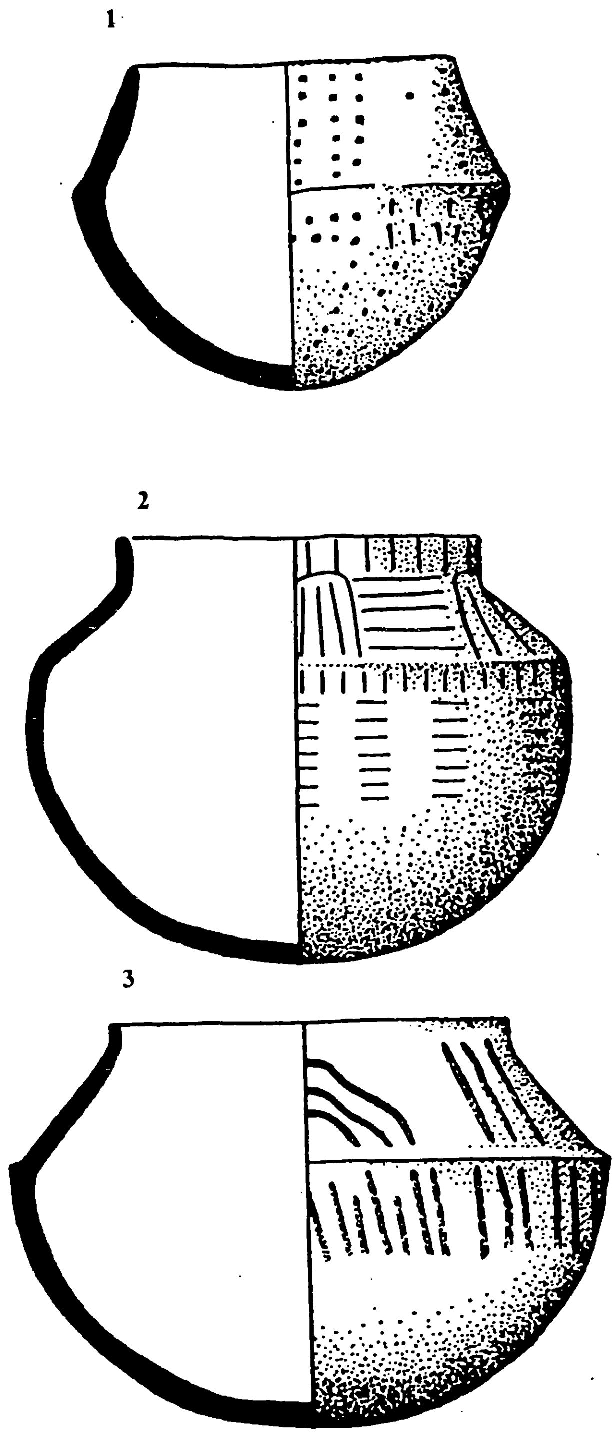


Figure 2.13.: beacharra bowls from chambered cairns

No. 1 is vessel 1 from Bickers Houses (after Henshall 1972:306); no. 2 is vessel 2 from Beacharra (ibid:302); no. 3 is vessel 3 from Beacharra (ibid:302).

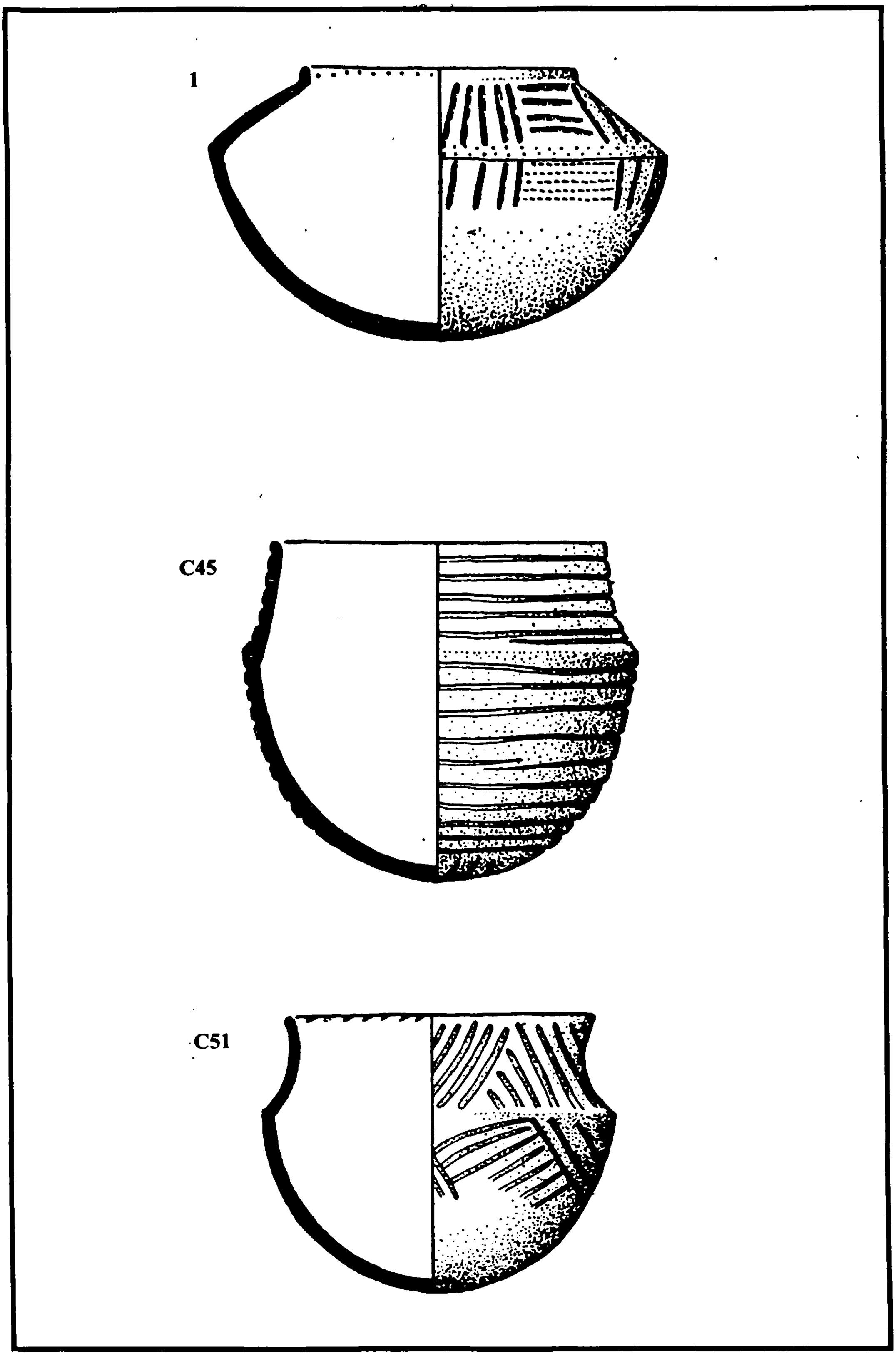


Figure 2.14.: beacharra bowls and necked bowls from chambered cairns

No. 1 is vessel 1 from Clachaig (after Henshall 1972:303); C45 is vessel 4 from Clettraval (ibid:308); C51 is vessel 3 from Clettraval (ibid:308).

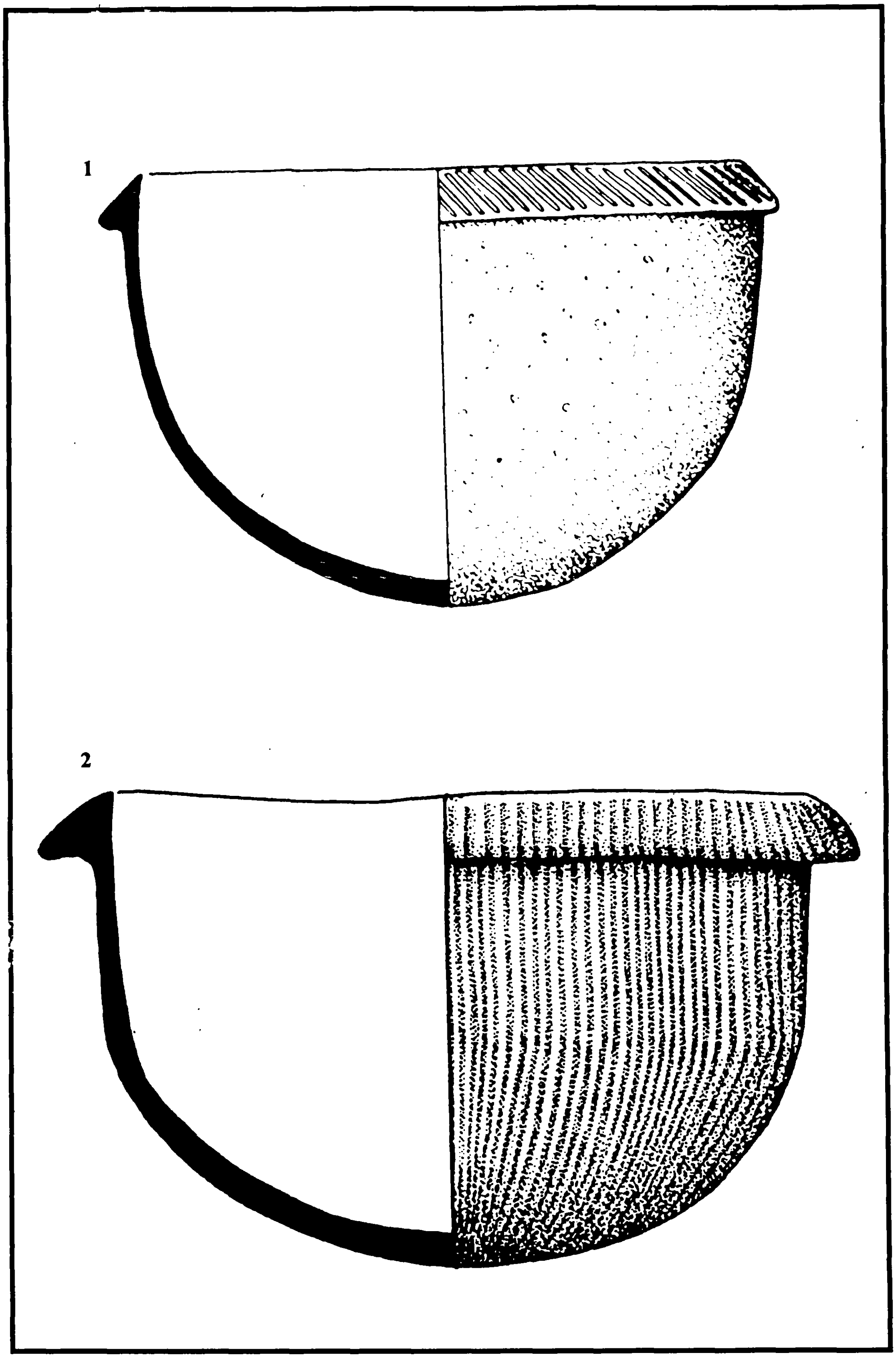


Figure 2.15.: achnacree bowls from chambered cairns

No. 1 is vessel 1 from Rudh' an Dunain, Skye (after Henshall 1972:310); no. 2 is vessel 1 from Nether Largie, Argyll (ibid:302).

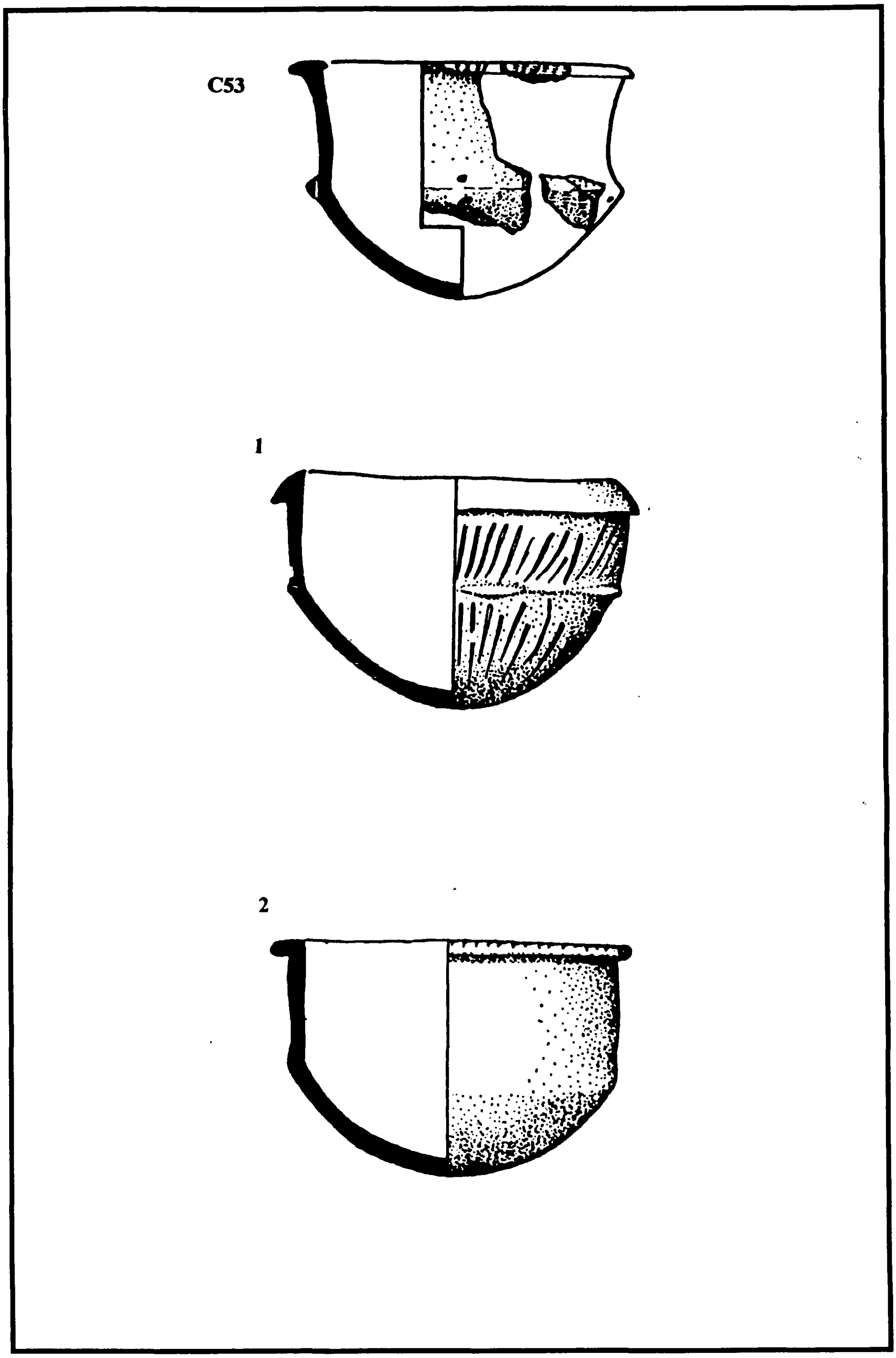


Figure 2.16.: achnacree bowls from chambered cairns

C53 is vessel 2 from Clettraval (after Henshall 1972:308); no. 1 is vessel 1 from Glenvoidean, Bute (ibid:306); no. 2 is vessel 1 from Glecknabae (ibid:306).

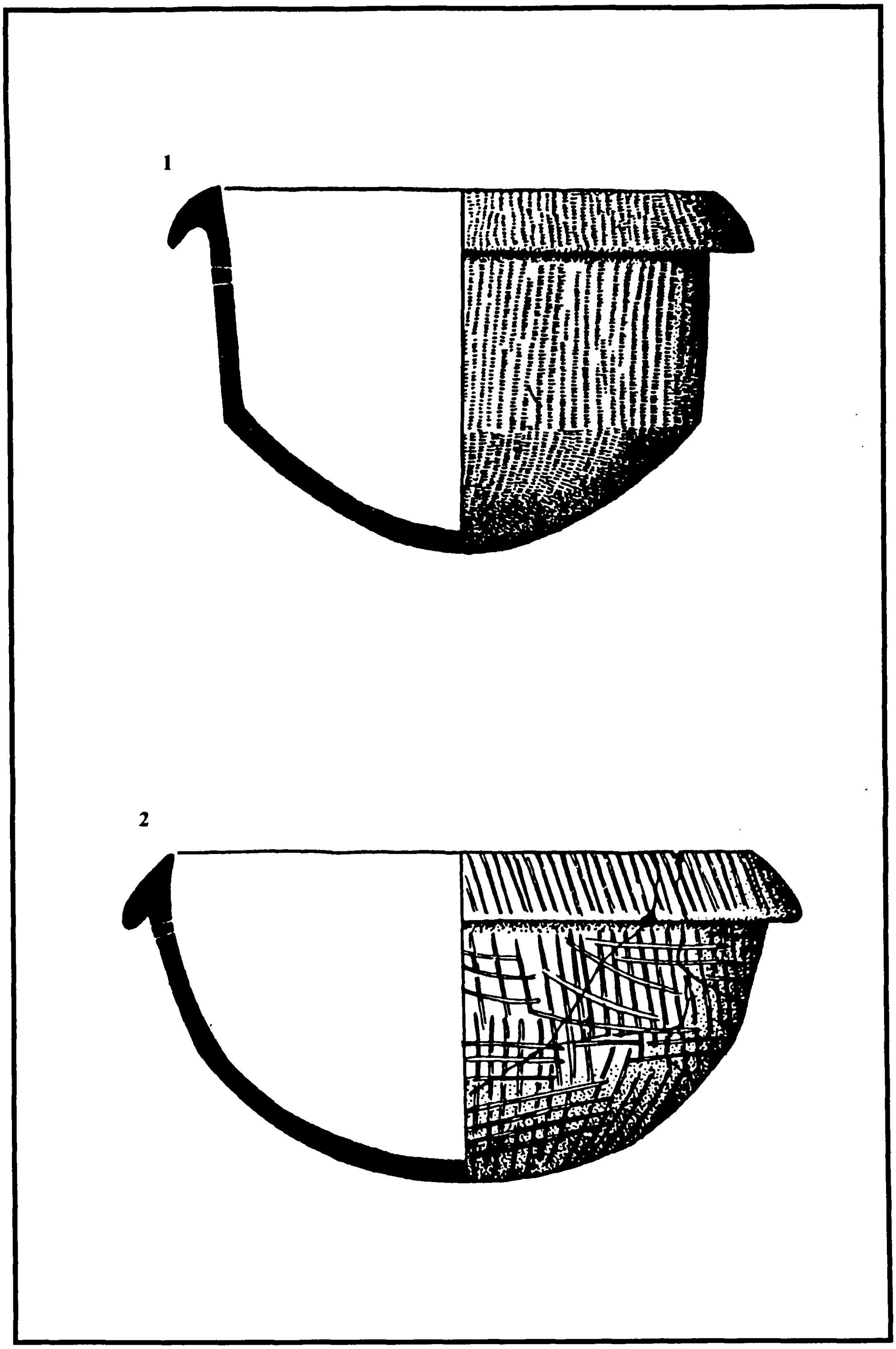


Figure 2.17.: achnacree bowls from chambered cairns

No. 1 is vessel 2 from Glenvoidean (after Henshall 1972:306); no. 2 is vessel 3 from Glenvoidean (ibid:306).

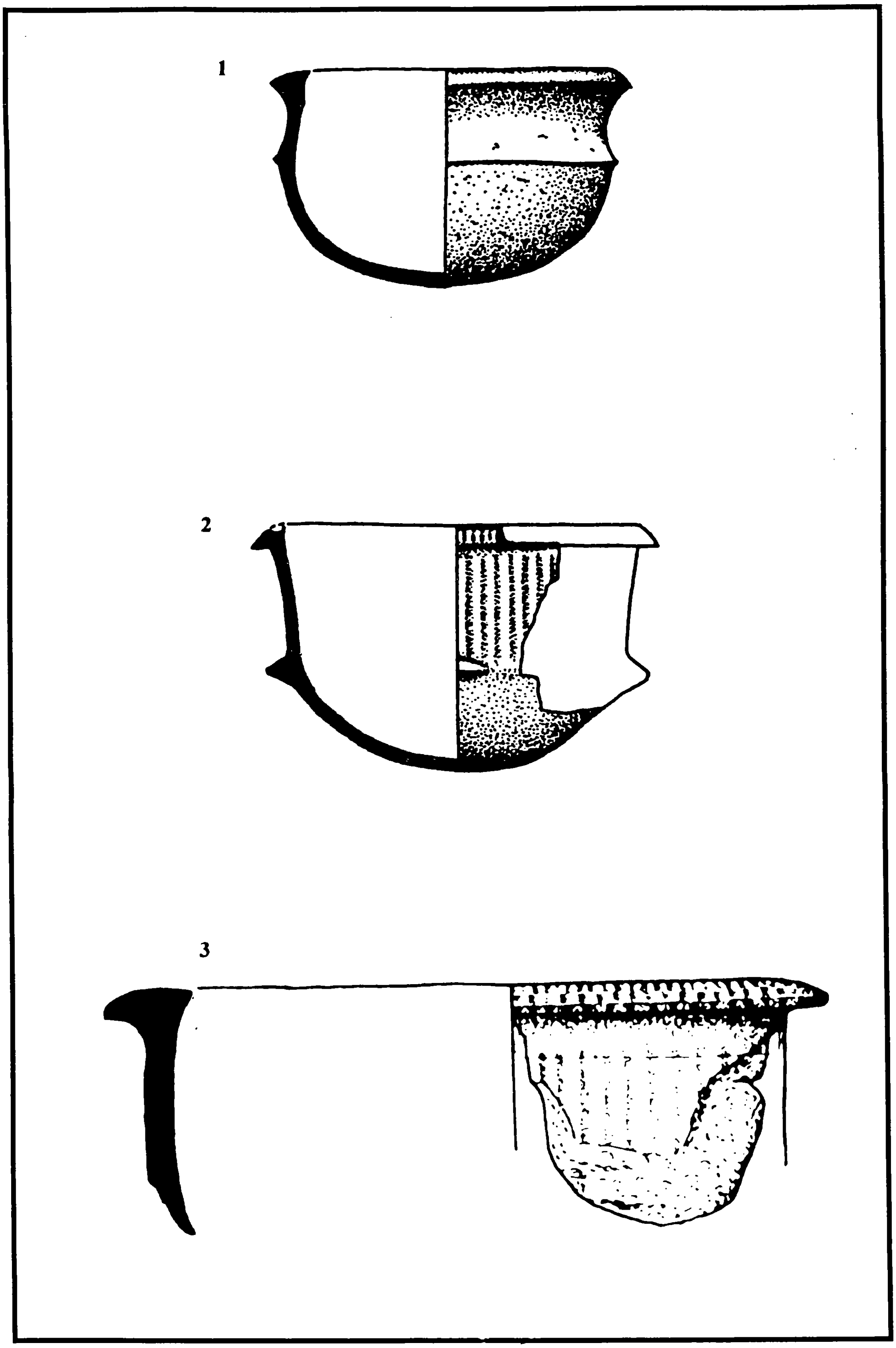


Figure 2.18.: achnacree bowls from chambered cairns

Nos. 1,2 and 3 are vessels 1, 2 and 3, respectively, from Achnacree, Argyll (after Henshall 1972:303).

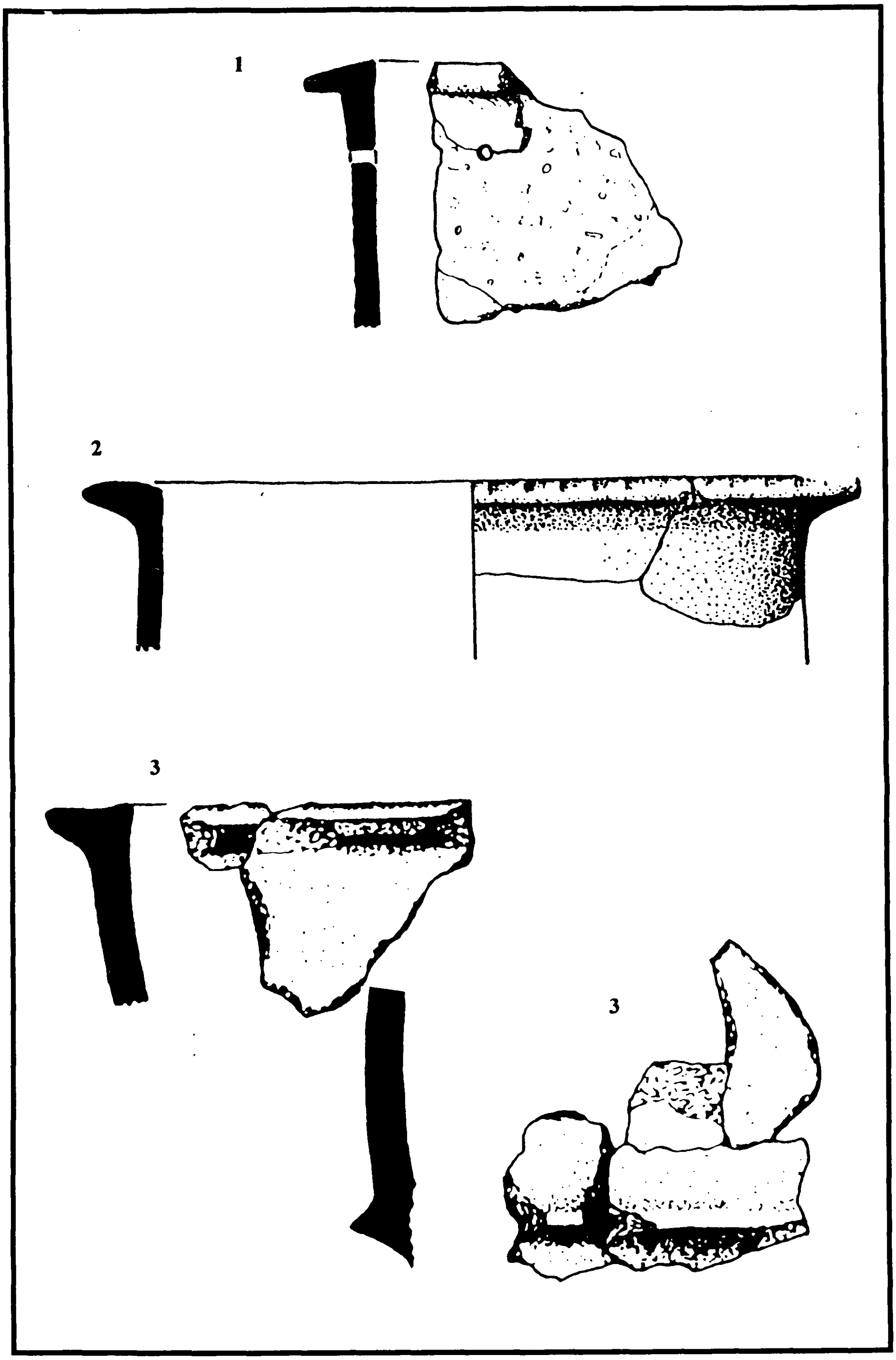


Figure 2.19.: undecorated bowls from chambered cairns

No. 1 is vessel 2 from Rudh' an Dunain, Skye (after Henshall 1972:310); no. 2 is vessel 2 from Glecknabae, Bute (ibid:306); no. 3 is vessel 2 from Nether Largie, Argyll (ibid:302).

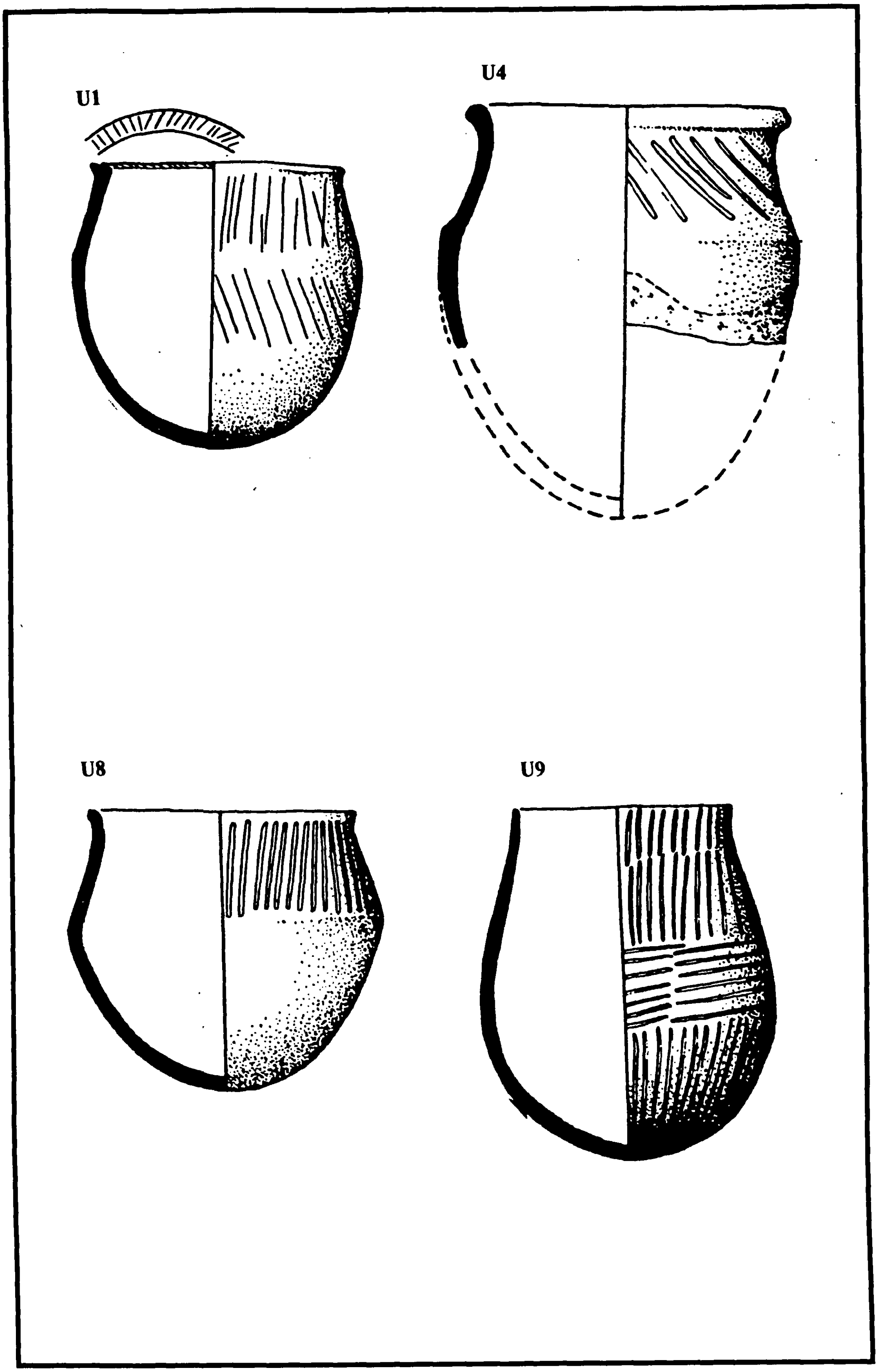


Figure 2.20.: shouldered bowls from Unival, North Uist

(after Henshall 1972:309; U1 is vessel 4; U4 is vessel 10; U8 is vessel 3; U9 is vessel 2)

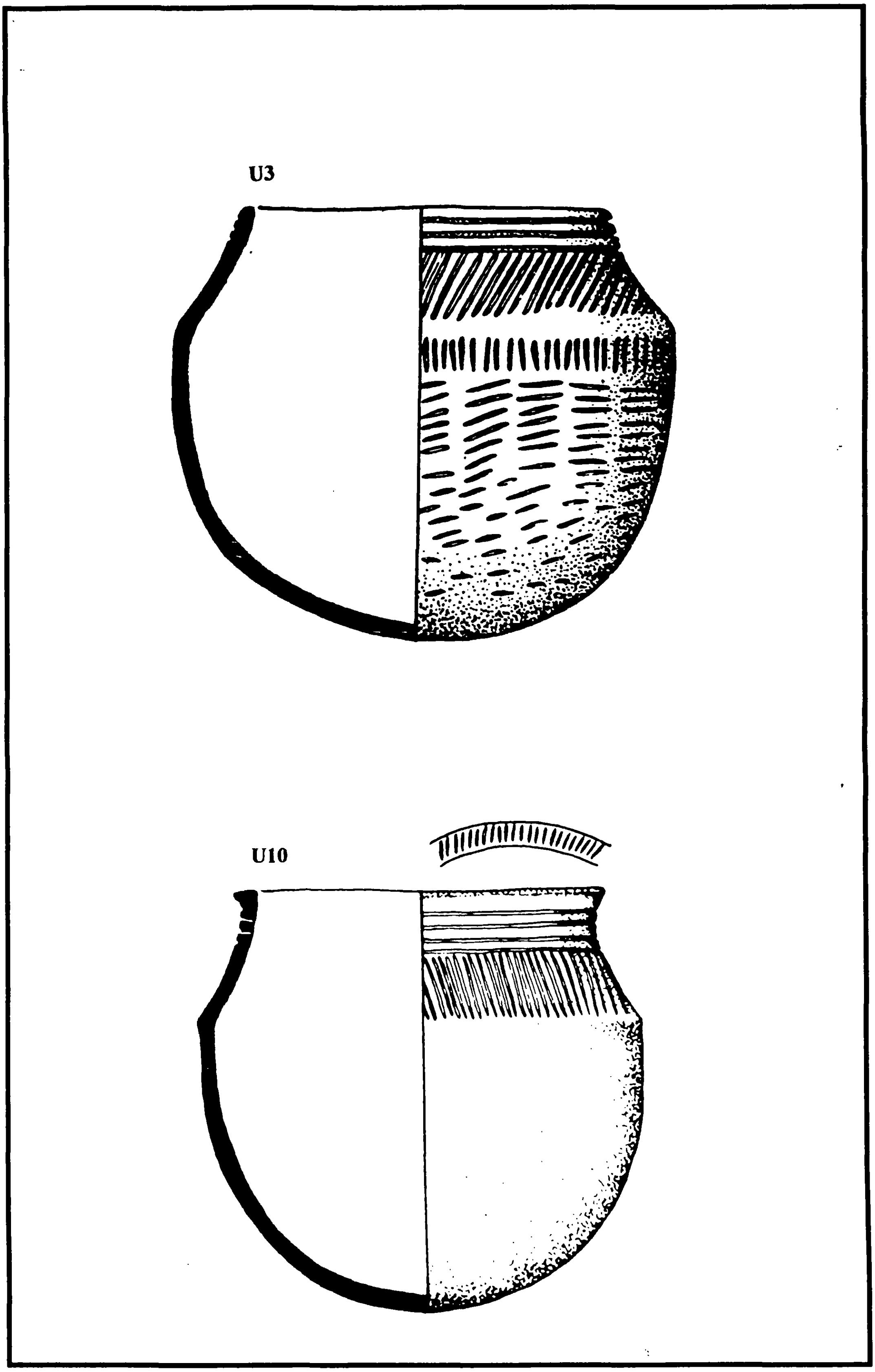


Figure 2.21.: shouldered bowls from Unival, North Uist

(after Henshall 1972:309; U3 is vessel 6; U10 is vessel 13)

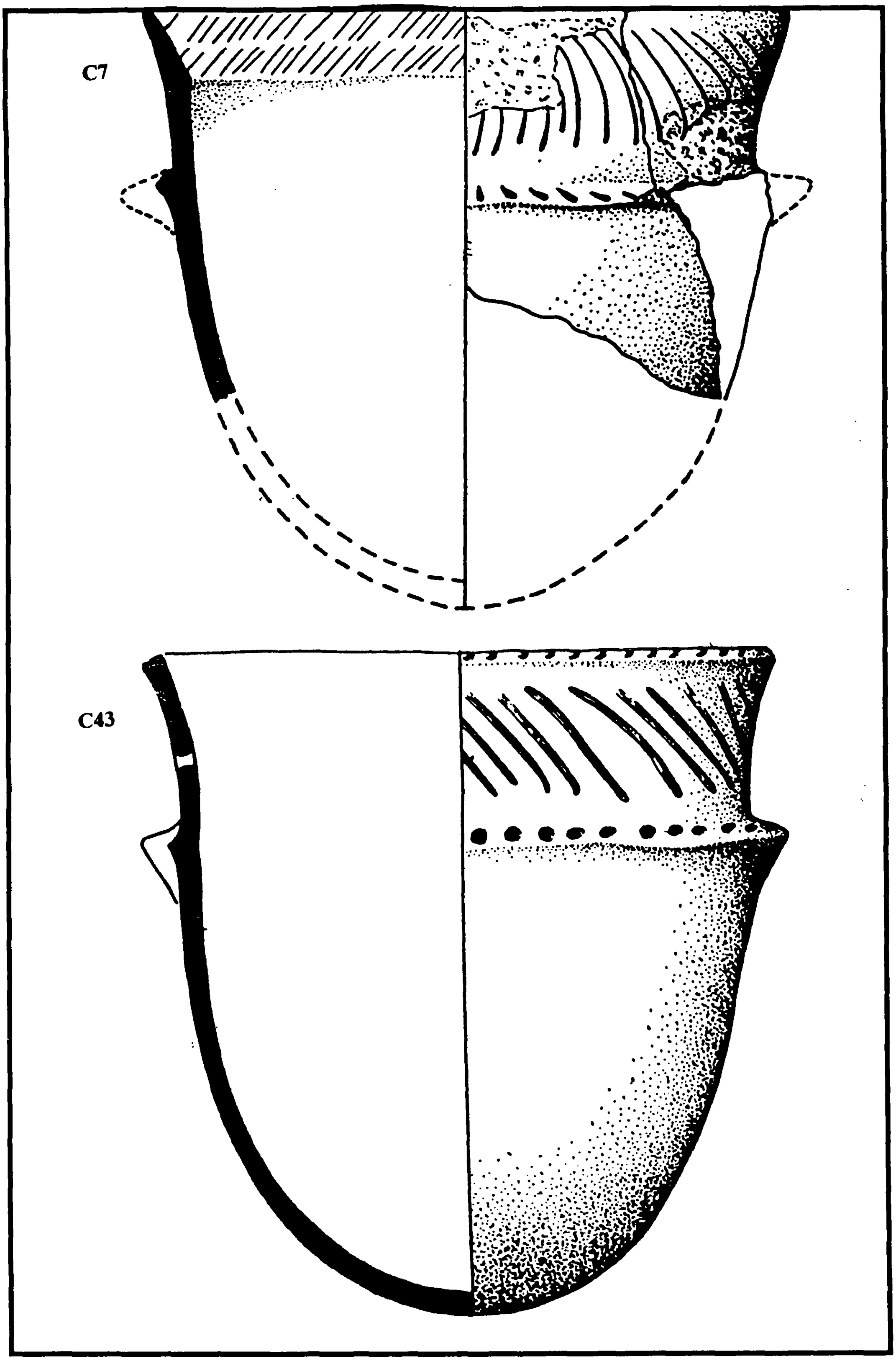


Figure 2.22.: collared jars from Clettraval, North Uist

(after Henshall 1972:308; C7 is vessel 11; C43 is vessel 10)

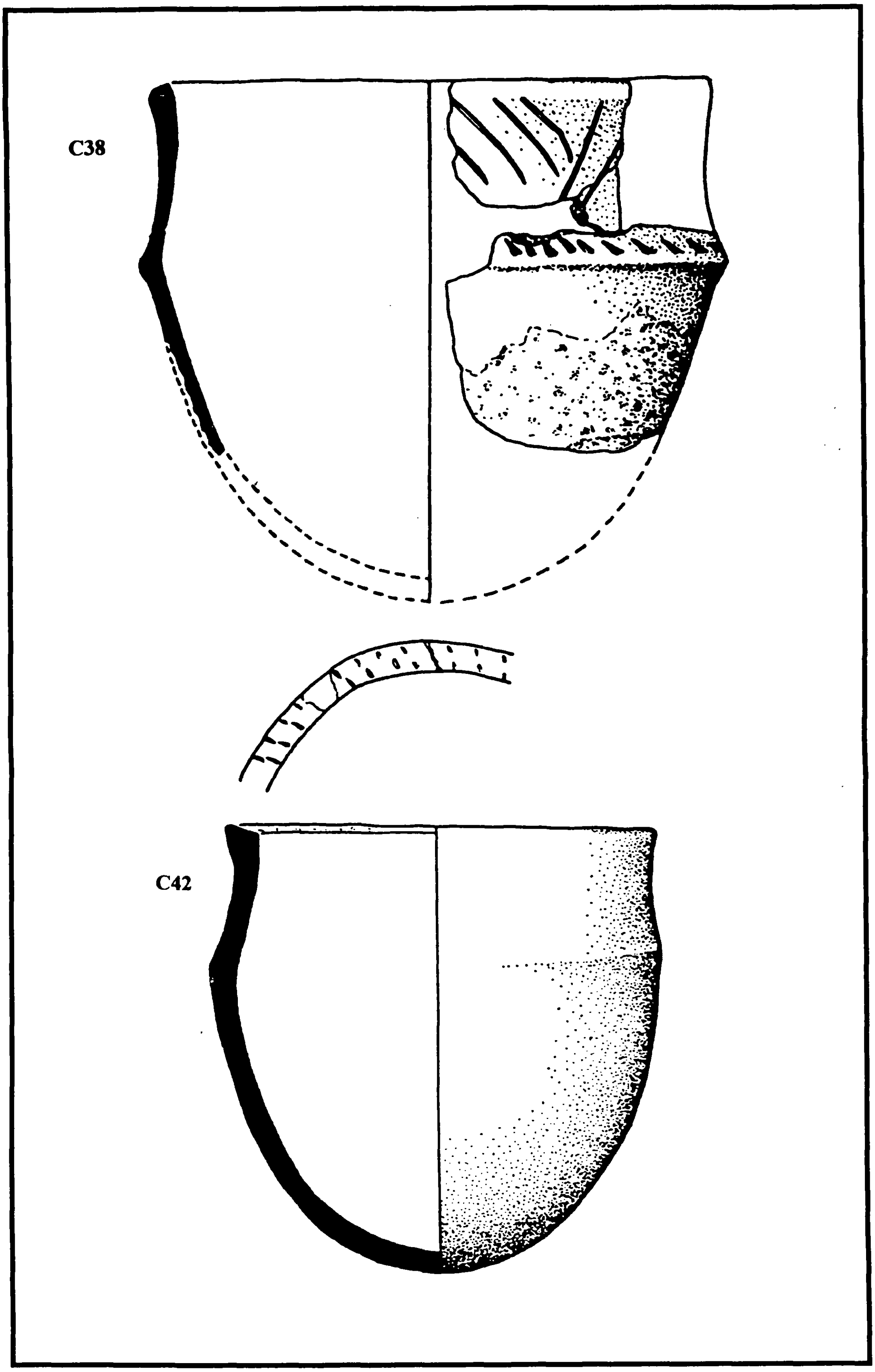


Figure 2.23.: collared jars and deep bowls from Clettraval, North Uist

(after Henshall 1972:308; C38 is vessel 9; C42 is vessel 6)

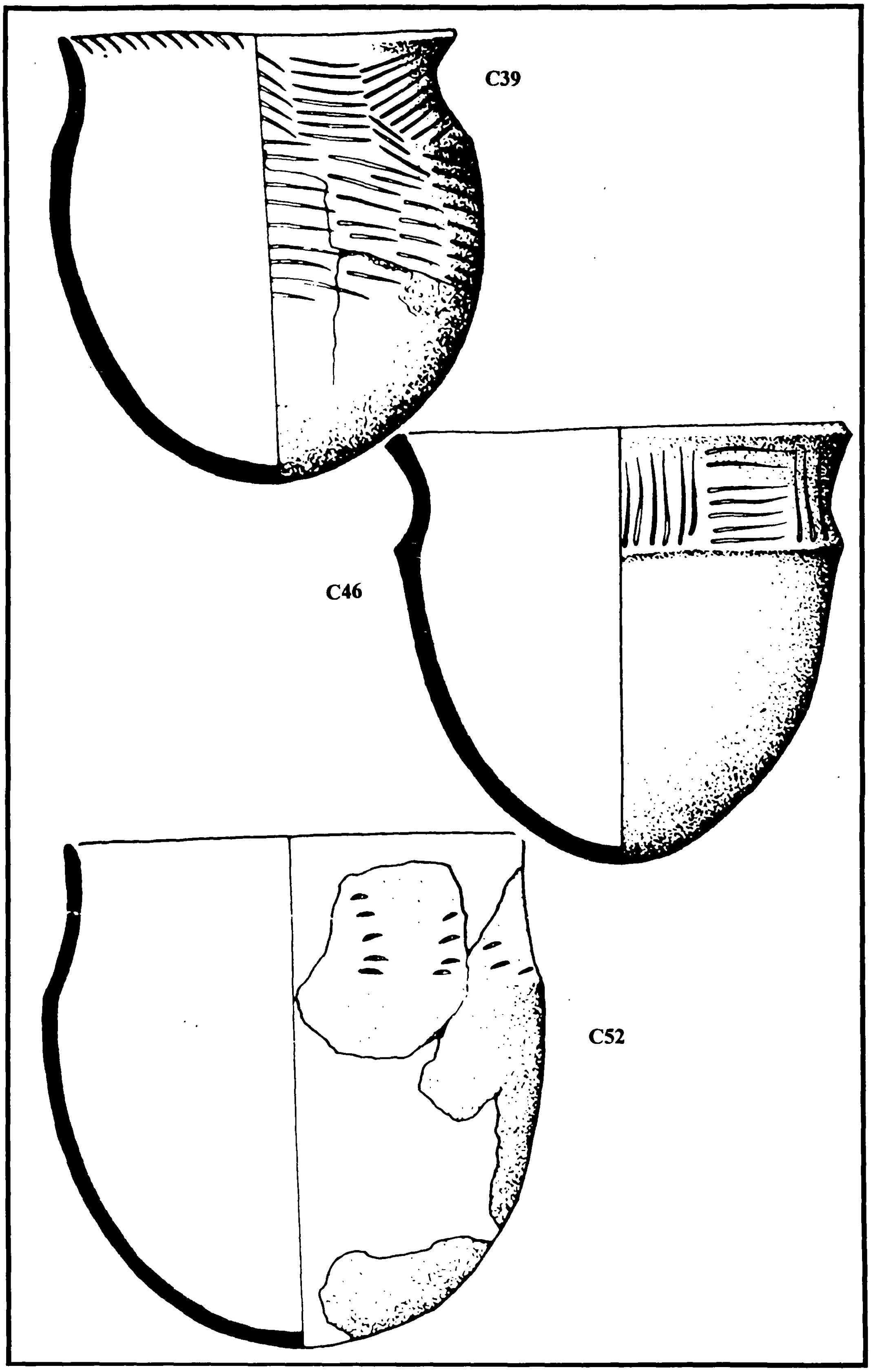


Figure 2.24.: collared jars and deep bowls from Clettraval, North Uist

(after Henshall 1972:308; C39 is vessel 7; C46 is vessel 8; C52 is vessel 5)

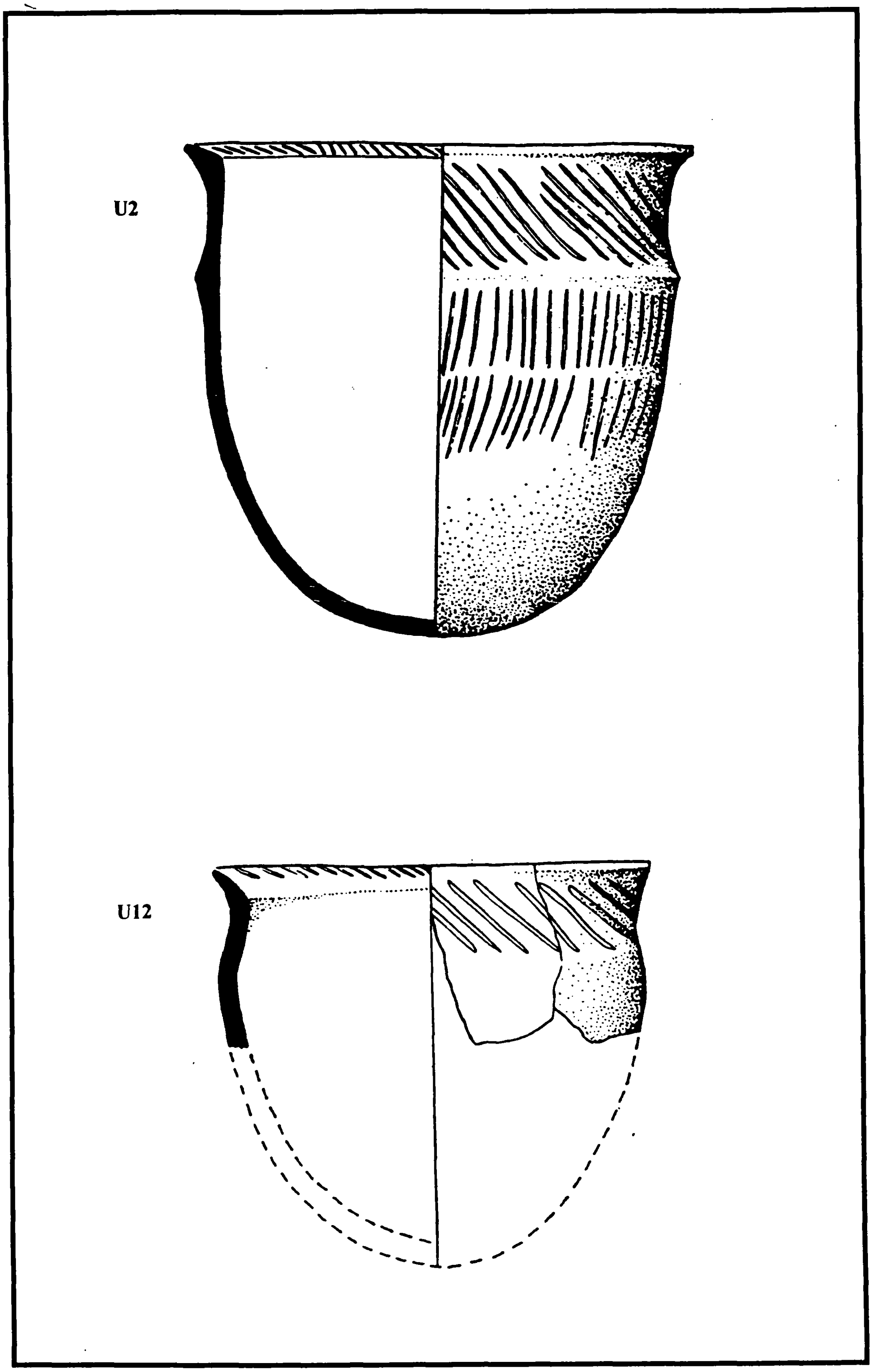


Figure 2.25.: necked deep necked jars from Unival, North Uist

(after Henshall 1972:309; U2 is vessel 9; U12 is vessel 7)

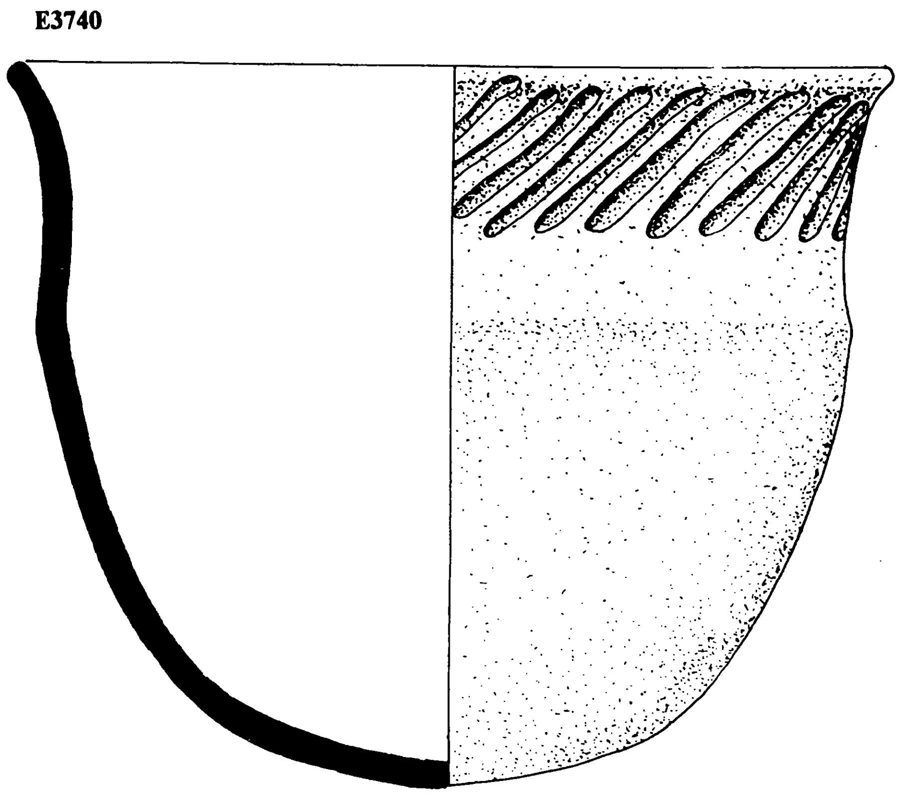


Figure 2.26.: necked jar from Eilean an Tighe, North Uist

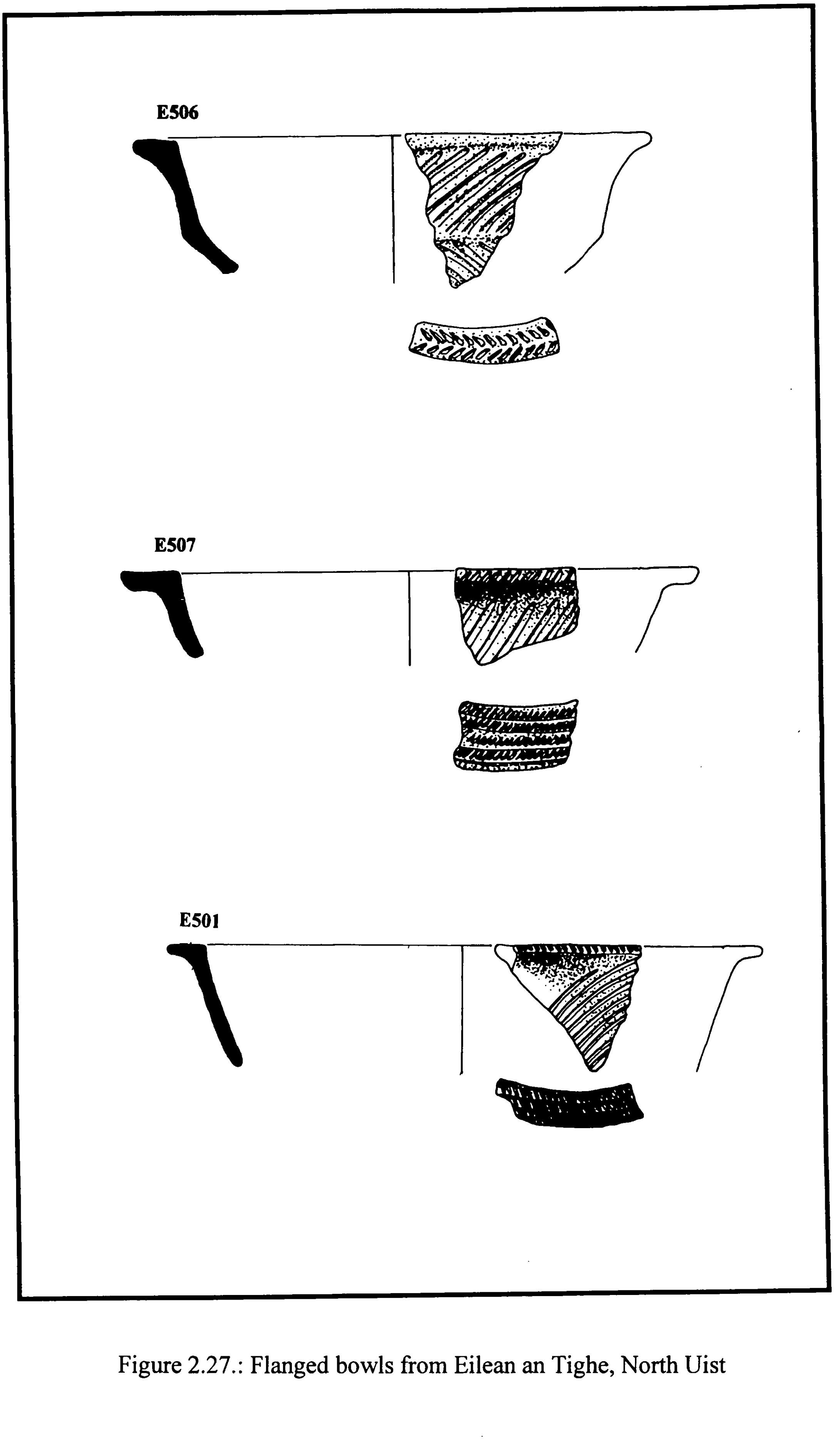


Figure 2.27.: Flanged bowls from Eilean an Tighe, North Uist

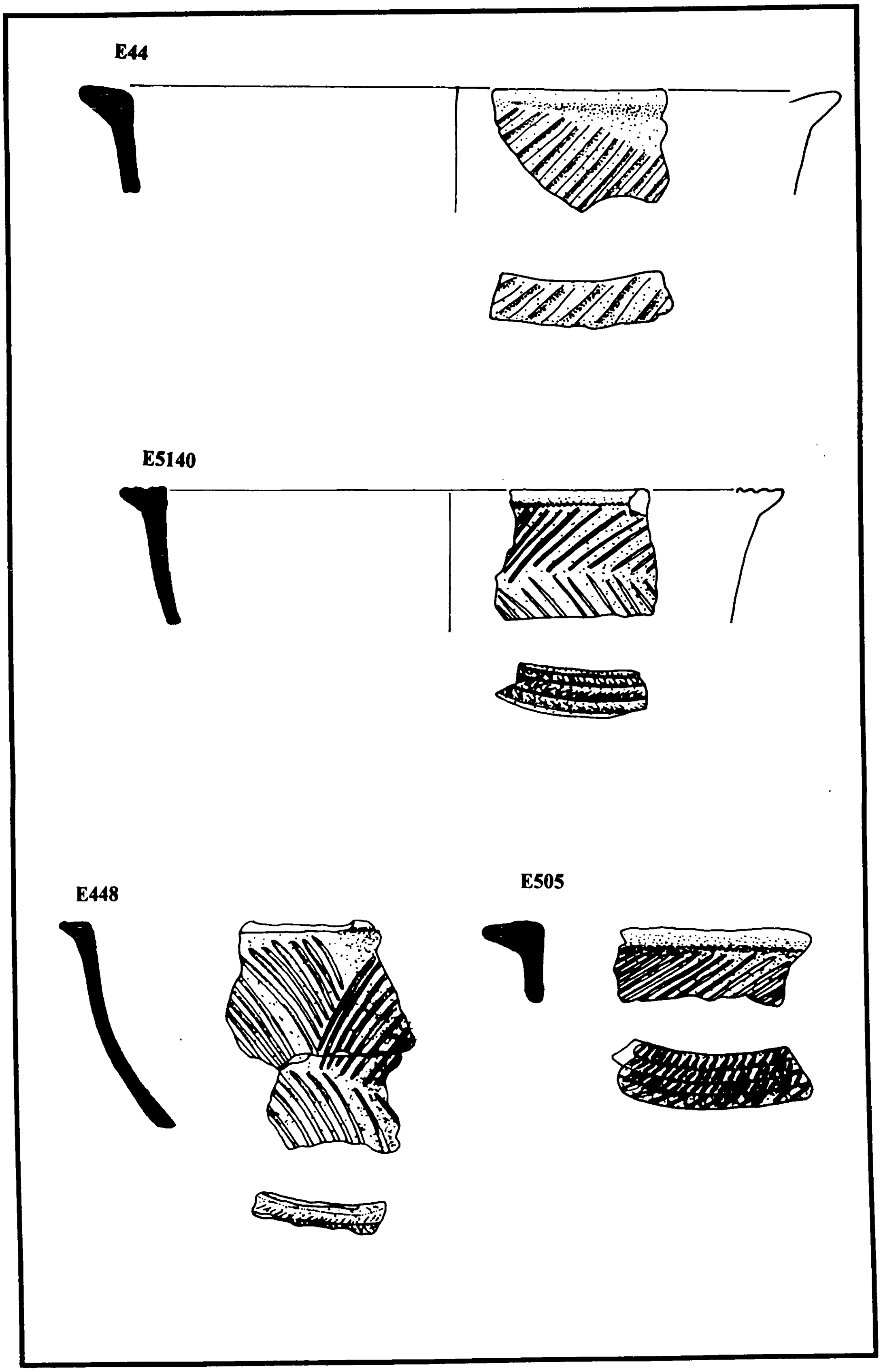


Figure 2.28.: Flanged bowls from Eilean an Tighe, North Uist

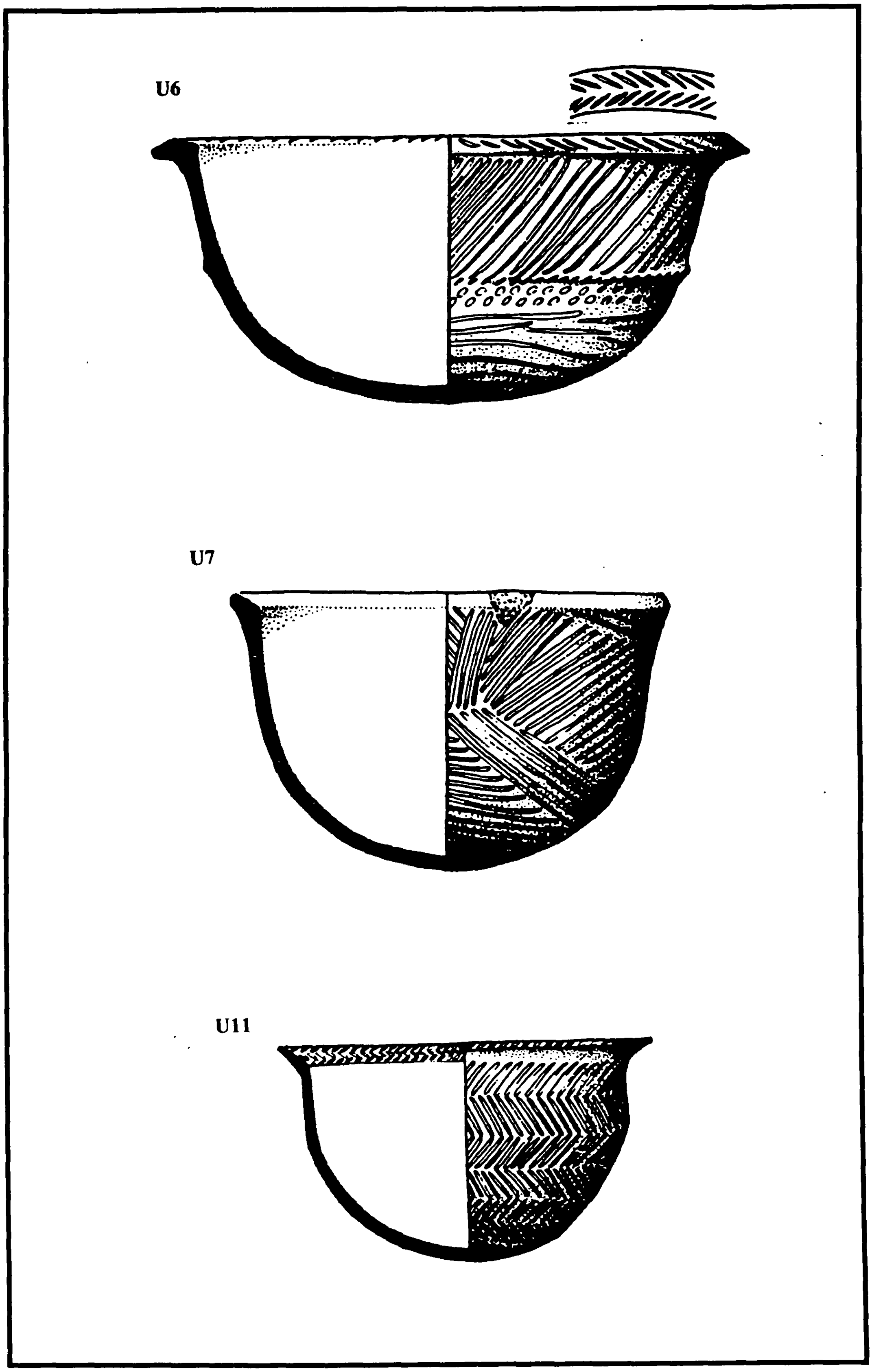


Figure 2.29.: Flanged bowls from Unival, North Uist

(after Henshall 1972:309; U6 is vessel 11; U7 is vessel 8; U11 is vessel 12)

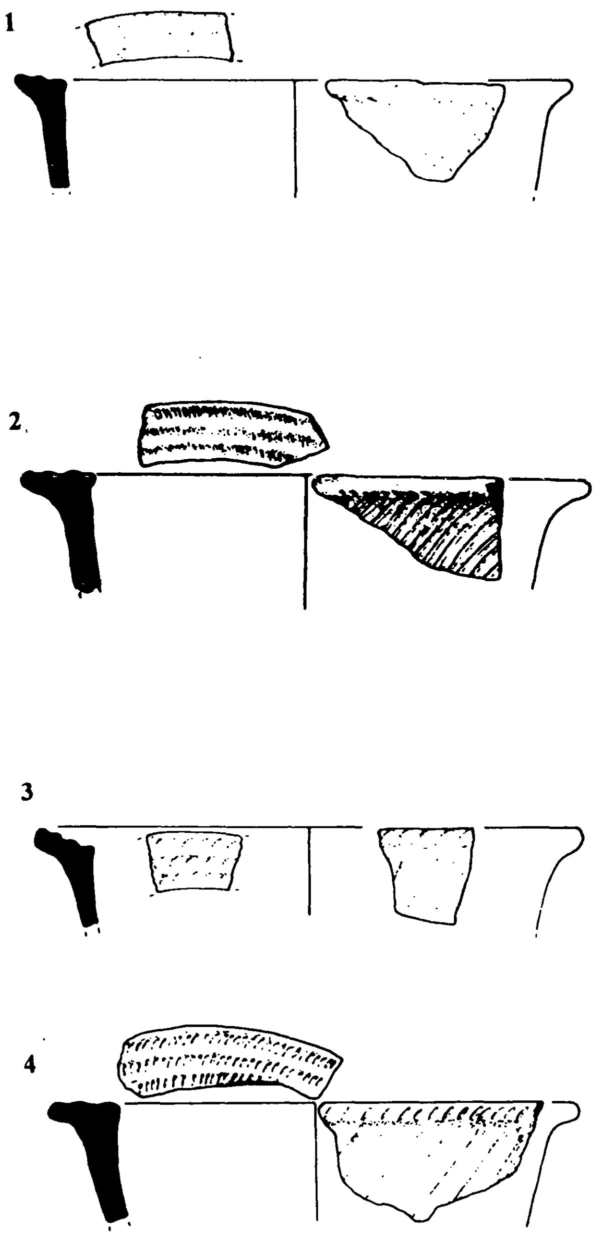


Figure 2.30.: Flanged bowls from Allt Chrisal, Barra

(after Gibson 1995a, Figure 4.32:105; no. 1 is vessel 76; no. 2 is vessel 75; no. 3 is vessel 74; no. 4 is vessel 73)

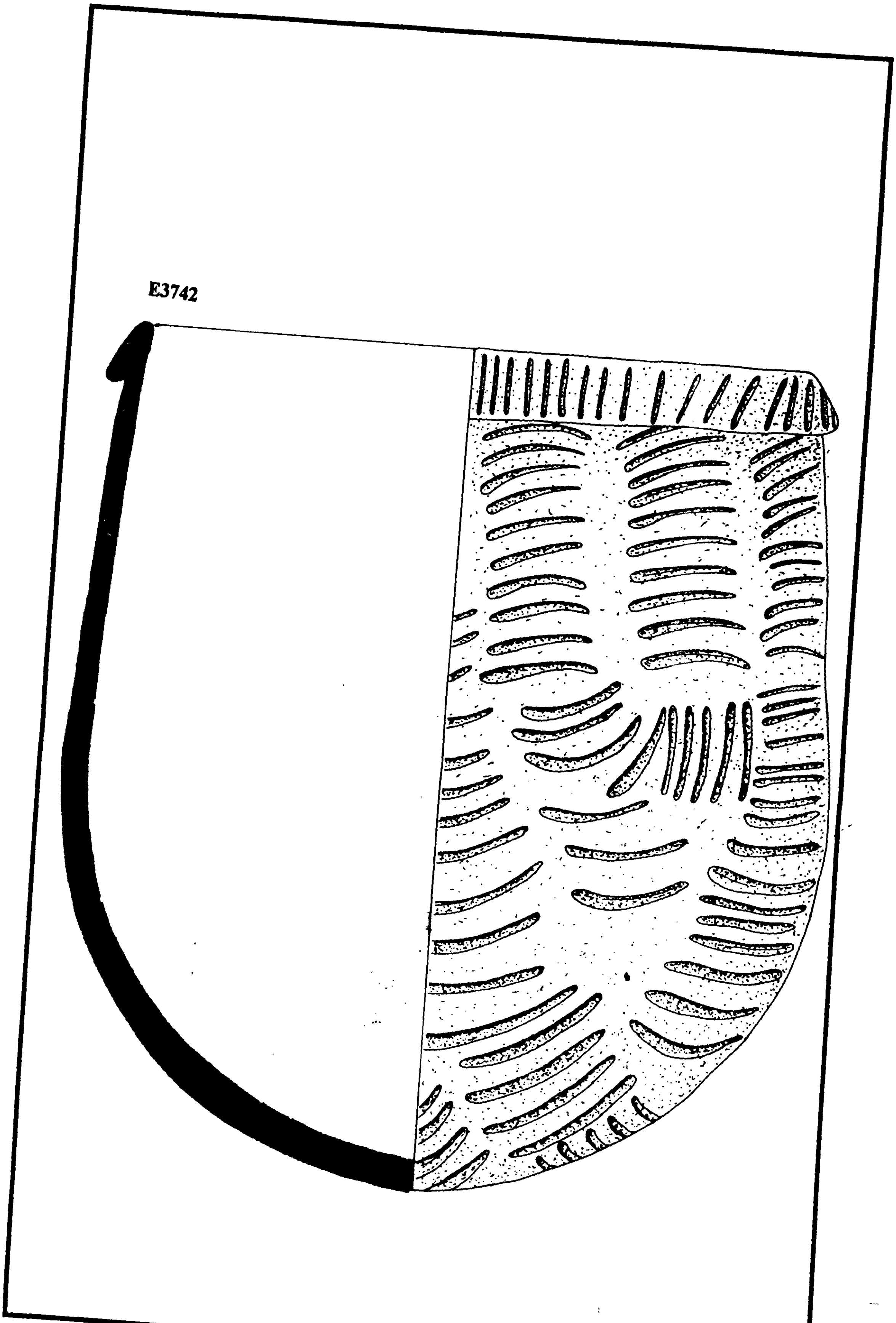


Figure 2.31.: bag-shaped jar from Eilean an Tighe, North Uist

E3741

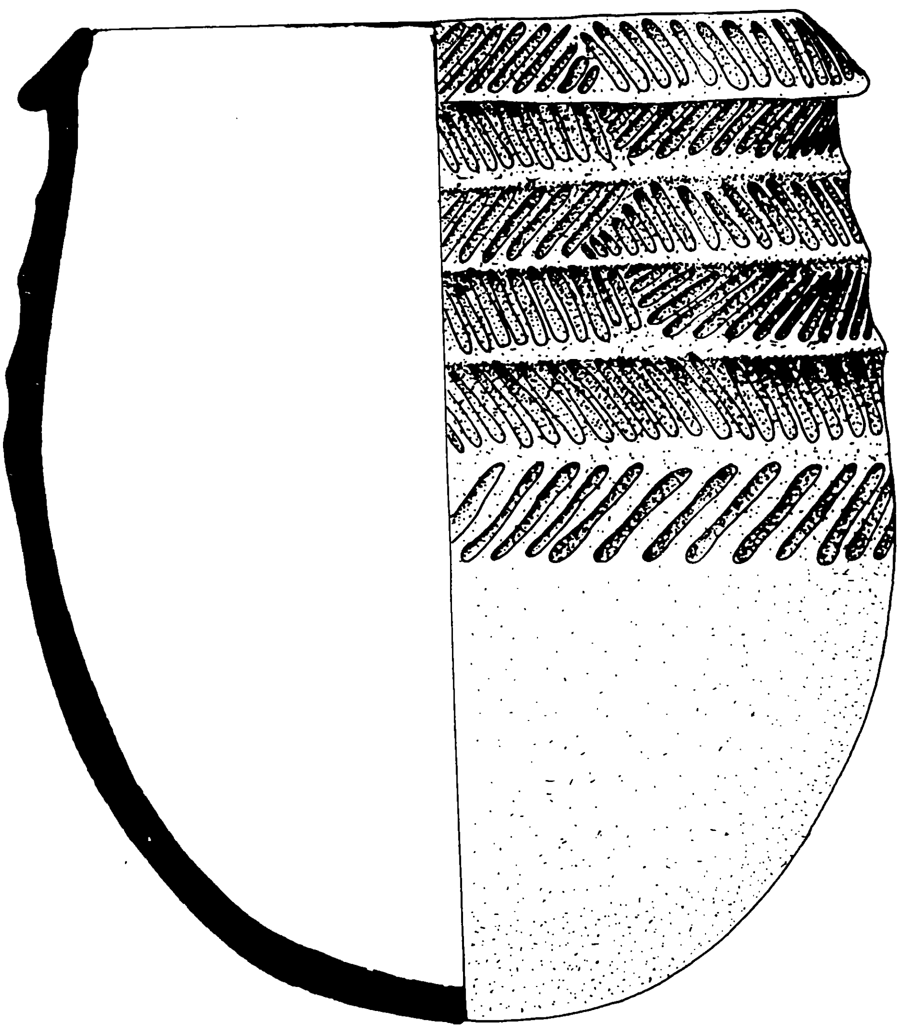


Figure 2.32.: ridged jar from Eilean an Tighe, North Uist

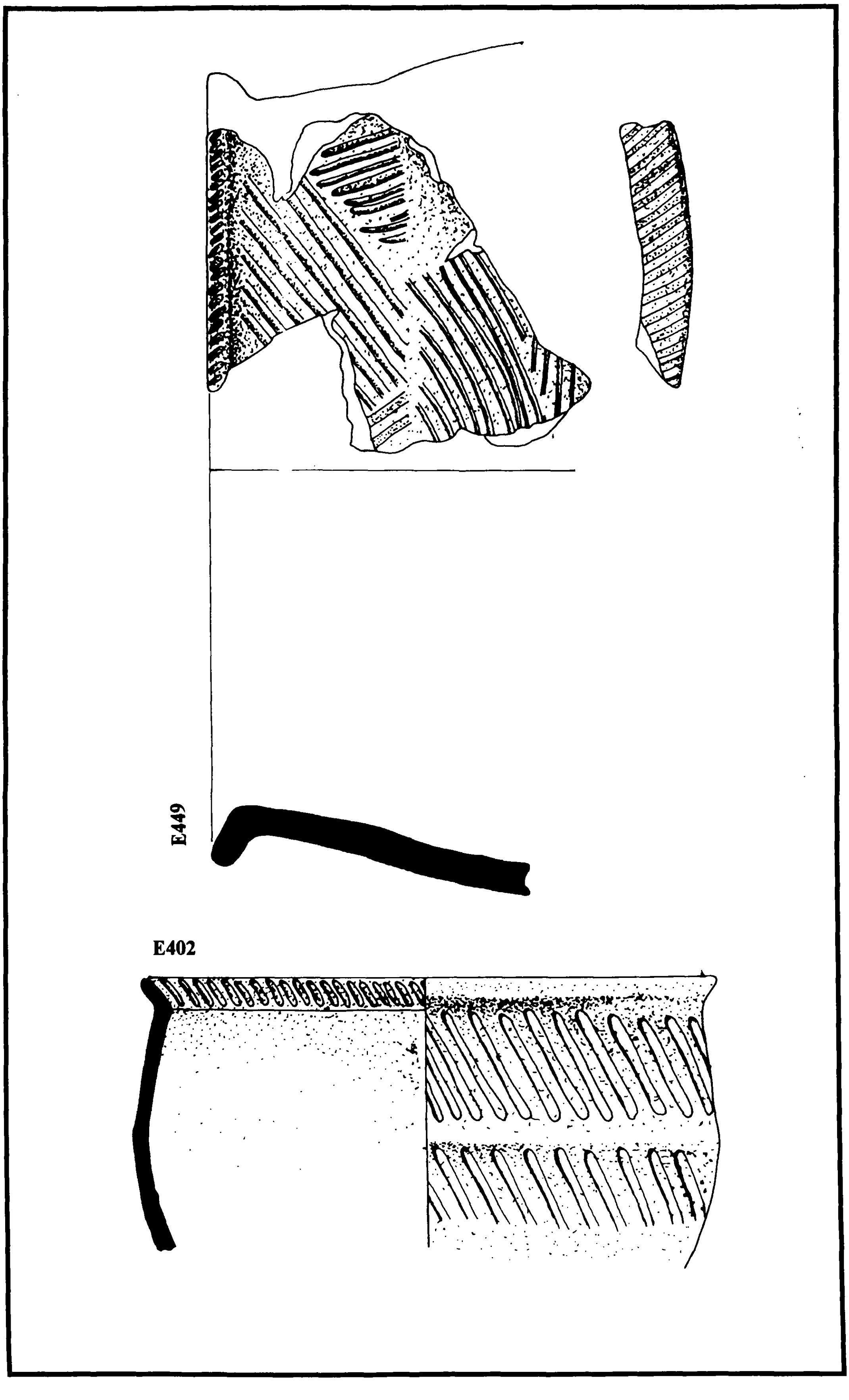


Figure 2.33.: hebridean bowls from Eilean an Tighe, North Uist

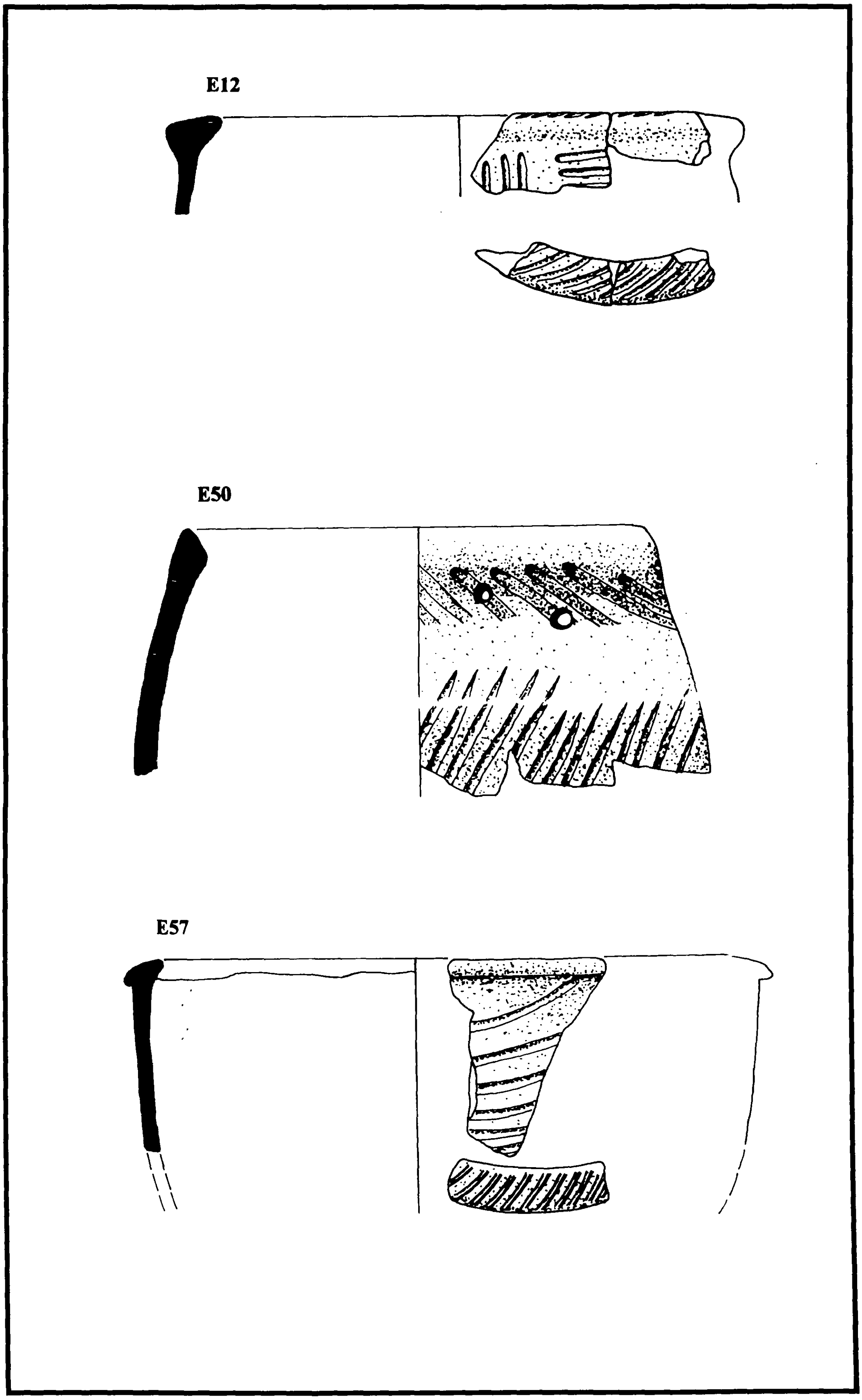


Figure 2.34.: hebridean bowls from Eilean an Tighe, North Uist

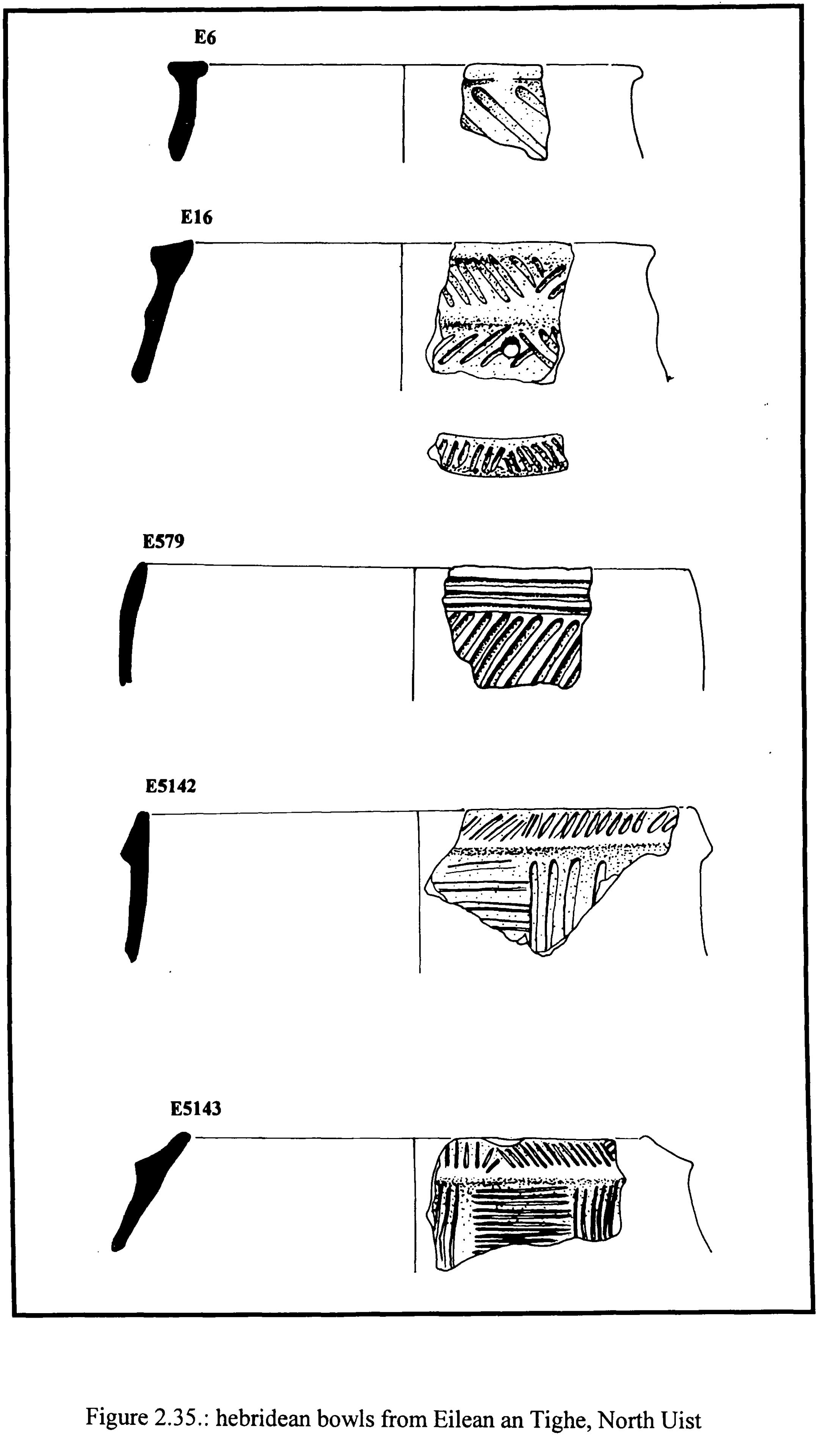


Figure 2.35.: hebridean bowls from Eilean an Tighe, North Uist

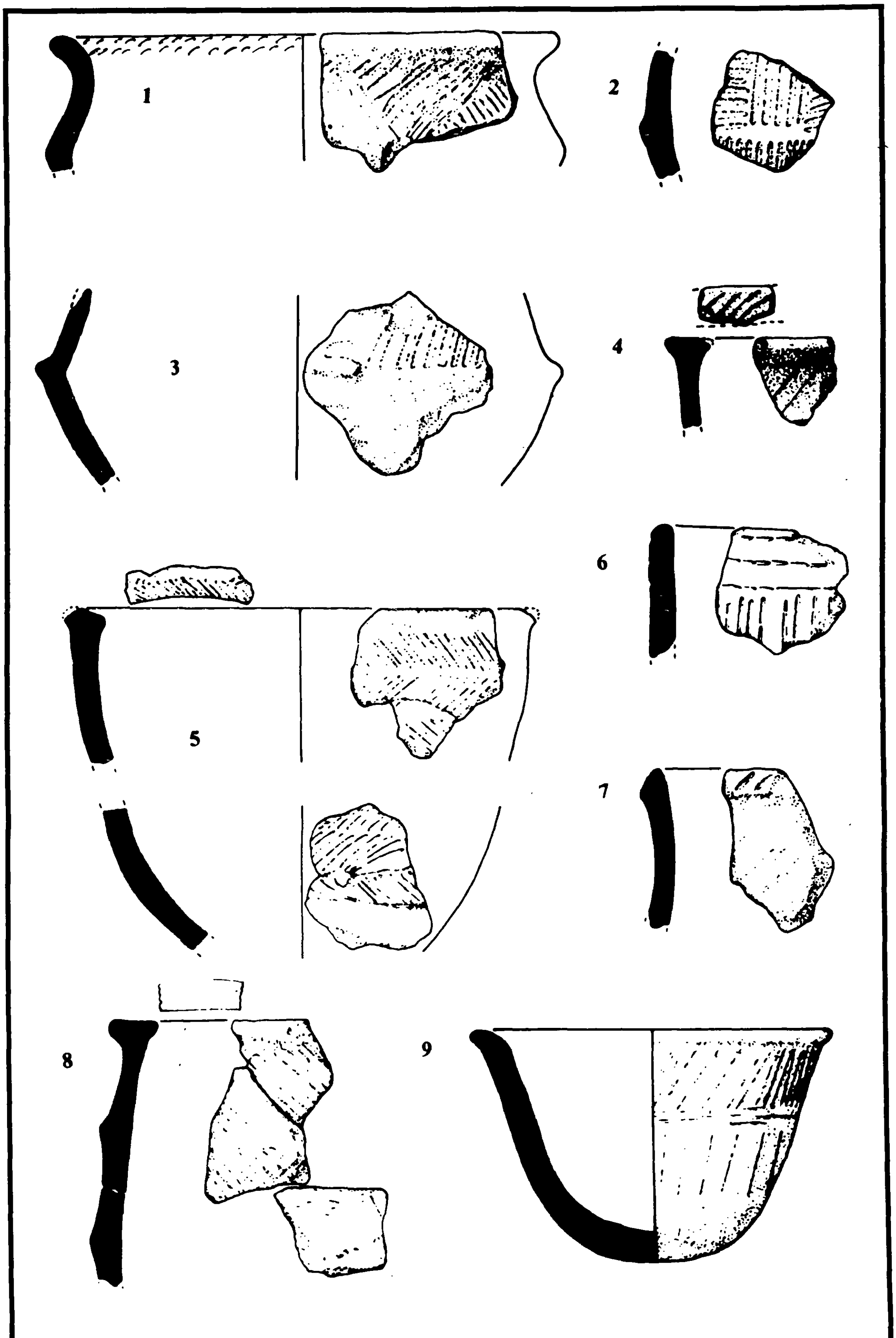


Figure 2.36.: hebridean jars and bowls from Allt Chrisal, Barra

(after Gibson 1995a, Figure 4.32:105; no. 1 is vessel 70; no. 2 is vessel 78; no. 3 is vessel 77; no. 4 is vessel 82; no. 5 is vessel 72; no. 6 is vessel 86; no. 7 is vessel 65; no. 8 is vessel 64; no. 9 is vessel 68)

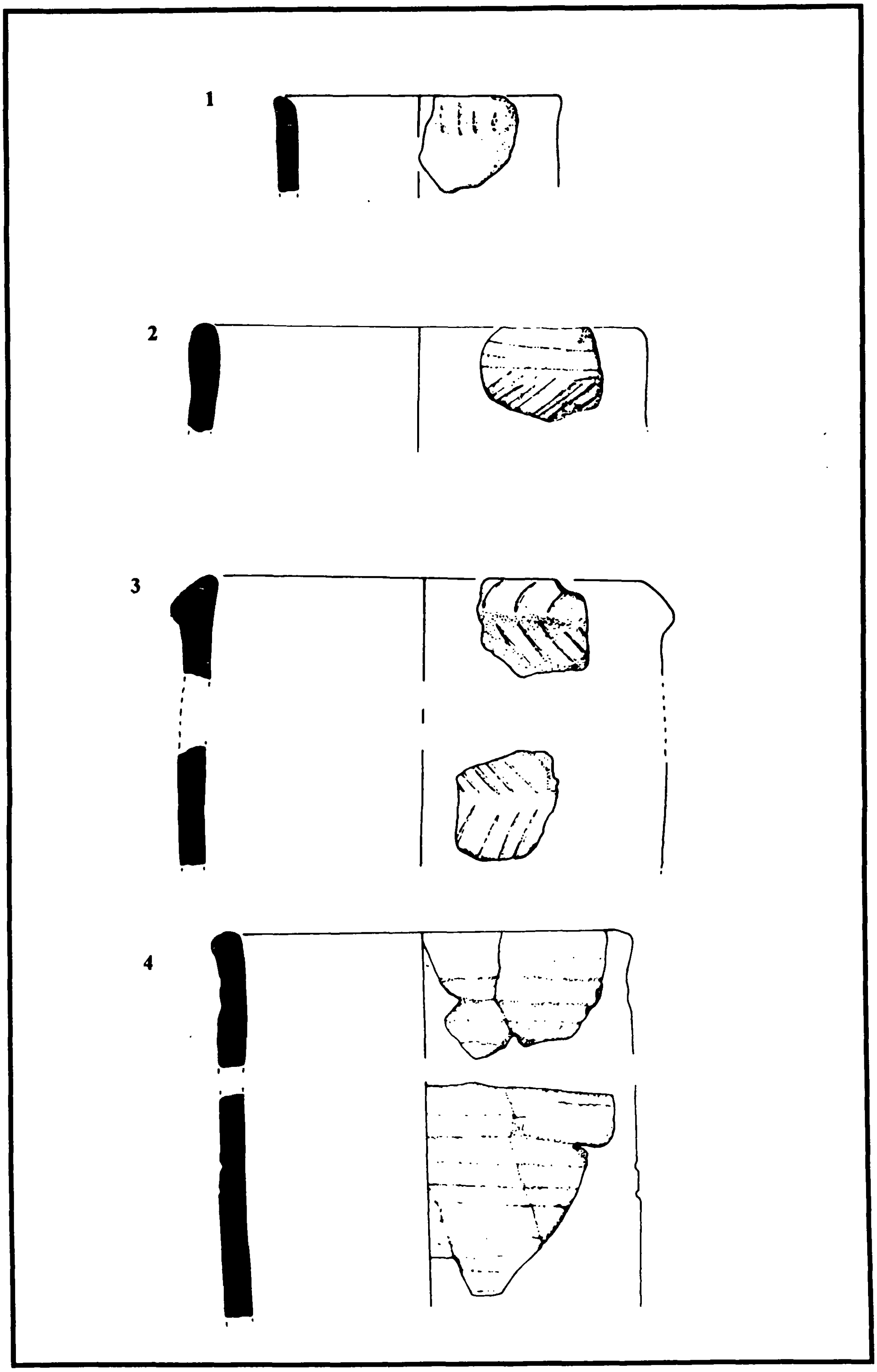


Figure 2.37.: neutral-shaped vessels from Allt Chrisal, Barra

(after Gibson 1995a, Figure 4.32:105; no. 1 is vessel 69; no. 2 is vessel 84; no. 3 is vessel 80; no. 4 is vessel 79)

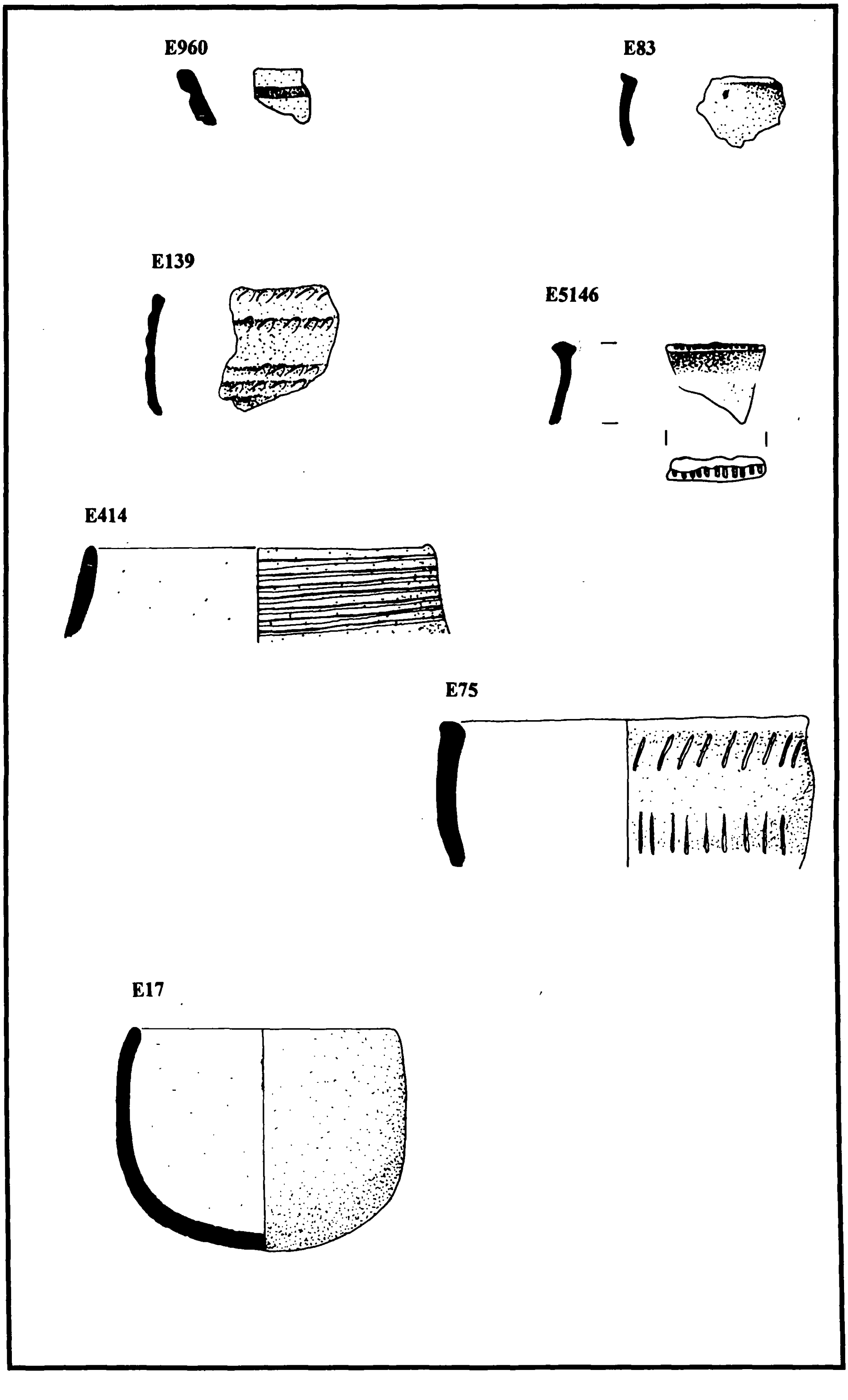


Figure 2.38.: cups and fine bowls from Eilean an Tighe, North Uist

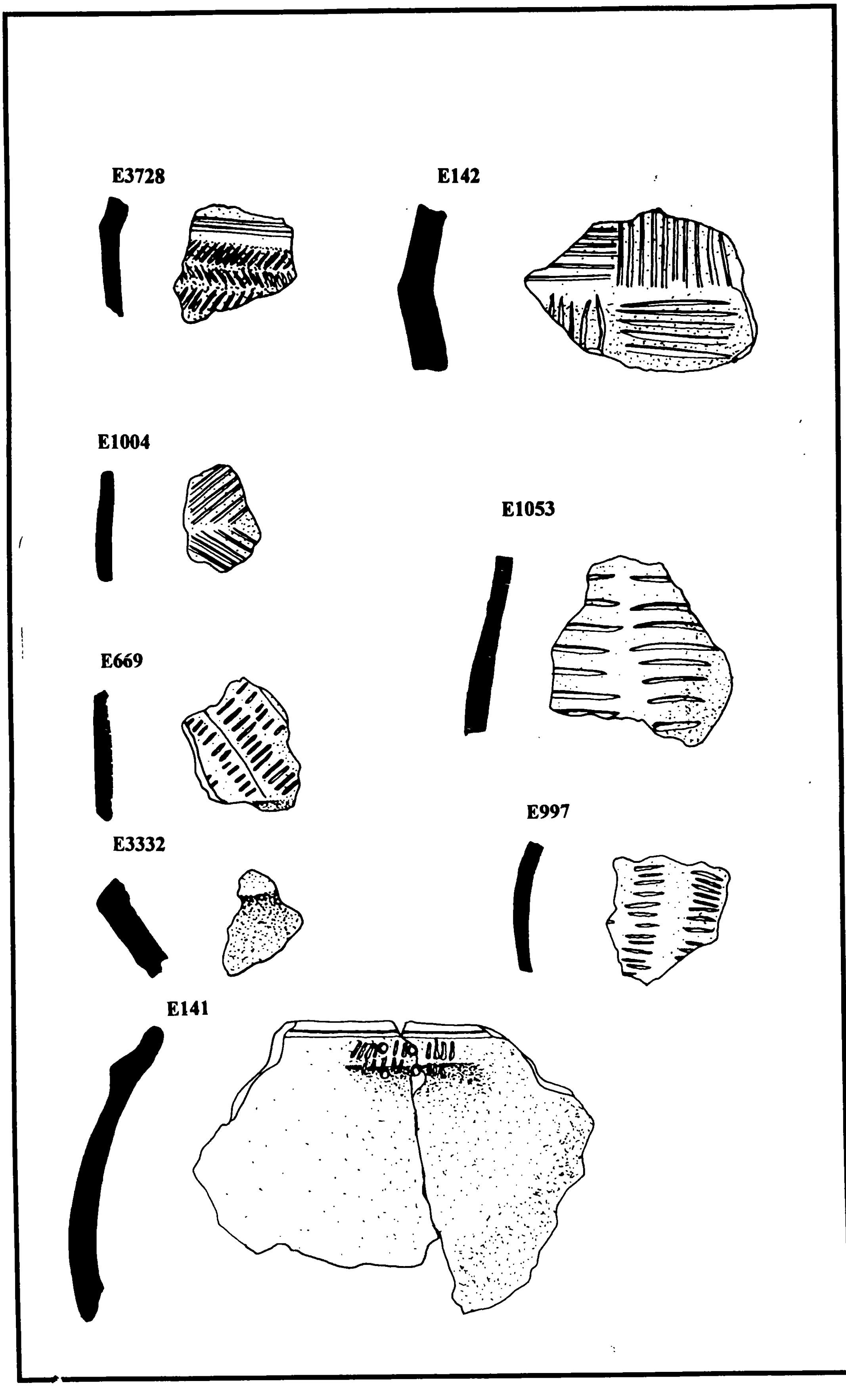
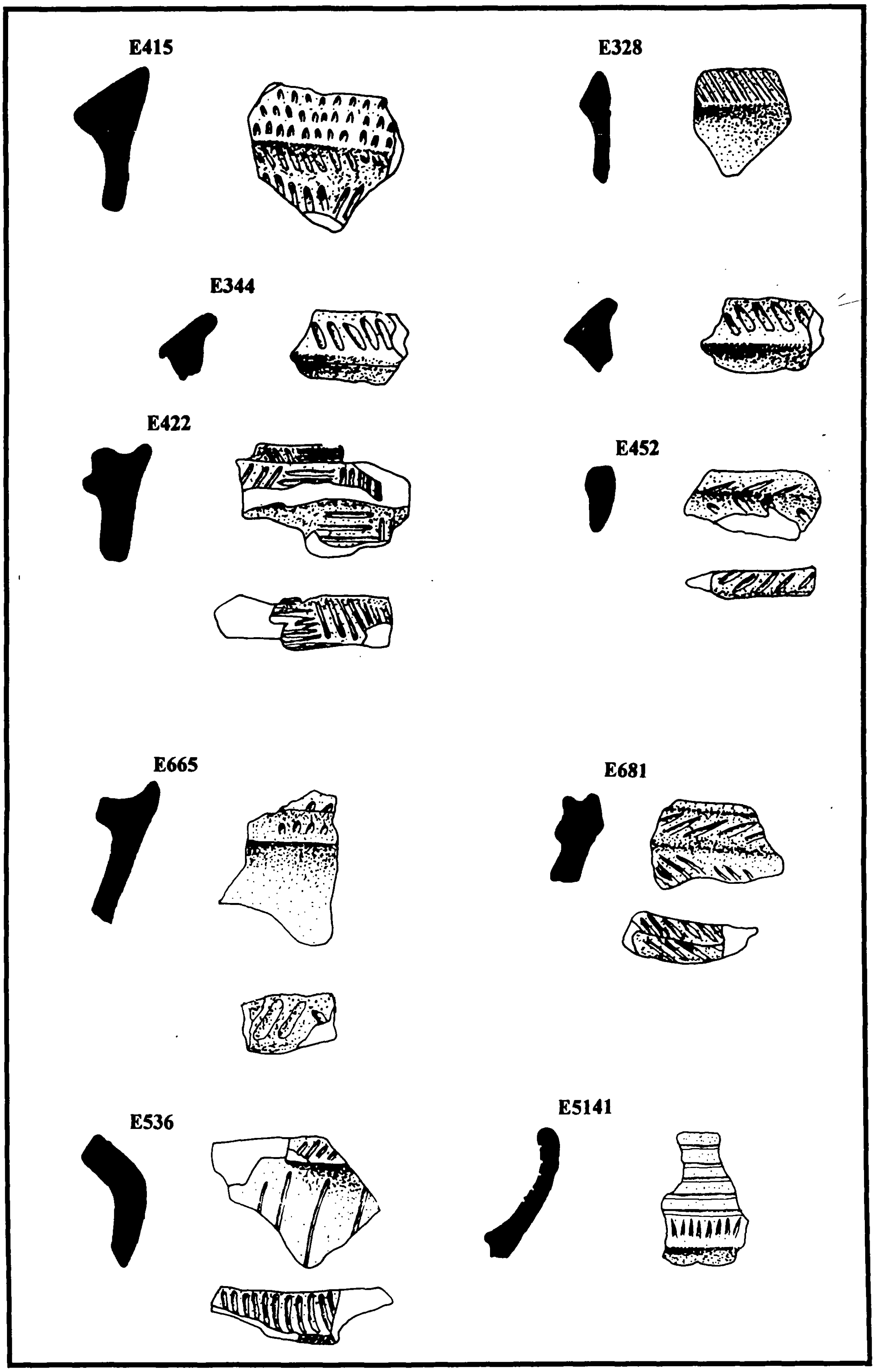


Figure 2.39.: hebridean ware from Eilean an Tighe, North Uist



no number

Figure 2.40.: hebridean bowls with elaborate rims
from Eilean an Tighe, North Uist

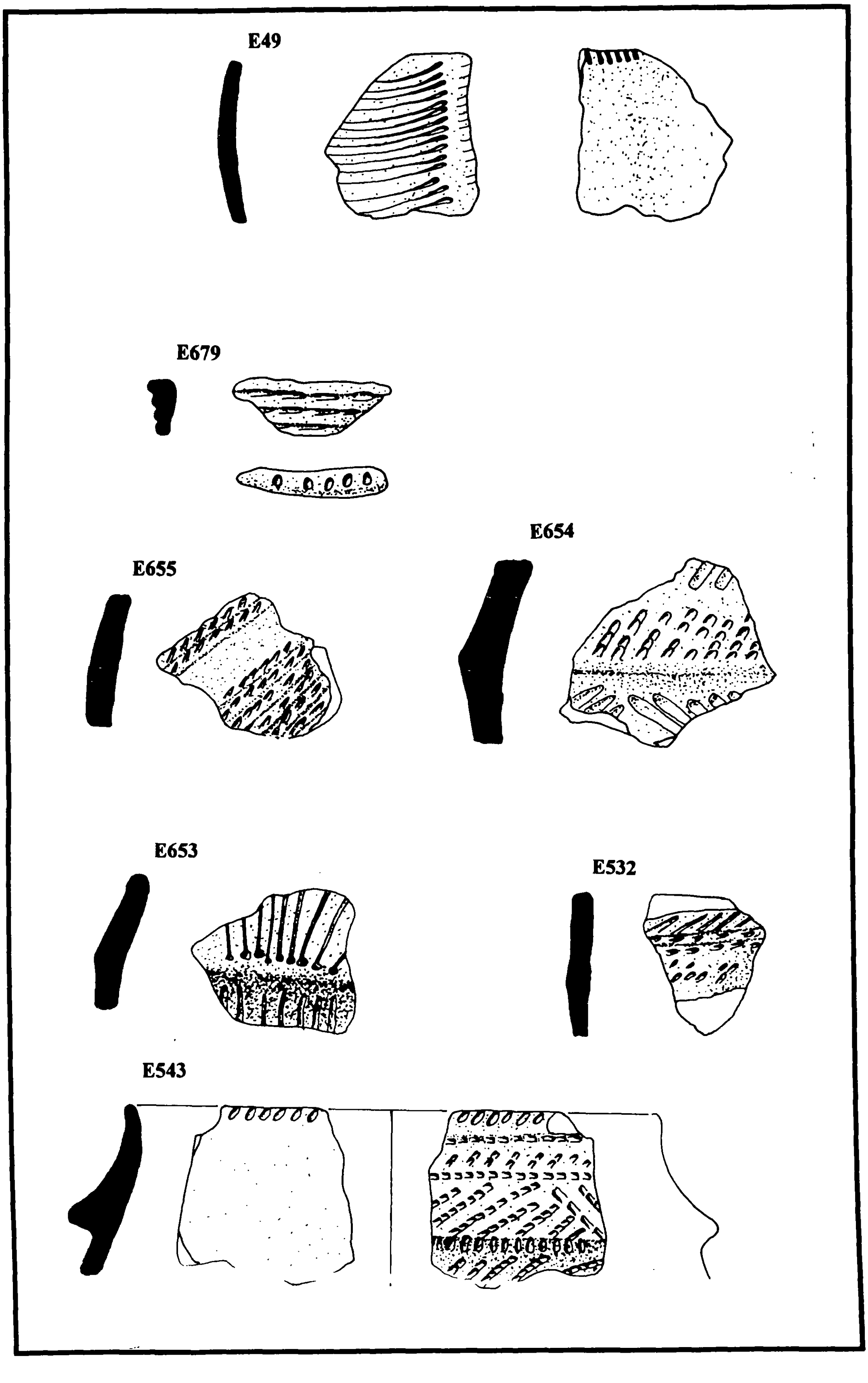


Figure 2.41.: hebridean ware with stab'n'drag decoration
from Eilean an Tighe, North Uist

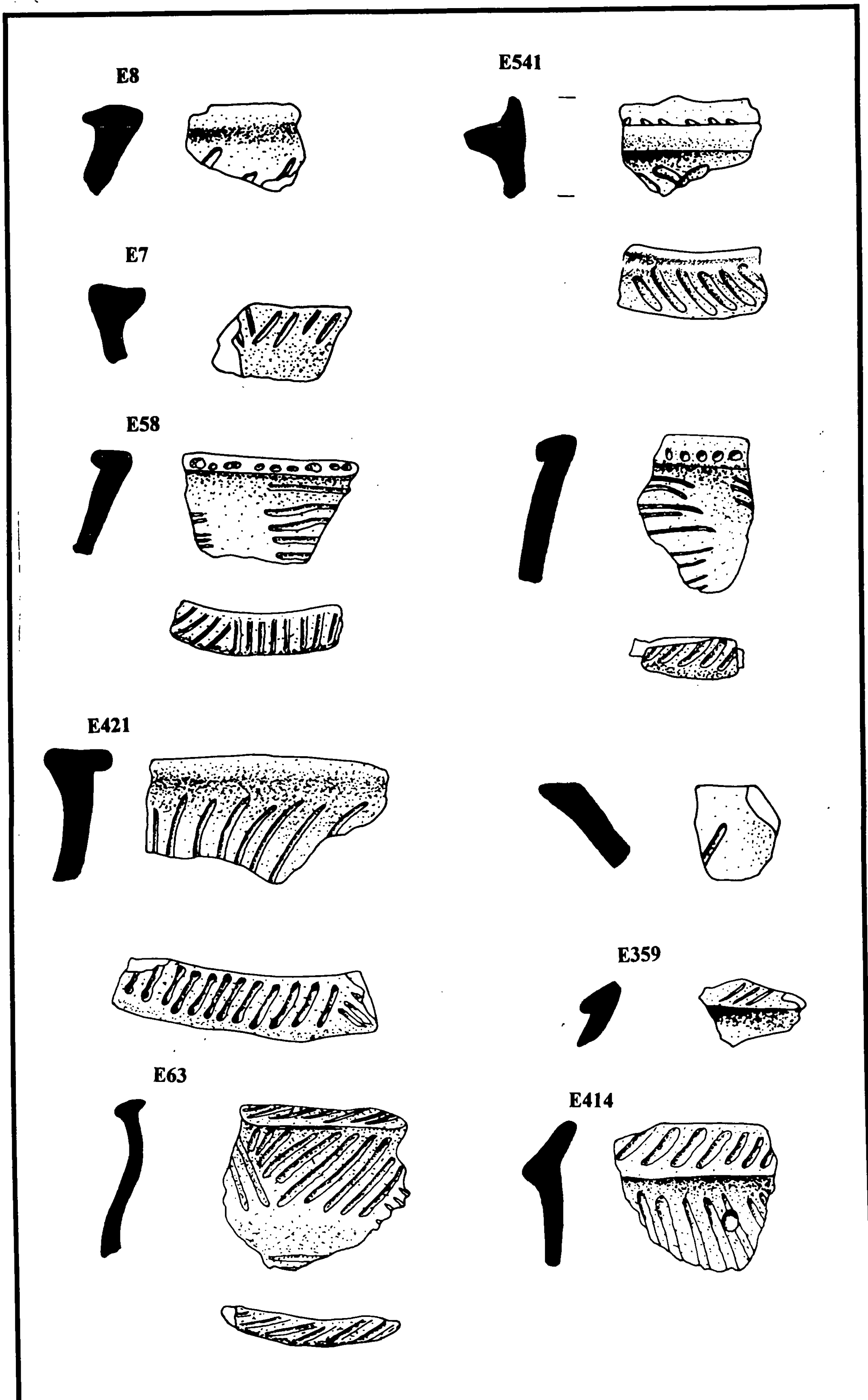


Figure 2.42.: hebridean ware from Eilean an Tighe, North Uist

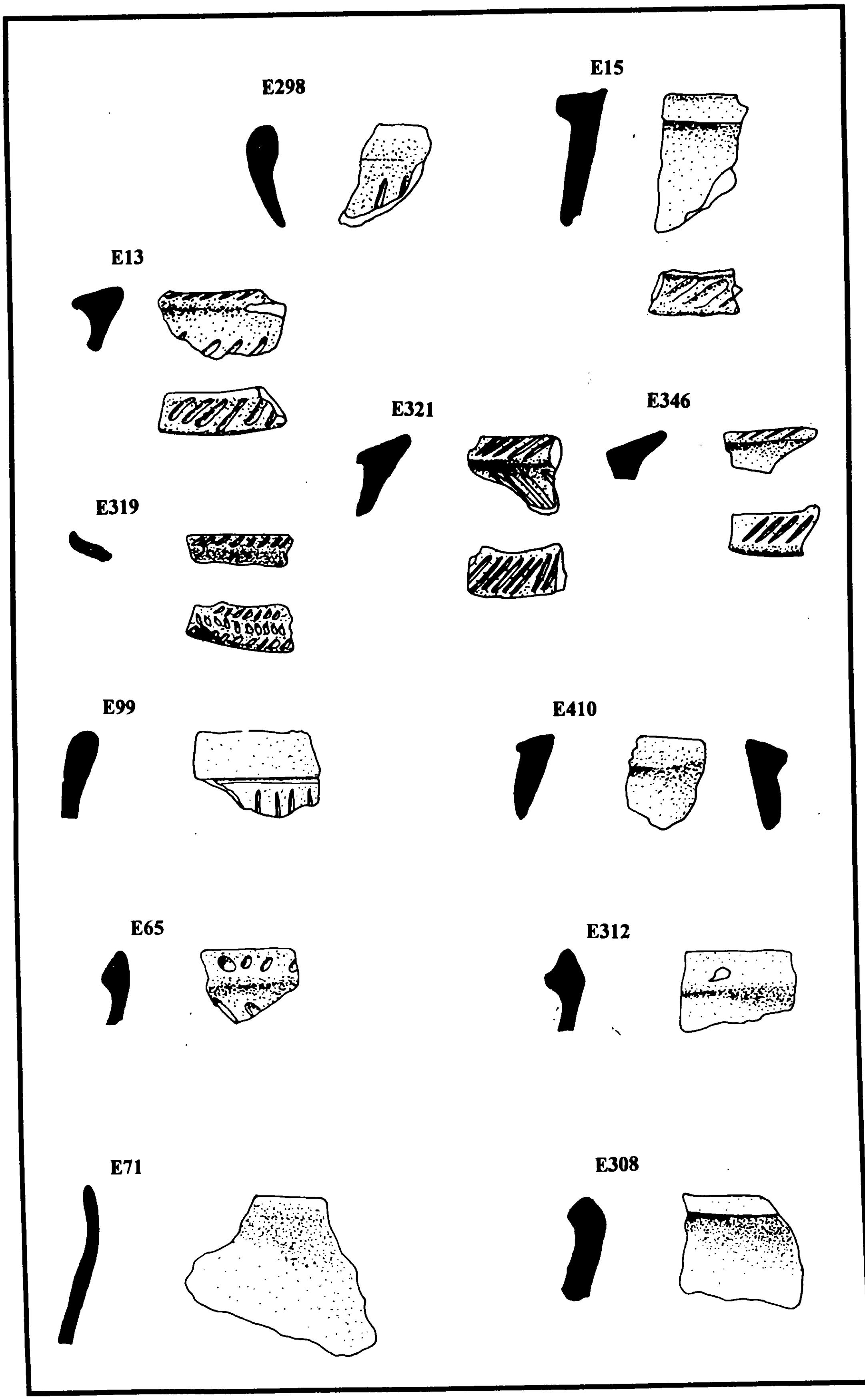


Figure 2.43.: hebridean ware from Eilean an Tighe, North Uist

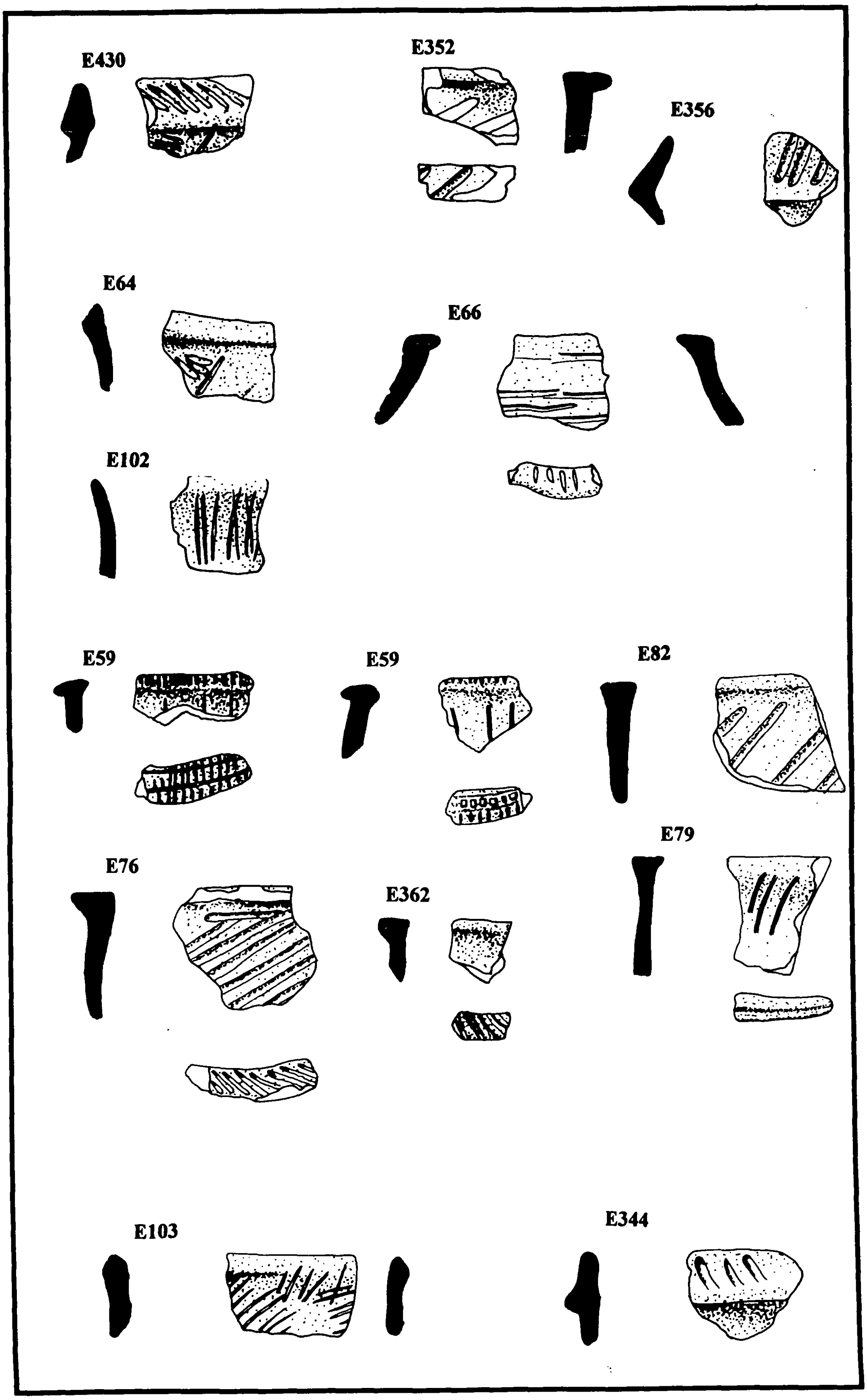


Figure 2.44.: hebridean ware from Eilean an Tighe, North Uist

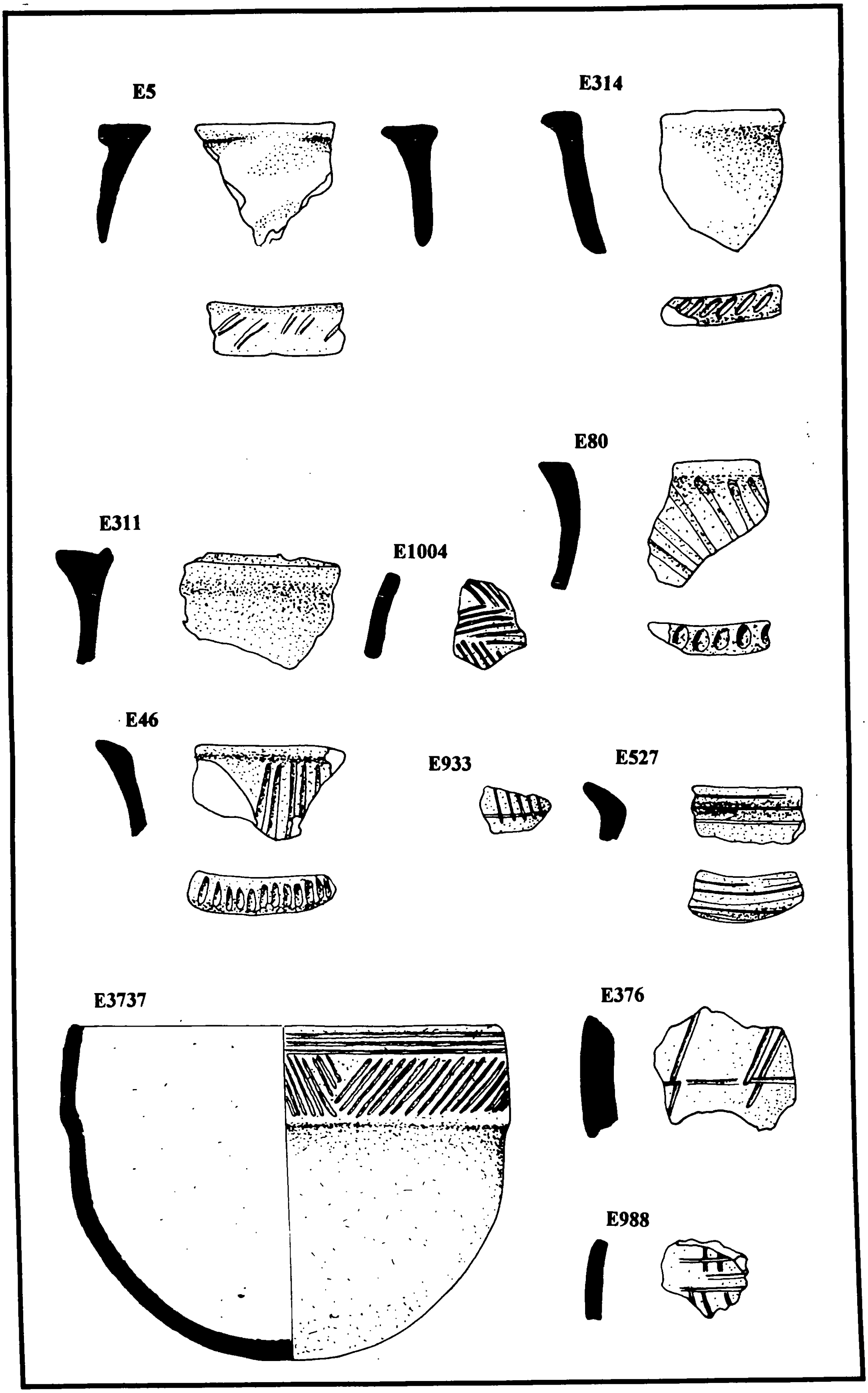


Figure 2.45.: hebridean ware from Eilean an Tighe, North Uist

decoration conform with a general style of hebridean ware (see Armit 1993:372; Crone 1993:378).

2.5.1.5. Unstan ware in the Western Isles

Unstan bowls, the more recognisable unstan ware style, occurs across much of northern Scotland, particularly in the Orkney Isles and the Western Isles (Henshall 1985:110 ; Smith 1974:116). Unstan bowls, illustrated in Figures 2.46 and 2.47, occur at Allt Chrisal on Barra (Gibson 1995a:110, nos. 136, 146, Figure 4.35:109), at Northton on Harris, and at Eilean an Tighe, Eilean Domhnuill a Spionnaidh and Bharpa Carinish on North Uist (Brown nd.; Crone 1993:378; Henshall 1972:177; Scott 1951a:14, 29-30). The same decoration is sometimes found on unstan bowls, hebridean bowls and hebridean jars (Brown nd.; Henshall 1972:179). Interestingly, in addition to these familiar decorative schemes, a considerable variety of other, often unique, decorative techniques and motifs were employed to embellish unstan bowls. Cord, fingernail and indeterminate oval impressions, stab'n'drag, and simple stabbing are known variously on unstan bowls from Eilean Domhnuill a Spionnaidh and Allt Chrisal (see Brown nd.; Gibson 1995a:110). Generally, the decoration on unstan bowls is more simple in the Western Isles than in Orkney (Brown nd.).

2.5.2. Late neolithic ceramic styles in the Western Isles

The late neolithic styles represented in the Western Isles, namely grooved ware, impressed ware, and fine and coarse beaker ware, occur in assemblages very different in character from those containing early neolithic styles. It is, for the reasons given in Section 2.5.2.1. below, impossible to sketch the characteristic of grooved ware assemblages in the Western Isles. Both impressed wares and beaker wares invariably occur in varying quantities in sites, frequently middens, eroding from the machair. Instances of late neolithic styles in the Western Isles

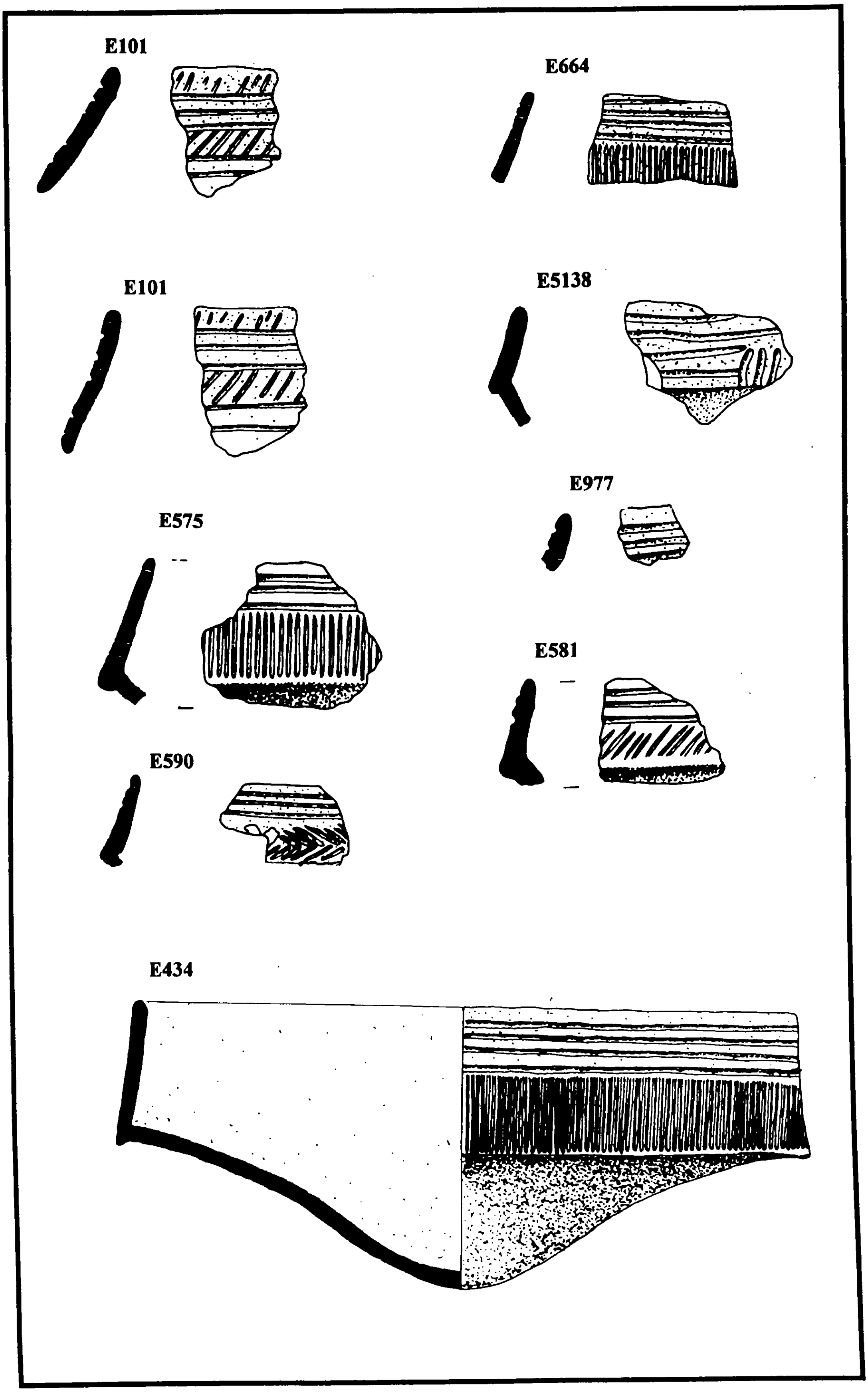


Figure 2.46.: unstan bowls from Eilean an Tighe, North Uist

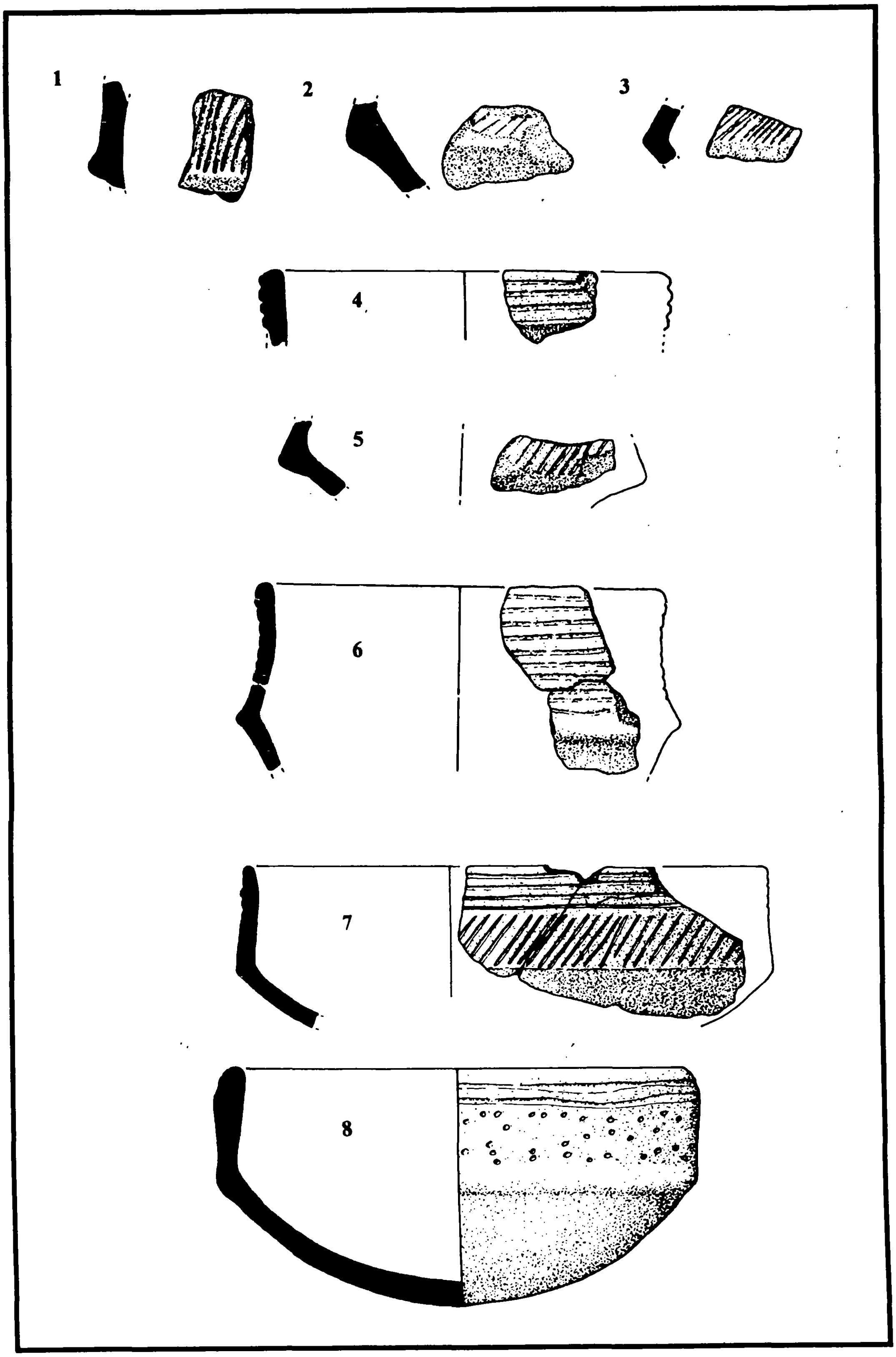


Figure 2.47.: unstan bowls from Allt Chrisal, Barra

(after Gibson 1995a, Figure 4.35:109; no. 1 is vessel 137; no. 2 is vessel 140; no. 3 is vessel 141; no. 4 is vessel 142; no. 5 is vessel 139; no. 6 is vessel 138; no. 7 is vessel 136; no. 8 is vessel 146) incite less speculation, and incur fewer interpretive repercussions, than early neolithic styles, because they are not generally considered as regional styles.

2.5.2.1. Grooved ware in the Western Isles

A meagre collection of grooved ware is known from the Western Isles (Armit 1996:75, 83). A minimum of nine vessels are represented in the assemblage from Callanais in Lewis (see Henshall nd.). A solitary grooved ware vessel, illustrated in Figure 2.48, was recovered from Unival in North Uist (see Henshall 1972:155, 181-82; Scott 1938:336-37, Plate LIX: following page 337; 1948:26-7, Plate VII, following page 24; 1951b:62-3). This meagre inventory completes the corpus of grooved ware from the Western Isles. The paucity of grooved ware in the Western Isles is probably more consequence of depositional practices, or even an original absence, rather than due to a functional equivalence with hebridean ware (*pace* Brown nd.).

Beyond the confines of Orkney, where applied decoration occurs frequently, grooved ware in Scotland is decorated primarily by incised or grooved linear lines, organised into horizontal or diagonal alignments, with motifs emphasised by employing multiple lines to repeat, and therefore enhance, the pattern (Henshall and Mercer 1981:129). The prevalence of incision on the grooved ware known from the Western Isles is unsurprising, given the ubiquity and frequency of incision on other preceding and contemporary ceramic styles in the region. The complexity of grooved ware decoration at Callanais (Barrowman 1994:151) accords with an existing tradition of profusely decorated pottery during the neolithic in the Western Isles.

The grooved ware from Callanais is associated with an insubstantial, and apparently indeterminate, structure, phased between the erection of the stone circle and the construction of the chambered cairn (Ashmore pers. comm.; Barrowman 1994:130). Some vessels in the Callanais assemblage, expressed in a

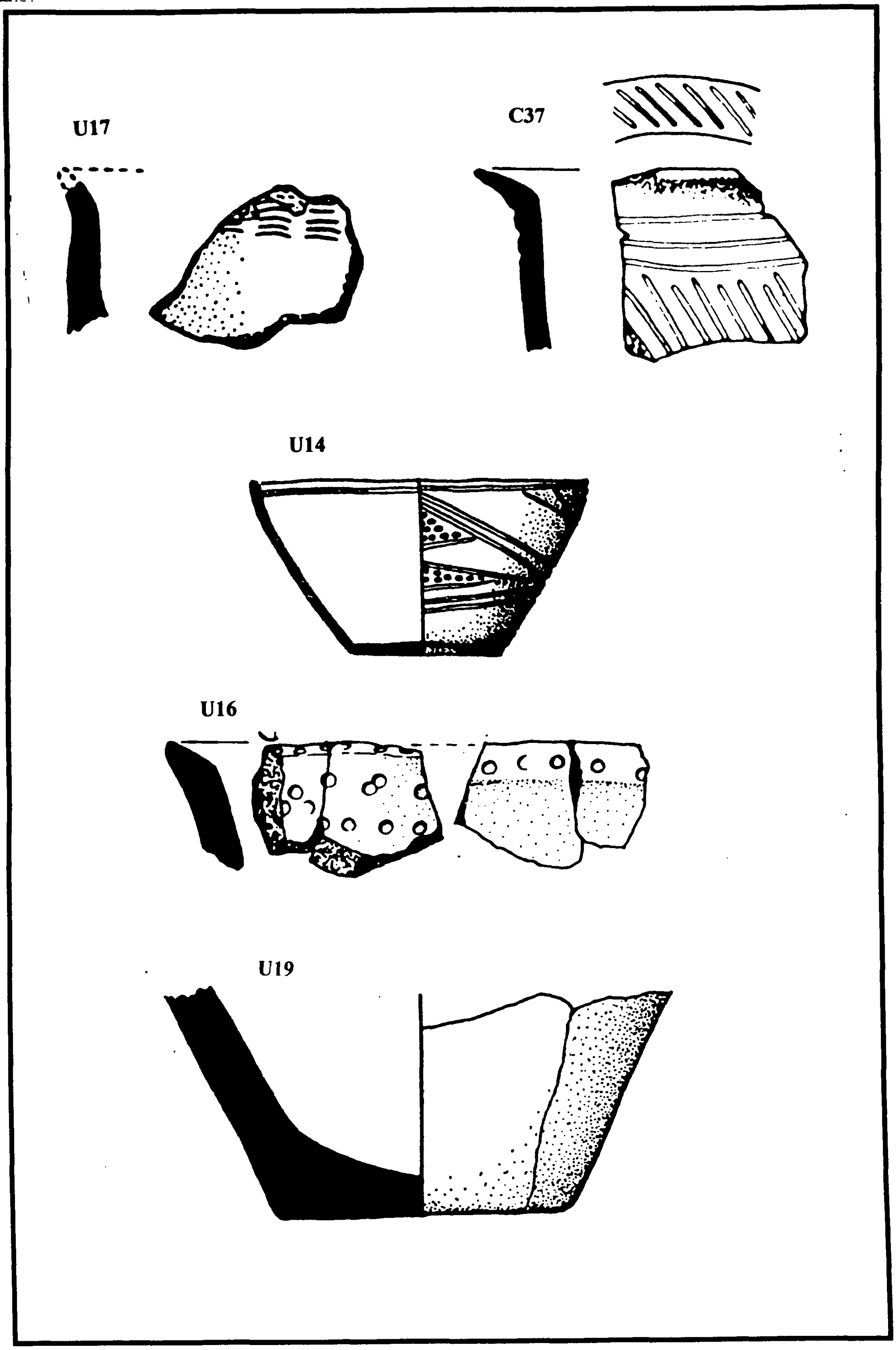


Figure 2.48.: miscellaneous vessels from Clettraval and Unival, North Uist

(after Henshall 1972:309; U17, U14, U16 and U19 are vessels 17, 14, 16 and 22, respectively, from Unival; C37 is vessel 12 from Clettraval).

conventional typological vocabulary, are in the Woodlands sub-style (Henshall 1993:106). However, it is possible to offer specific stylistic comparisons for only two vessels. Vessel 61, a small bowl in a fine fabric, is comparable with the Unival vessel discussed more fully below (Henshall nd.). Interestingly, the wavy lines that decorate the vessel exterior, almost certainly an attempt to simulate an applied cordon, are entirely the product of incised and impressed decorative techniques (see Henshall nd.). The tenacity of existing decorative techniques, namely incision and impression, to emulate new designs, readily achievable by applied decoration, is amply demonstrated on this particular vessel. Indeed, the absence of applied decoration in the assemblage is notable (Barrowman 1994:145). Vessel 63, decorated with incised double linear lines, infilled with impressed dots, and arranged in a diagonal alignment, is paralleled on grooved ware from Tormore on Arran, and Townhead on Bute (see Henshall nd.). Henshall identifies this vessel as grooved ware rather than as fine beaker ware on the basis of the decoration. That such a motif is known on a beaker from Rubha an Udail Site 6 suggests that the categorical status of vessel 63 remains moot. More interesting is the use of similar, even identical, motifs on completely separate vessel traditions.

The grooved ware from Unival, curious in style and aberrant in context, has been variously identified as skara brae C style (Childe and Grant 1938:25), rinyo I type, presumably by virtue of its fine fabric, incised decoration, and lozenge motifs (see Piggott 1954:328-329), and, similarly, in the clacton sub-style, by virtue of its internal decoration immediately below the rim (Wainwright and Longworth 1971:237, Figure 89:238). This vessel, regularly mentioned in the archaeological literature, is apparently comparable with, for example, the aldbourne cups (Piggott 1954:346), and, say, vessel P1 from Balfarg henge in Fife (Henshall and Mercer 1981:132, Figure 43:130). The interpretive utility of these rote comparisons remains dubious. The general absence of grooved ware from mortuary contexts suggests that the vessel from Unival was not interred in connection with funerary activities (Wainwright and Longworth 1971:249, 254).

However, the scarcity of grooved ware from the Western Isles ensures any attempts to document contextual patterning of assemblages are premature.

2.5.2.2. Impressed ware in the Western Isles

Impressed wares, consistently represented in neolithic assemblages in the Western Isles, remain obscure in the archaeological literature because many of the vessels representing this particular ceramic style are also readily interpreted as coarse beaker pottery. Impressed wares in the Western Isles are decorated by impressed or stabbed motifs effected by fingernail, fingertip, twisted cord, whipped cord, cockle shell, scallop shell, bone, and 'reed' implements (Gibson 1995a:110). The relative sparsity of decoration on impressed wares from the Western Isles contrasts markedly with the density of decoration on peterborough ware and other impressed wares from northern Britain (Gibson 1995a:110). Impressed wares, illustrated in Figures 2.49 to 2.50, are represented at Northton in Harris, and at Unival, Clettraval, Eilean an Tighe, and Eilean Domhnuill a Spionnaidh in North Uist (see Brown nd.; Gibson 1995a:110; Henshall 1972:181; McInnes 1964:53; Scott 1951a:32, Y20, Figure 6:17), at Callanais on Lewis (Henshall nd.), and elsewhere in the Inner Hebrides, at, for example, Rudh' an Dunain Cave on Skye (McInnes 1964:53; Scott 1934b:216, Figure 6.7:214). Some of the pottery reported from Galson, Barvas, in Lewis are probably impressed wares (Topping and Topping 1984:44).

2.5.2.3. Fine and coarse beaker ware in the Western Isles

A considerable amount of beaker pottery, some of which is illustrated in Figures 2.52. to 2.59, is known from the Western Isles. Almost all of this material is derived from middens, often interpreted as probable settlement contexts, and affording a lucrative opportunity to investigate the viability of beaker settlement as a separate phenomenon in the Western Isles. Indeed, the substantial middens in the Western Isles, suggesting prolonged occupation, provide the least

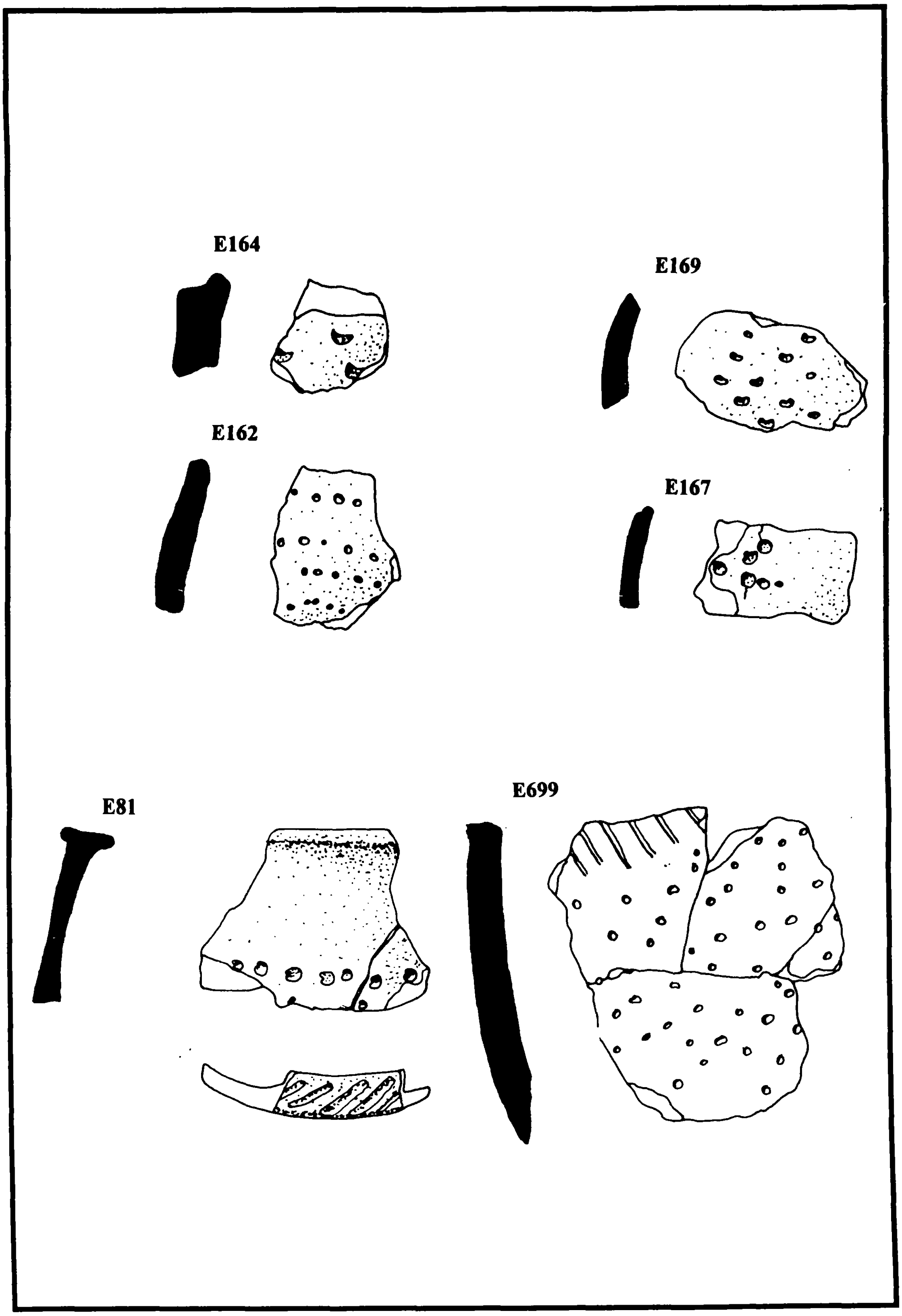


Figure 2.49.: impressed wares from Eilean an Tighe, North Uist

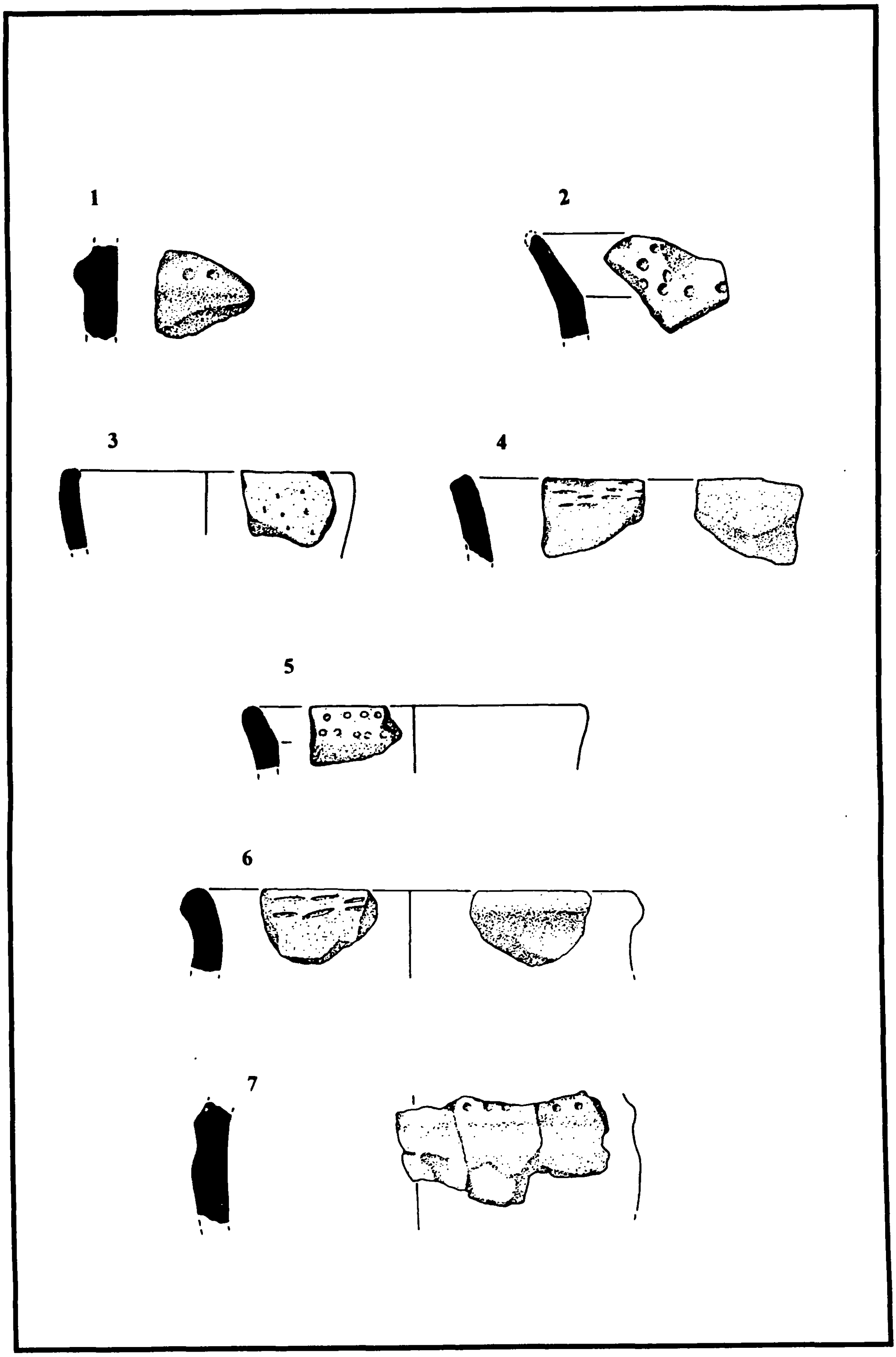


Figure 2.50.: impressed wares from Allt Chrisal, Barra

(after Gibson 1995a, Figure 4.35:109; no. 1 is vessel 155; no. 2 is vessel 154; no. 3 is vessel 156; no. 4 is vessel 150; no. 5 is vessel 152; no. 6 is vessel 151; no. 7 is vessel 153)

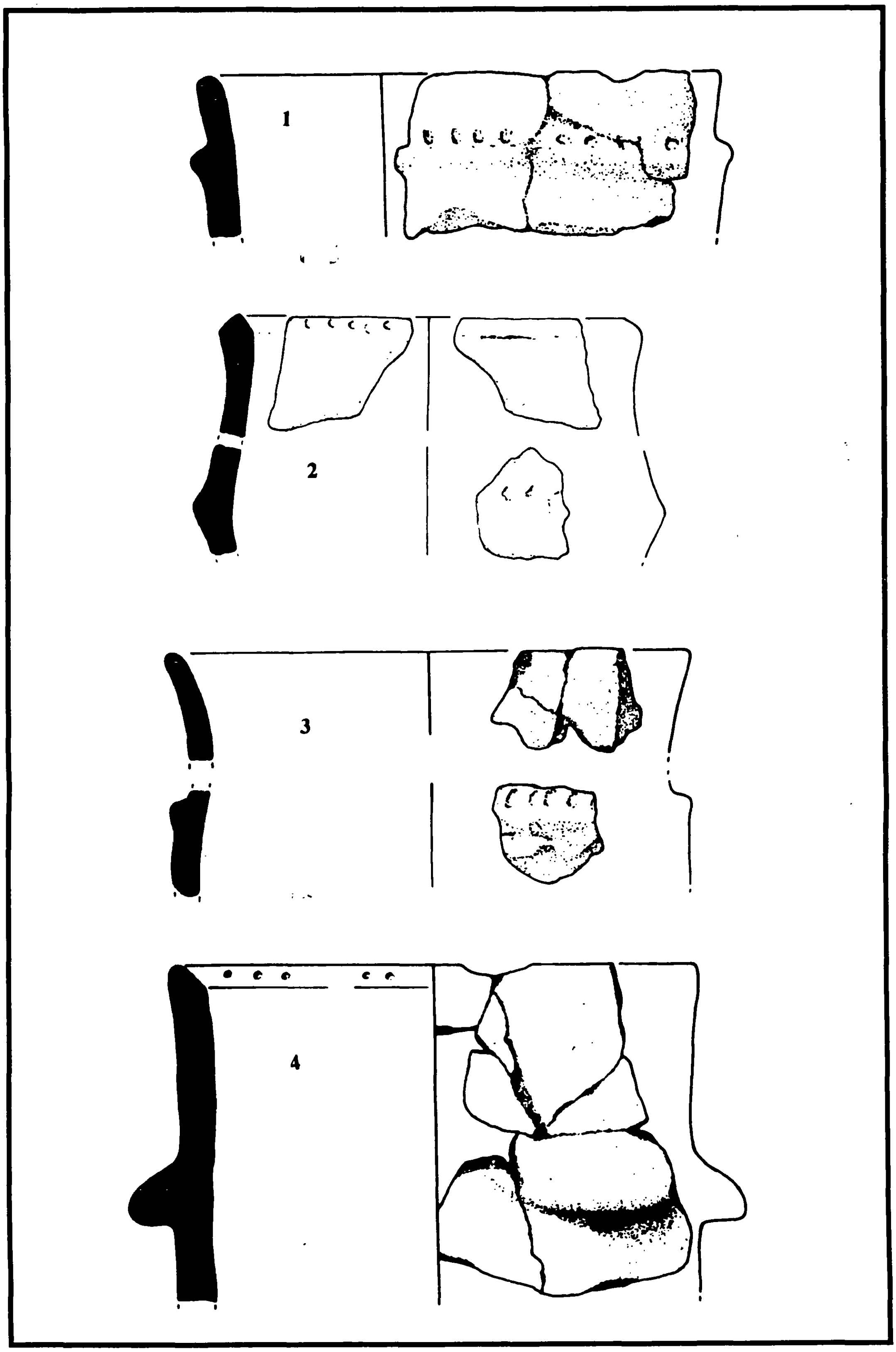


Figure 2.51.: impressed wares from Allt Chrisal, Barra

(after Gibson 1995a, Figure 4.35:109, Figure 4.37:112; no. 1 is vessel 193; no. 2 is vessel 191; no. 3 is vessel 189; no. 4 is vessel 190) ambiguous indications of domestic activities and habitation sites associated with beakers in Britain (Gibson 1982:47; 1984:75; cf. Armit 1996:88). Substantial assemblages containing beakers from midden contexts are in evidence at Rosinish on Benbecula (Shepherd 1975; 1976; Shepherd and Tuckwell 1974; 1976; 1977a; 1977b), Northton on Harris (Simpson 1966; 1976), and Dalmore on Lewis (Ponting and Ponting 1984c). More meagre assemblages from similar contexts are apparent at Gortan (Shepherd, Shepherd and Maclean 1978:35; Shepherd, Ralston and Maclean 1979:47) and South Glendale on South Uist (Barber 1984:45), at Paible on North Uist (Crawford 1978b:35; Maclean and Shepherd 1978:35), at Ensay on Harris (Curtis and Curtis 1989b:72), at Traigh Bosta on Great Bernera (Curtis and Curtis 1993a:110), and at Barvas Sands on Lewis (Cowie *et al.* 1986:52-3; Cowie 1987:62). Solitary sherds are reported from a midden at Scalpaig on North Uist (Crawford 1978c:36) and from a deflated context on the machair at Traigh na Beiridh on Lewis (Close-Brooks 1995:275; Cormack 1973:48). Beakers occur in moderate numbers at Allt Chrisal on Barra (Gibson 1995a:114), at Callanais in Lewis (Henshall nd.:5-7), and infrequently at Rubha an Udail Site 6 on North Uist (Crawford 1980:2, 3). Beaker pottery also occurs in overt mortuary contexts at the chambered cairns of Clettraval (Scott 1935:495*ff.*; Henshall 1972:106), Geirisclett (Henshall 1972:105-06) and Unival on North Uist (Henshall 1972:155). The beaker pottery from Callanais, discovered in contexts post-dating the destruction of the chambered cairn, was probably originally deposited within the cairn (Henshall nd.; cf. Ashmore 1981:49). Interestingly, with the exception of two sherds from a short cist discovered at Lochs on Lewis (Callander 1928:25), none of the ceramics recovered from short cists in the Western Isles are readily identifiable as beaker pottery (see Armit 1996:96; Cowie 1995:284). This departure from contextual normality, as evinced throughout much of mainland Britain, presumably attests to the local adoption, interpretation and manipulation of beaker pottery in the Western Isles.[10]

Many of these assemblages, including Rosinish on Benbecula (Shepherd 1976:21; Shepherd and Tuckwell 1974:39), Northton on Harris (Simpson

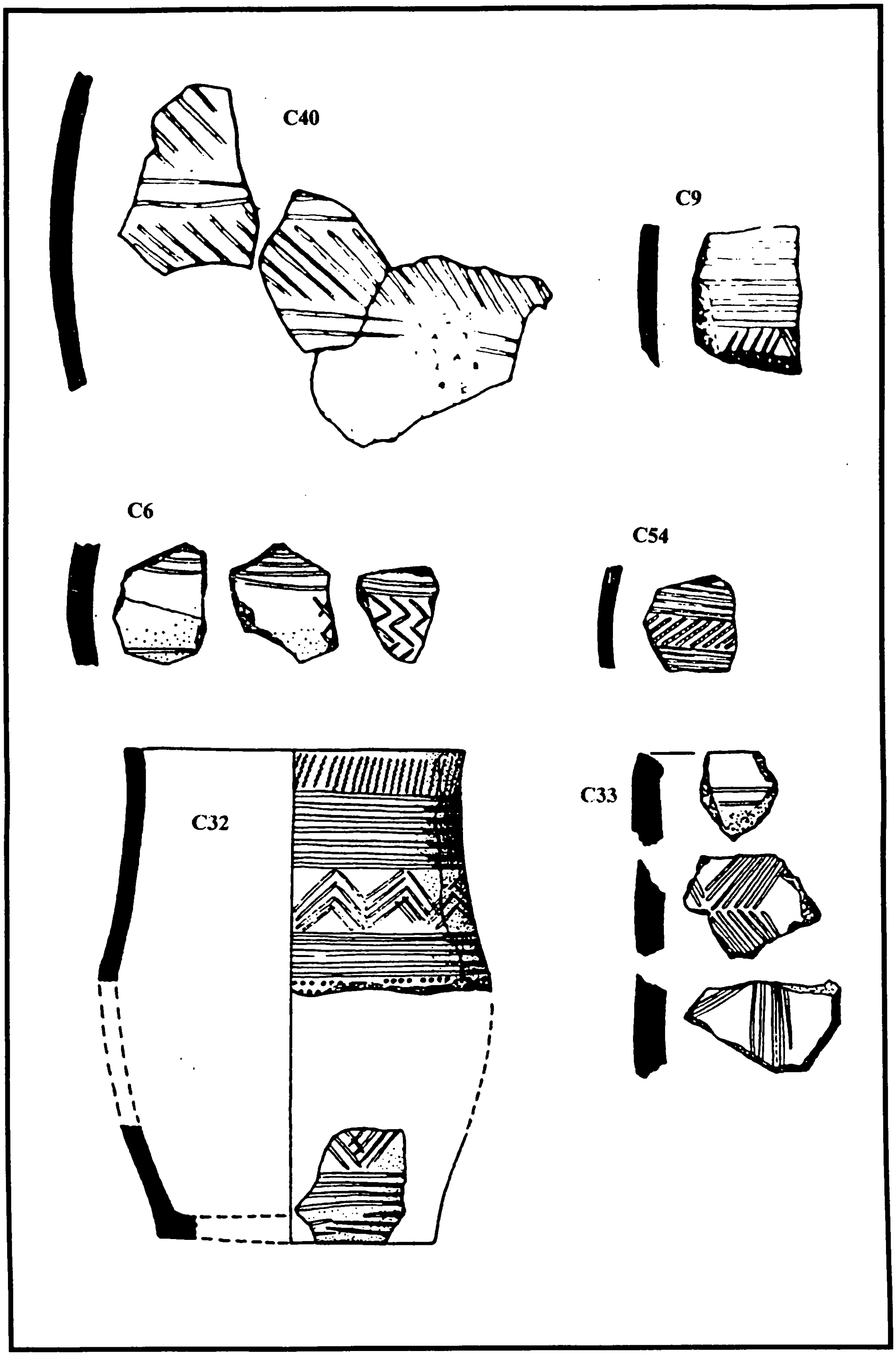


Figure 2.52.: beaker pottery from Clettraval, North Uist

(after Henshall 1972:309; C40 is vessel 13, C9 is vessel 31; C6 is vessel 30; C54 is vessel 27; C32 is vessel 25; C33 is vessel 17).

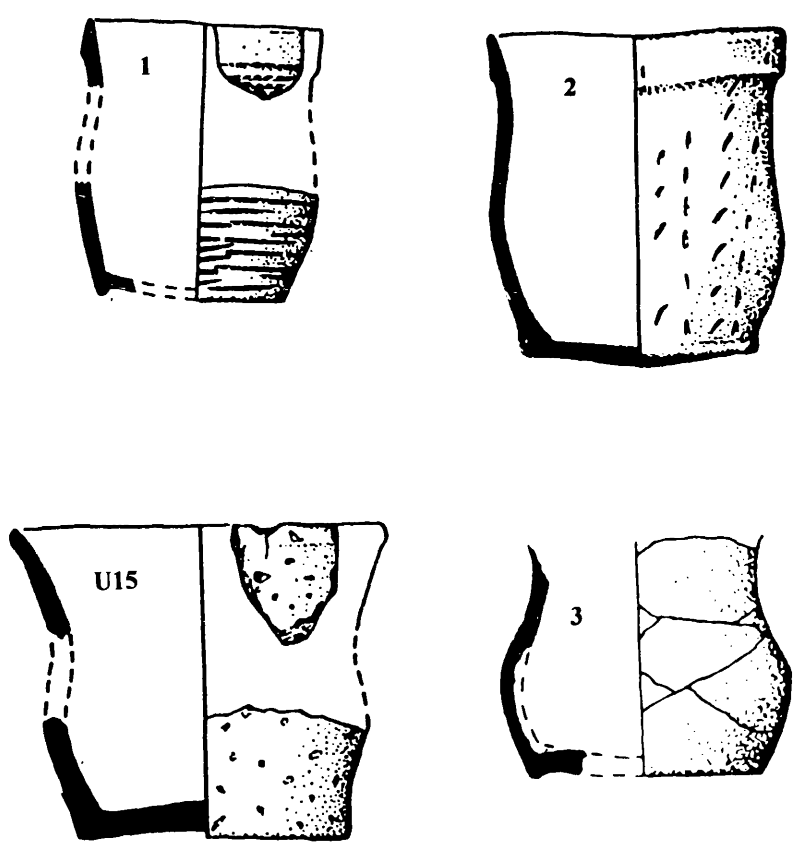


Figure 2.53.: beaker pottery from chambered cairns

Nos. 1, 2 and 3 are vessels 6, 5 and 7, respectively, from Glecknabae, Bute (after Henshall 1972:306; U15 is vessel 15 from Unival (ibid:309).

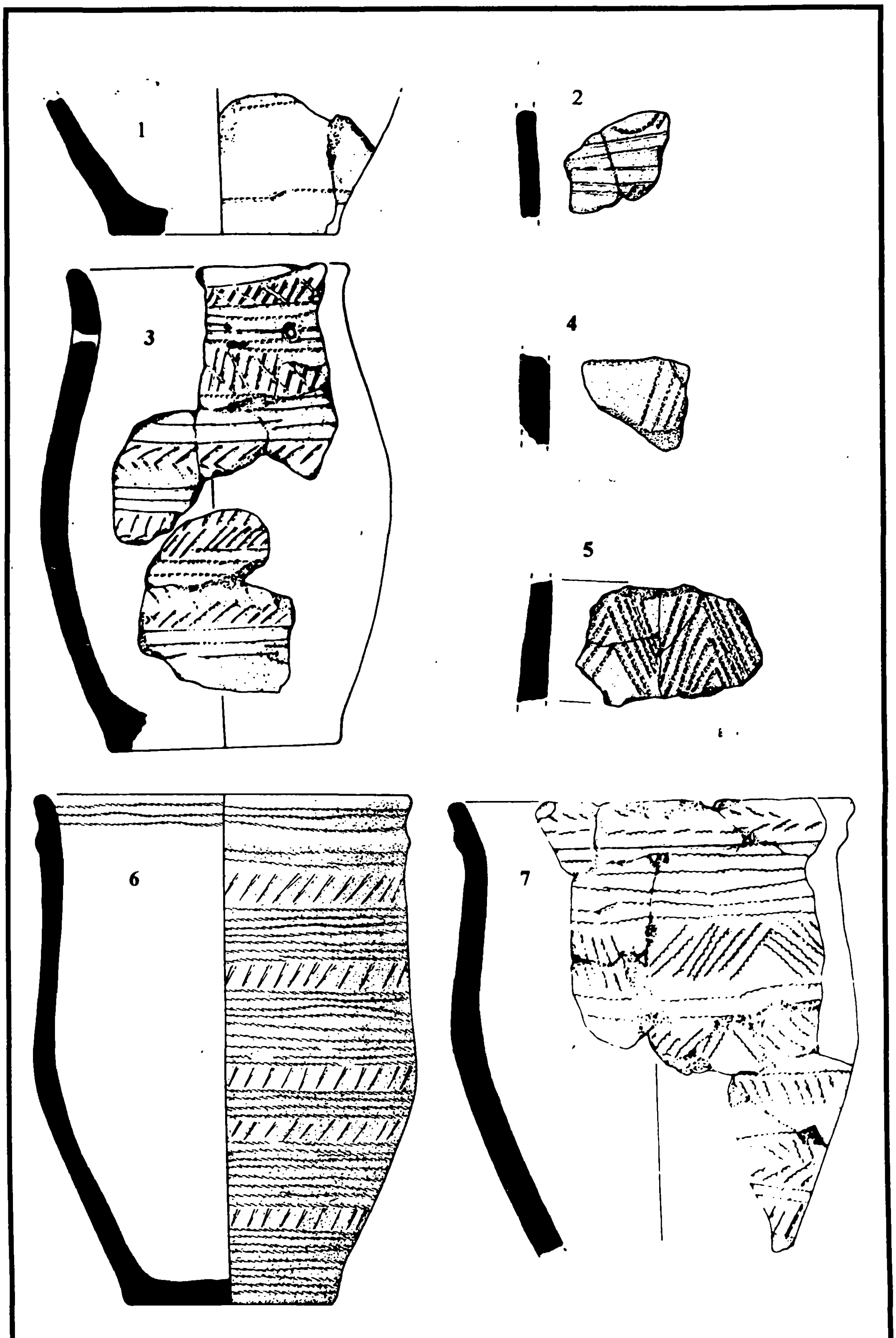


Figure 2.54.: beaker pottery from Allt Chrisal, Barra

(after Gibson 1995a, Figure 4.36-4.37:111-13; no. 1 is vessel 200; no. 2 is vessel 182; no. 3 is vessel 196; no. 4 is vessel 178; no. 5 is vessel 177; no. 6 is vessel 214; no. 7 is vessel 199).

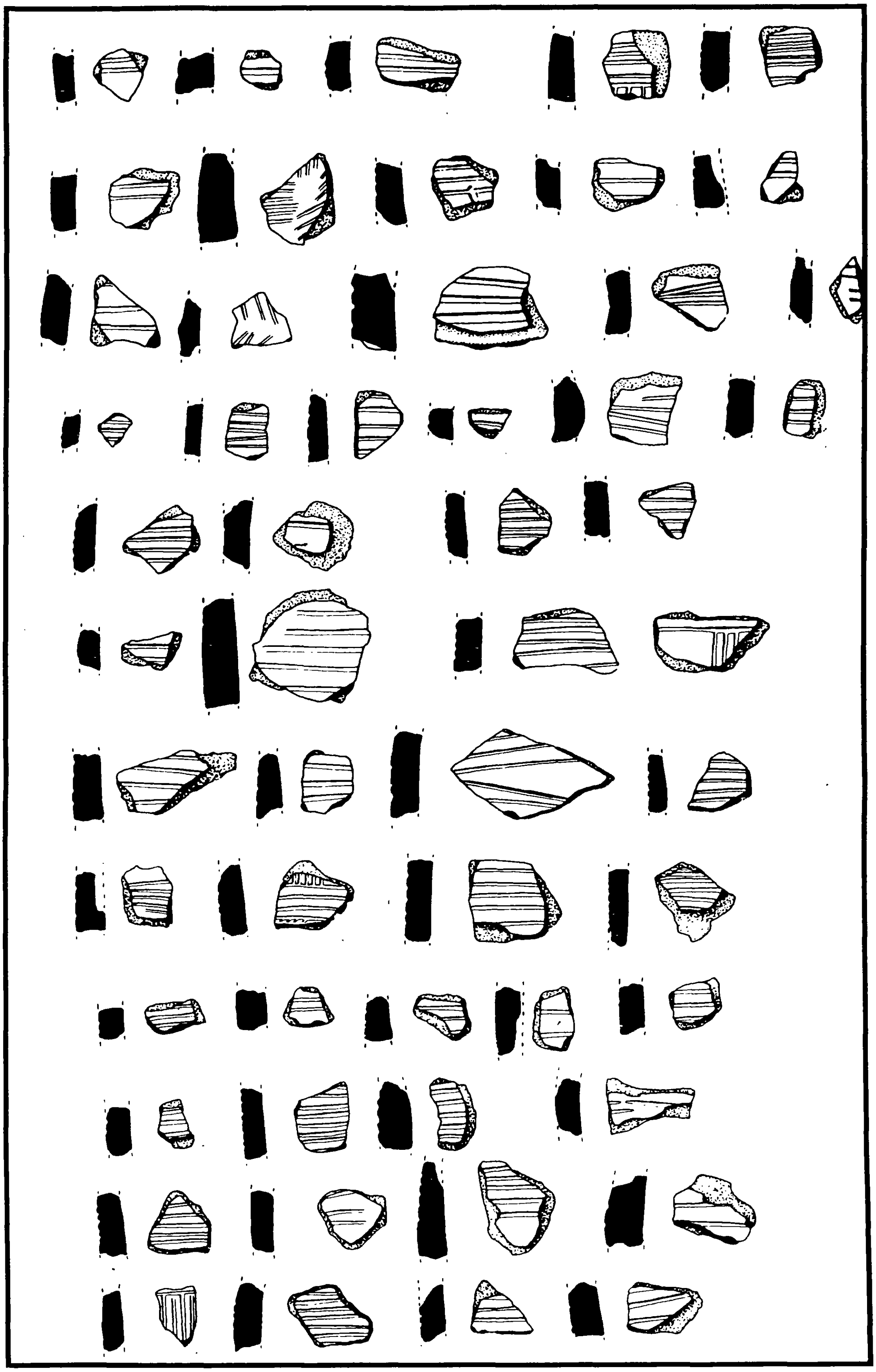


Figure 2.55.: beaker pottery from Northton, Harris

(after Gibson 1982, Figure 4:473)

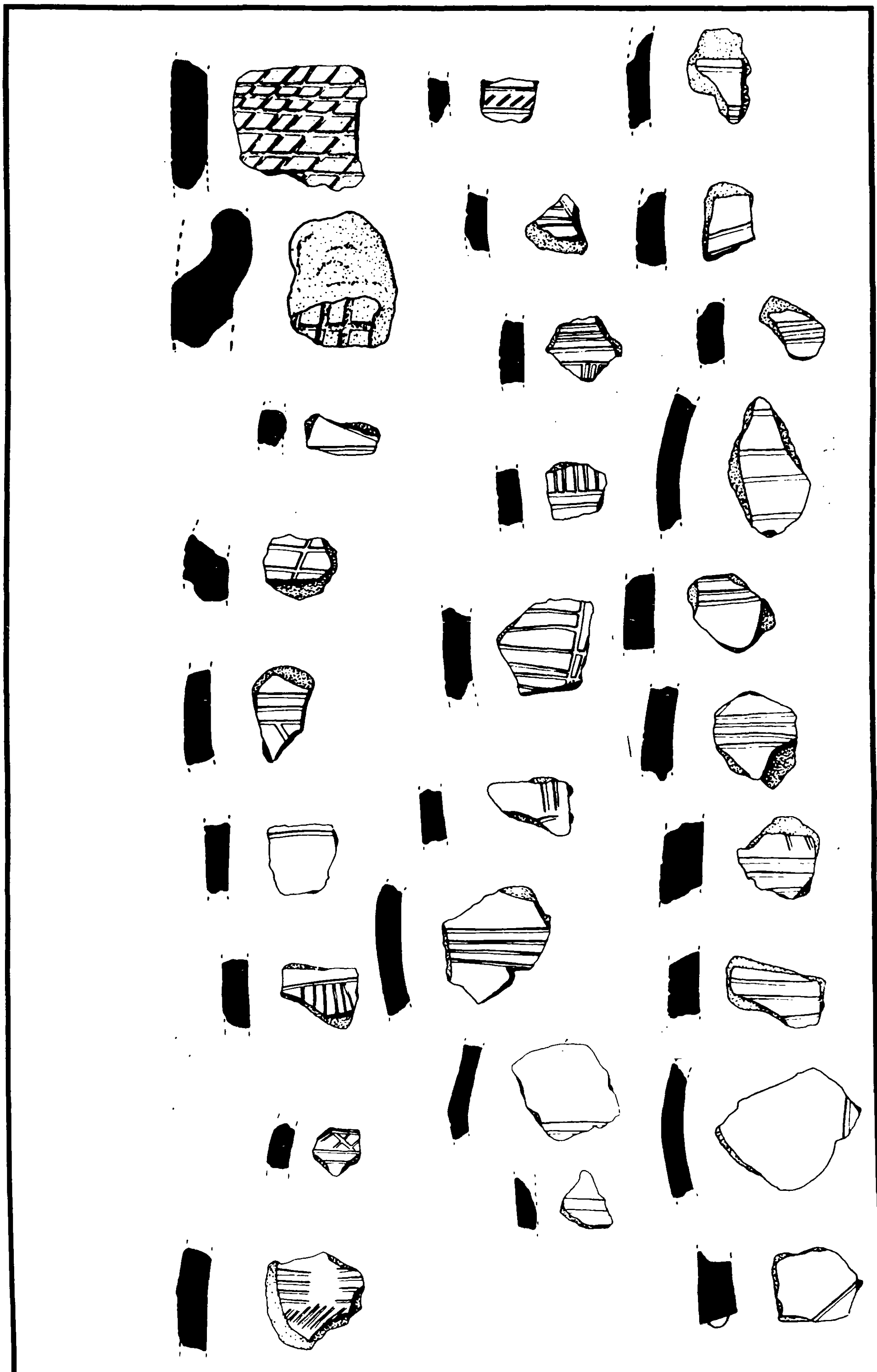


Figure 2.56.: beaker pottery from Northton, Harris

(after Gibson 1982, Figures 1-4:470-73)

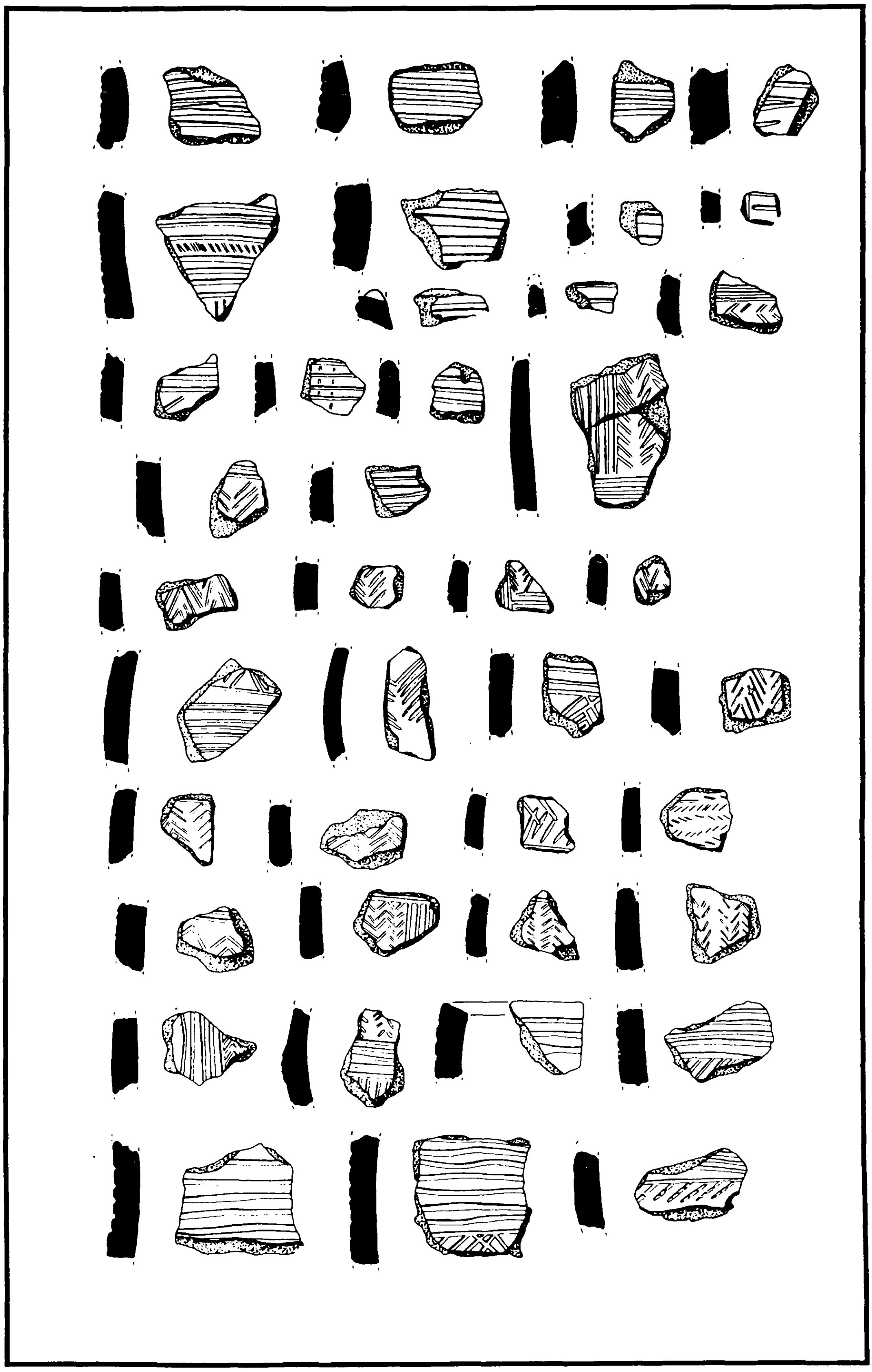


Figure 2.57.: beaker pottery from Northton, Harris

(after Gibson 1982, Figure 5:474)

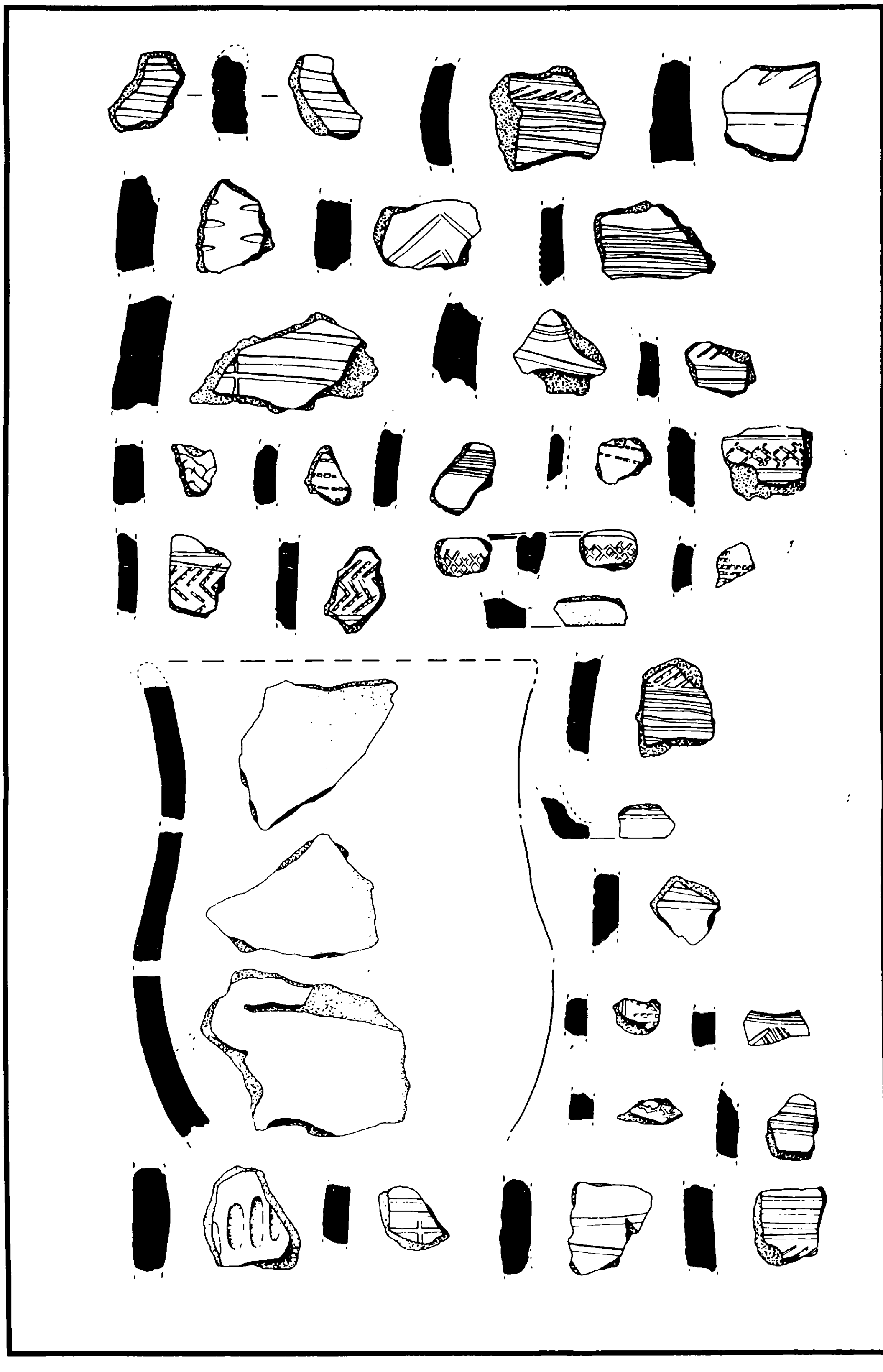


Figure 2.58.: beaker pottery from Northton, Harris

(after Gibson 1982, Figures 6:475)

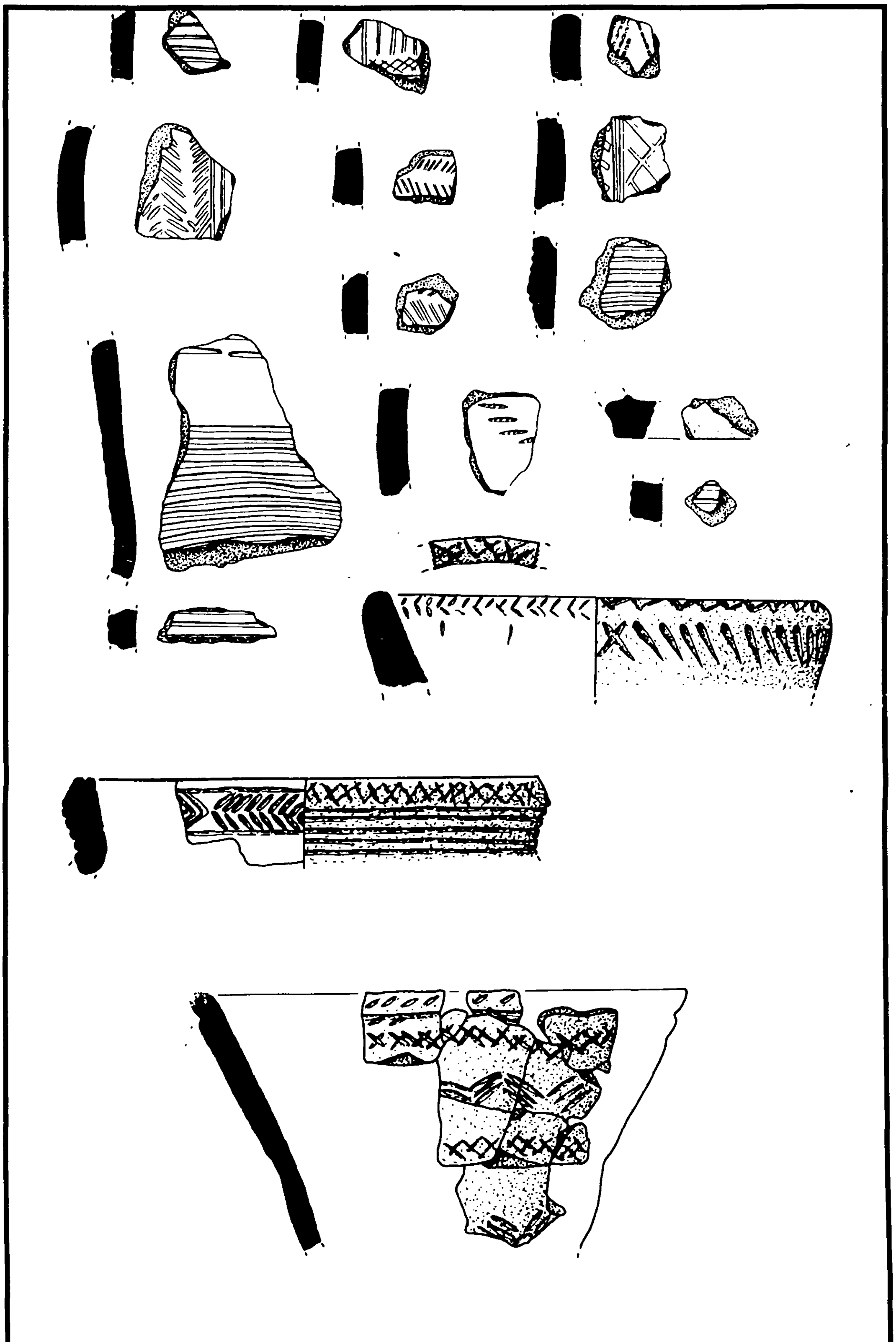


Figure 2.59.: beaker pottery from Northton, Harris

(after Gibson 1982, Figures 5-7:474-76)

1976:224), and Rubha an Udail Site 6 and Unival in North Uist (Henshall 1972:188), contain both fine and coarse beaker pottery, embodying an eclectic stylistic diversity, and, in some instances, allegedly suggesting a replete functional utility. The fine beakers from the Western Isles, with the notable exception of almost half of the beakers from Allt Chrisal, which are in the AOC style (Gibson 1995a:114), are usually classifiable within a northern tradition (eg. Shepherd 1975:50; Shepherd and Tuckwell 1974:38). The coarse beakers are effectively a plethora of largely unclassifiable styles. The 'bronze age' pottery recovered from midden contexts in the Barvas machair (see Cowie 1979:47), and some of the vessels reported from Galson nearby (see Topping and Topping 1984:44), may represent such material. Fine beakers, always readily identifiable, and coarse beakers, frequently little more than coarse pottery, often embellished with impressed decoration, in association with fine beakers, are manifest at almost all of the aforementioned sites. Notably, there are no fine beakers at Eilean an Tighe (Brown nd.; Henshall 1972:176) or Eilean Domhnuill a Spionnaidh (Brown nd.) on North Uist. However, coarse pottery with impressed decoration, conceivably labelled coarse beaker pottery in other contexts, occurs at Eilean an Tighe (Figure 2.[]; cf. Scott 1951, *Y20*, Figure 6: 17), reputedly a hebridean ware assemblage. Similarly, Henshall (nd.) identifies rusticated pottery at Callanais as grooved ware, presumably on the basis of fabric and contextual association with pottery overtly recognisable as grooved ware.

The beaker pottery in the Western Isles displays various stylistic idiosyncrasies best interpreted as regional characteristics. The significance of such local permutations of style are considered fully in chapter seven. However, a curious vessel, recovered as an isolated find from the peat near Clachan on North Uist, deserves especial mention in this regard. This distinctive vessel, allegedly devoid of local stylistic precursors or parallels, was originally interpreted as a coda to a beaker floruit in the Western Isles (Atkinson 1953:200). Yet many stylistic aspects of this vessel, for example the fabric, the rim and body morphology, the size and volume, all aspects of decoration, including the technique, motifs, and overall structure, and the overall quality of manufacture and finish, recall features typical of early neolithic pottery, particularly hebridean ware, elsewhere in the Western Isles (*contra* Atkinson 1953:200, Figure 5:199). This vessel, embodying a fusion of hebridean and beaker traits, more likely anticipates or coincides with beaker manufacture and use in the region. It is not too fanciful to envisage the absence of such vessels from contemporary assemblages in the Western Isles as a consequence of depositional proscription relating to discard practices.

2.6. Conclusion

The originality and diversity of styles discernible in neolithic and early bronze age pottery from Ireland and Britain were impossible to articulate fully using conventional typological analyses. Yet it remained possible to identify general ceramic styles. The existence of general categories of pottery, for example grooved ware, was, of course, incontrovertible in the empirical sense. Unfortunately, a considerable body of ceramics in the archaeological record were difficult to classify adequately using these familiar stylistic labels. However, the fluidity of clay as a raw material, and the level of stylistic detail demanded by typological analyses, ensured that many vessels embodied traits typical of different styles. The stylistic similarities between, for example, impressed wares and domestic beaker coarse ware threatened the integrity of these classifications. Such debate, on the categorical identity of any given vessel, more a consequence of methodology than an indication of original categorical circumstance, was largely specious.

The various categorical biographies discussed above demonstrate something of the aspirations of traditional archaeological evaluation, and its continuing allure in contemporary archaeological practice. Chapter three, drawing attention to alternative approaches to pottery, focuses on the methods, rather than the conclusions, of ceramic analysis in archaeology.

[1] Many ceramic styles from western Scotland, for example rothesay ware and beacharra ware, are identifiable in northern Ireland under categorical pseudonyms, labelled, in these instances, as dundrum bowls and ballyalton bowls respectively (see Sheridan 1995:6).

[2] Henshall, for example, attributed this diversity of ceramic style to lone potters working independently (1972:166), and to the prevalence of potentially unrepresentative assemblages from mortuary, rather than domestic, contexts (Henshall 1972:174-75).

[3] Interestingly, Leeds advocated the concept of windmill hill pottery, in preference to that of 'grimston-keramik' (the terminological precursor of grimston-lyles hill ware), because the former retained a regional integrity, whereas the latter, encompassing assemblages separated by considerable distances, relinquished any semblance of spatial, and by implication, cultural coherence (see Leeds 1927:456-60).

[4] The attempt by Manby to relate grimston ware to heslerton ware, by a process of typological degeneration, whilst conceding the complexity of the connection (1958:233, 245-36), recalled that of Newbigin, who postulated a similar stylistic demise, whilst remarking that the distinction between these two ceramic styles was frequently imperceptible in many vessels (1937:190-91; cf. Piggott 1954:114). Essentially, the prototypical grimston and heslerton wares, each representing opposite extremes of the same continuity, were misleading, because they embodied an inordinate degree of stylistic abnormality.

[5] Notably, Newbigin, in her review of neolithic pottery from Yorkshire, remarked, with reference to Piggott's shape based categorisation of early neolithic pottery from southern Britain: "...the divisions of Mr Piggott's classification, with their regional and chronological implications, do not seem to have much significance in this northern pottery" (Newbigin 1937:190-91; see Piggott 1931, Figure 1:75).

[6] It is perhaps significant that this re-evaluation of early neolithic styles involved an empirical perusal of many of the relevant assemblages. Arguably, such seminal critiques are nigh impossible when relying solely on a literature review.

[7] The distinction, if any, between shouldered bowls and plain bowls is not explicated by Herne (1988). The typological significance of heslerton ware, neither carinated nor shouldered, but with an S shaped profile, remains obscure as a consequence.

[8] The secondary silts of the Site IV ditch at Mount Pleasant in Dorset contain, if conceived with the typology of Clarke (1970), some eight fineware beaker categories and three domestic beaker forms. This concurrence of styles, presaging the British Museum dates, was greeted with disdain (Gibson 1982:24; Longworth 1979:90; Whittle 1981:308), such was the absolute faith in established typology (cf. Boast 1990:95-6).

[9] The close proximity of the vessel recovered from Eochdar in South Uist, to the chambered cairn of Tigh Cloiche, is insufficient reason to afford this pot a neolithic date (*pace* Godden and Godden 1980:42). As such, it is not mentioned further in this review.

[10] Alternatively, the vast majority of short cist interments post-date the chronological currency of beaker pottery in the Western Isles (see Close-Brooks 1995; Dunwell *et al.* 1995; Megaw and Simpson 1961).

Chapter three

A critique of ceramic studies in archaeology

3.1. Introduction

The fluctuating definitions of conventional ceramic types, documented in the selection of ceramic biographies presented in the preceding chapter, suggest that an exploration of alternative ways of understanding materiality is necessary. This chapter, then, demonstrates, in sections 3.2. and 3.3. respectively, the persistence of traditional, and the potential of alternative, approaches to ceramics in contemporary archaeological practice.

3.2. The tenacity of culture historical assumptions in ceramic studies

A traditional approach to archaeological ceramics involves the description and comparison of pottery styles. With the demise of culture historicism this almost exclusive preoccupation with the identification of the typological antecedents and affinities of different styles becomes a questionable exercise. The stylistic relations discernible between different types of pottery no longer evoke a cultural significance. A perusal of recognisable styles remains an attractive analytical option, because the physical condition of ceramic assemblages in the archaeological record, augmented by an ingrained intellectual conservatism, ensure a reluctance to depart from traditional methods of ceramic analysis.

The retention of routine stylistic comparisons in studies of prehistoric pottery is readily understandable. That the vast majority of assemblages of prehistoric pottery in Scotland comprise vessels easily confused, poorly represented, and largely fragmentary precludes outright a meaningful analysis of these assemblages using any of the alternative approaches explored more fully in section 3.3. below (cf. Herne 1988:10; Sharples 1981:39). Indeed, if the interpretive futility of a descriptive and comparative evaluation of an assemblage is conceded, the only viable alternative is invariably to dismiss the pottery as useless for interpretive purposes. The tenacity, ostensibly the allure, of a traditional assessment lies in its reliance on the *intrinsic properties* of material culture. It remains possible to describe, compare, and even postulate the significance, of ceramic styles represented by a meagre number of diminutive sherds, because the success of a traditional evaluation of an assemblage, which need not necessarily emphasise, for example, depositional practices, contextual affiliation, or the degrees of completeness and brokenness of vessels represented, is already vindicated by the incontrovertible *tangible presence* of such material culture. Style, intrinsic to material culture, often survives the transition from complete vessel to fragmentary sherd (*pace* Shepard 1985:314). Indeed, that essential denominator of archaeological style, the rim profile, is not properly revealed until the vessel lies broken. A traditional approach, entirely unsatisfactory, is retained because the alternative, a recognition that much of the material culture routinely excavated is unable to contribute to a meaningful interpretation of the past, is unpalatable, if not entirely inconceivable, to many archaeologists.

The comparison of assemblages on the basis of the presence or absence of pottery types continues in contemporary pottery analysis. This is particularly the case with fragmentary assemblages, from uninformative contexts, and with previously unpublished, often recently excavated, material. The fortitude of traditional approaches is partly attributable to the organisational structure of contemporary archaeological practice. Significantly, the majority of specialist reports, commissioned from freelance specialists at the behest of the excavator, are simply incomplete without the obligatory inclusion of a comparative analysis of artefact styles. Theoretical dissent, a privilege of the dilettante intellectual, is a luxury the freelance archaeologist can ill afford. It is, regardless of theoretical inclinations, more prudent, for the purposes of remuneration and future employment, to include the approaches considered germane by the archaeological establishment. Stylistic comparison, affording an otherwise mundane description of some vestigial ceramics with the a modicum of (illusory) archaeological significance, is the interpretive climax of such a report. Unthinking comparison masquerades as measured explanation. This is necessary to situate the newly recovered ceramics within a familiar interpretive context, assimilate them into the archaeological record, and so confirm their status as items of material culture legitimately able to reflect the past.

To perpetuate implicitly a defunct culture historicism by the continued use of the jaded methodology inspired by such an approach is an inadequate response to the theoretical challenge that the demise of a traditional archaeology has created. The following section, which focuses on the specific methodological techniques used, rather than the overarching intellectual assumptions endorsed, in previous treatments of the neolithic pottery from the Western Isles, demonstrates the inveterate persistence of cultural archaeology.

The prevalence of traditional attitudes to the interpretation of ceramic styles, fully documented in chapter two, requires no further emphasis. The fragmentary condition of the assemblages that contain neolithic pottery encourages a perseverance with the obsolete theoretical assumptions of culture historicism, and exonerates the established interpretive concern with typological definition and stylistic comparison (cf. Herne 1988:10). An emphasis on stylistic comparison remains the interpretive priority in many of more recent reports on neolithic assemblages from the Western Isles (eg. Armit 1989; Brown nd.; Gibson 1995).[1] Allusions to the functional or social significance of pottery are negligible. The review of ceramic studies in section 3.3. below urges a reconsideration of the ways in which pottery is conceptualised and treated in archaeology.

3.3. Alternative approaches to archaeological ceramics

The notion that ceramics deserve study because they are abundant, or even ubiquitous, in the archaeological record is a tacit sentiment prevalent in the literature (eg. Anderson 1984:15; Arnold 1985:1; Braun 1983:108; Bronitsky 1986b:209; Kramer 1985:78; Moorhouse 1986:86; Peacock 1981:187; Sinopoli 1991:7; Vandiver 1988:139). The expectation that ceramics have an interpretive potential equal to their considerable quantity remains implicit in contemporary ceramic studies. Jones explicates similar sentiments:

> "Why does pottery enjoy such a pre-eminent position in archaeological studies? The prime reason likely to be offered is simply 'because it's there'. Of all artifacts pottery is the most easily available to the archaeologist... ...It does break very easily, it will not be mended very satisfactorily, but in fragments it is virtually indestructible. Thus it is there to be found, often in embarrassing quantities" (Jones 1979:1).

This, presumably, is an interpretive relic of empiricism, but remains an attractive argument. Indeed, Jones concludes that pottery *must* be accepted as a crucial interpretive resource because it is so common (1979:4). It becomes possible to confuse quantity with veracity. Millett effectively argues that ceramics are more representative of past activities on a site because they occur more profusely than other artefacts (1979b:35). More edifying reasons for the study of pottery exist. Some of these reasons are explored below.

Ceramic studies have flourished since the advent of processualism. It is no coincidence that much of this research exudes processual sympathies. The development of middle range theories, applicable to pottery, remain a fundamental aim of these analyses. A comprehensive knowledge of the technological, practical and cultural factors that influence the production, use and discard of ceramics is essential to the successful development of these fundamental principles. Arguments to support or refute the basic tenets of processual archaeology, well rehearsed elsewhere, require no further comment here (see Barrett 1990; Binford 1972; 1983;

1989; Hodder 1986; Shanks and Tilley 1987a; 1987b). Instead, by way of critique, an investigation of attempts to develop middle range theories to facilitate the identification of the *original assemblage* is undertaken. An original assemblage, loosely defined, is a collection of vessels in use at any one time on an archaeological site. The contributions of ceramic ethno-archaeology, ceramic technology, and several interpretive approaches towards the reconstruction of the original assemblage are examined separately below.

3.3.1. Ceramic ethno-archaeology

Ceramic ethno-archaeology is invariably designed to facilitate analogy, and so the development of middle range theories able to decipher the complexities of the archaeological record. Most ethno-archaeological accounts of pottery concentrate on production (eg. Arnold, P. 1991), use-life (eg. Foster 1960; DeBoar 1974), the relation between form and function (eg. Henrickson and McDonald 1983), and depositional practices (eg. Arnold, P. 1991:120-37; Deal 1985). They are effectively attempts to formulate abstract maxims able to identify and reconstruct the types and proportions of pottery in the original ceramic assemblage amongst the material that survives as the ceramic component of the archaeological record. These different approaches emphasise, for example, the logistical or quantitative aspects of production, the differential breakage rates of different types of pottery, and the resultant spatial patternings of different disposal strategies, because such information is useful in attempts to devise middle range theories of ceramic manufacture and use. There is an obvious emphasis on the spatial organisation of strategies that involve the procurement of raw materials, the production of artefacts, the transportation of marketable commodities, the distribution of curated material, and the depositional patterning of discarded items. These attempts to catalogue the spatial movement of artefacts encapsulate the processual desire to construct a theory of the logistics of material culture. Such a theory is intended to facilitate a more mature interpretation of the spatial patterning of material culture in the archaeological record. By contrast, it is unusual to find an ethno-archaeological treatment of local conceptions of material culture because such information aggravates rather than assists the aspirations of processualism. Studies which focus upon, or even allude to, the intricacies of ceramic symbolism (eg. David *et al.* 1988; Sterner 1989), frequently demonstrate the simplicity, perhaps the futility, of conventional archaeological interpretation.

It is, then, unsurprising that the proverbial cautionary tale, namely: "..statements demonstrating that material patterns documented in one example contradict the patterning observed in a purportedly similar context" (Arnold, P. 1991:2), become anathema to any attempt to develop acontextual generalisations. That cautionary tales apparently celebrate the particular and confound the general demonstrates, for P. Arnold anyway, the failure of ceramic ethno-archaeology to develop appropriate middle range theories:

> "The fact that a contrary argument can effectively negate an interpretation merely underscores our ignorance of how the variables are causally related. Cautionary tales simply beg the question of why the observed variability exists. Still lacking is an understanding of the variables selecting for a particular production decision; that is, a theory of ceramic production" (Arnold, P. 1991:2).

D. Arnold, adopting a similar stance, argues that cautionary tales are an initial reaction of an archaeological establishment bewildered at the complexity of the ethno-archaeological record (1991:324). It is notable that the existence of cautionary tales does not call into question the intellectual project of processualism, but merely demonstrates that it is not yet complete. Cautionary tales will, subsequent to the development of suitable middle range theories, be relegated to the annuls of a history of archaeology, as frustrating anecdotes, the superficial anomalies of particularism, awaiting explanation. Yet, the ceramic ethno-archaeological review by D. Arnold (1985), a notable attempt to realise the processual potential of analogy, and collate the conclusions of numerous ethno-archaeological studies into universal generalisations, is severely hampered by the persistence of the unresolvable caveats of particularism. It is paradoxical that the purpose of ethno-archaeology is to circumvent the need for such research. The extirpation of the particular and the elucidation of the general, to render ethno-archaeological study superfluous, remain the elusive dual ambitions of processual archaeology. Ethno-archaeology, a distasteful engagement with an unhelpful humanity, is thankfully a temporary state of affairs.

It is doubtful whether any of the general resolutions taken from ceramic ethno-archaeology are germane to neolithic pottery from Ireland and Britain. The communities which host contemporary ethno-archaeological research into ceramic use, manufacture and discard, are all located in non temperate climates, unlike that of prehistoric north west Europe, and all employ modern metal and synthetic containers as non-ceramic alternatives. The many abstract inferences on the relation between climate and ceramic production, a consequence of a processual obsession with environmental determinism, are likely to be irrelevant. Similarly, the various stipulations on ceramic manufacture, distribution, transportation, function, reuse, and use-life, all rely on societies in which a traditional pottery repertoire has been largely superseded by modern non-ceramic alternatives. Non-ceramic containers usually replace the traditional ceramic storage and table wares. The tenacity of ceramic cooking wares lies in the pleasurable flavour such vessels impart to food (see Arnold, D. 1985:138-39, 142-43). The relatively recent introduction of various non-ceramic containers is likely to have had a profound influence on local conceptions and treatments of both clay and ceramic. The quantity, and importance, of ceramics in these societies, subsequent to the introduction of non-ceramic alternatives, is probably diminished (Rice 1987:296). In particular, the symbolic connotations of ceramic manufacture, use and disposal are likely to have become impoverished, with the increased availability of ready made containers and implements manufactured in metal and plastic.

3.3.2. Ceramic technology

The intrinsic properties of ceramics provide an obvious source of information on the production and use of pottery in the past. The profuse amount of experimental research on ceramic technology, investigating the suitability of different technological features to specific utilitarian tasks, is designed to identify, from a technological perspective, the optimal performance characteristics of archaeological pottery. Technological inquiry aspires to the equation of distinct technical features with specific vessel functions. The allure of ceramic technology is twofold. Technological properties are, firstly, intrinsic to the material culture under study, and, secondly, as a consequence, largely immune to the otherwise detrimental transition from complete vessel to fragmentary sherds. The interpretive efficacy of the general correlates between technological property and envisaged function are therefore unaffected by the physical condition or contextual ambiguity of an archaeological assemblage. But innumerable explorations of ceramic technology demonstrate only the desirability, not the necessity, of specific technological properties in pottery designed for some particular function. Indeed the relevance of much ceramic technology to archaeological pottery is questionable. The inadmissible or superfluous nature of much of this technological evidence is investigated below.

3.3.2.1. The superfluity of ceramic technology

The development of ceramic technology represents part of an increasing specialisation and diversification of archaeological knowledges that threaten the interpretive cohesion of archaeological practice (see Pritchard and van der Leeuw 1984:6-7). This disciplinary fragmentation, which exemplifies the necessity of interpretation rather than an illegitimacy of method, encourages the pursuit of ceramic technology as a vitiating end in itself (Shepard 1985:335). There has been a failure to develop interpretive concepts to match the increasing complexity and refinement of scientific techniques employed in ceramic analysis (Bishop and Lange 1991:1). It is necessary to actively interpret, rather than simply endorse, the resultant technical information (Rands *et al.* 1992:33). The integration of this research into wider archaeological explanation is essential, if its interpretive potential is to be realised (Bishop and Lange 1991a:1, 2, 5-6; Kingery 1987:91-2, 98-9; Neff 1992:6; Wright 1992:5). It requires an archaeological relevance, not simply a technical validity, to justify its interpretive significance (Lightfoot 1987:611; Rands *et al.* 1992:32; Schiffer and Skibo 1987:602, 607; Schiffer *et al.* 1994:199). Explanations of the functional desirability of different technical and physical properties of ceramics are available elsewhere (eg. Bronitsky 1986a; 1986b; Bronitsky and Hammer 1986; Rice 1987; Rye 1976; 1981; Schiffer 1990a; 1990b; Schiffer and Skibo 1989).

There is some confusion over the archaeological applicability, and so interpretive utility, of the profuse amount of abstract technological data generated by ceramic studies. The presumed divergence, frequently remarked upon, between current archaeological and past social conceptions of pottery technology is considerable. The technological precision so coveted in ceramic studies invites the false assumption that archaeological potters were similarly concerned with technical mastery (Simon and Coghlan 1989:109). The people who made the ceramics that are now the focus of such intense archaeological study, acquired their knowledge of pottery manufacture from intuitive experience rather than inductive experiment (Braun 1983:111; Schiffer and Skibo 1987:597; Steponaitis 1984:114). Yet this implicit knowledge, a practical awareness of the technical possibilities of ceramic manufacture, comprises a technological acumen sufficient to ensure successful pottery production. Ceramic ethno-archaeological studies demonstrate either a high technological awareness, or production procedures consonant with this, amongst contemporary potters (eg. Nicklin 1979:438). The criteria to select and evaluate raw materials, and manufacture pottery, are radically different from those of modern archaeological science (Rice 1987:51-2, 237). If the people responsible for the manufacture of ceramics also routinely use them, the efficacy or futility of technological precepts, whether implicit or explicit, would soon become apparent (Braun 1983:112; Rye 1976:14-5). The adequacy of their expertise is attested in the successful manufacture of usable pottery:

> "...materials and shapes used by domestic potters can be expected to be, if not actually finely attuned to all details of intended vessel performance, at least *satisfactory* for the demands placed on them" (Braun 1983:112; emphasis in original).

The technological properties of ceramics ensure a passable, but seldom optimal, level of functional performance (Rands 1988:166; Schiffer and Skibo 1987:600). The coarse and porous fabrics of low fired prehistoric pottery, able to absorb, and so endure, the mechanical strain induced by thermal expansion, have a high thermal stress resistance (Nicklin 1979:447; Rands 1988:169; Rice 1987:106; Woods 1986:169). These types of fabric are sufficiently, if inadvertently, resilient to preclude the need for a carefully prepared fabric recipe to ensure successful functional performance (Rands 1988:169). A considerable amount of ceramic technology was probably irrelevant, *as ceramic technology*, to the manufacture and use of archaeological ceramics (Rice 1987:106, 347; 1990:5, 7). All ceramic technology is redundant if any such technology will suffice.[2]

The heterogeneity of archaeological pottery encapsulates a diversity of technological properties, some beneficial and some detrimental, to the envisaged function of the vessel. It is therefore inevitable, given this inherent ambiguity of technological efficacy, that some aspects of vessel design will have an adverse, rather than advantageous, effect on vessel use (Schiffer and Skibo 1987:599; Schiffer *et al.* 1994:210-11; Skibo 1992:37). Technological inconsistency within a solitary vessel, with, for example, internal variation in fabric strength, is often considerable (Simon and Coghlan 1989:109). Similarly, coarse fabrics, preferable in cooking wares, alleviate thermal stress but accentuate mechanical stress (Bronitsky 1986b:257; Rice 1987:104; Steponaitis 1984:108). It follows that these eclectic technological features seldom converge into an optimal functional suitability, but more usually provide a tolerable solution to utilitarian demands. The notion of a definitive technological profile to achieve a superlative functional performance is a misnomer. Practical and cultural prescriptions are probably more important than functional or technological factors to vessel design in situations where vessels perform tasks adequately (Schiffer 1990:374).

Archaeological and ethno-archaeological examples which contradict, and suggest a blatant disregard for, the careful technical predictions of ceramic technology are readily found (cf. Gibson and Woods 1990:34; Orton *et al.* 1993:220; Rice 1987:230). These demonstrate the discrepancy between technological expectation and archaeological reality. The marked difference between the optimal and actual technical properties of much archaeological pottery demonstrates the divergence between the predictions of a ceramic technology obsessed with functional efficiency and the product of prehistoric potters content with functional adequacy. The single example, focusing on prehistoric cooking wares from Britain, is sufficient to demonstrate this discrepancy. Since ceramic exhibits poor heat conduction (Arnold, D. 1985:23), but good heat retention (Woods 1984:28), the optimal technological properties of cooking wares, designed to increase thermal stress resistance, include thin walls, moderate size, smooth morphological profiles, coarse fabrics, dark surfaces, high porosity, and inclusions with negligible thermal expansion rates (Arnold, D. 1985:23, 144; Bronitsky 1986b:250; Orton *et al.* 1993:220; Sinopoli 1991:23, 84; Rands 1988:183; Rice 1987:226-32, 237, 369; Rye 1976:113-18; 1981:26-7; Schiffer *et al.* 1994:200, 209). Yet, amongst prehistoric British ceramics, the majority of cooking wares have abrupt morphological profiles, with flat rather than round bases, and quartz, quartzite, or flint inclusions (see Gibson and Woods 1990:33-6; Woods 1986:159-68). The frequent use of such inclusions in the fabrics of these vessels is particularly ironic. As Woods states candidly:

"...numerous wares that have been identified as cooking vessels... ...are stuffed full of quartz" (Woods 1984:26).

The thermal expansion rates of quartz inclusions, and the ceramic matrices in which they occur, are sufficiently different to make quartz, in abstract technological terms, one of the worst opening materials available (see Bronitsky and Hammer 1986:98; Orton *et al.* 1993:220; Rice 1987:228-30; Rye 1976:115-18; 1981:34; Sinopoli 1991:14-15). The evidence to suggest that the people who made and used this pottery were even aware of thermal stress is negligible. They were more likely concerned with the successful manufacture and firing of actual pottery rather than with recondite technological precepts (Woods 1984:25). It is the proportion, not the composition, of inclusions within a fabric that influences thermal stress resistance (Woods 1986:170). It is probable that *all* pottery, which survived the intense heat of an open firing, was, regardless of subsequent functions, able to endure the thermal stresses induced by the comparatively low temperatures of domestic hearths (Gibson and Woods 1990:33-4; Woods 1984:25-30; 1986:168). The temperatures of cooking fires are, at any rate, generally below that required to instigate the destructive thermal expansion of quartz inclusions (Woods 1986:169).

3.3.2.2. Concepts of etic and emic reality

Ceramic technology, as an essential part of the processual quest for a middle range theory of ceramics, enjoys an ontological veracity unsurpassed by any local conceptions of pottery technology in the ethno-archaeological record. Archaeological, but not local, conceptions of ceramic technology assume a universal interpretive relevance that apparently confirm the profound ontological credentials of the former perspective. The ontological superiority of archaeological, and the corresponding inferiority of indigenous, conceptions of pottery manufacture is encapsulated in the dichotomy between etic and emic interpretations respectively (eg. Arnold, D. 1971). These concepts, due to the latent processualism that motivates most ceramic research, are recurrent in the germane literature (eg. Arnold, D. 1971; 1985:231; 1991:334; Rye 1976:107-08). The processual predisposition for abstract, acontextual maxims is readily apparent in the treatment of the etic and emic in ceramic studies. The legitimacy of these separate concepts, and that of the dichotomy they represent, is unsustainable beyond the interpretive confines of processualism.

If the archaeological reading of ceramic technology is the only true one, indigenous conceptions of pottery technology become difficult to explain, precisely because they are equally successful means to the manufacture of usable pottery, but using inferior emic judgements. Instead of admitting the efficacy of different conceptions of production, it seems necessary to assert the primacy of an etic grasp of technology. Rye, for example, speculates that the original technological reasons for a particular manufacturing process would gradually become obscure, to be replaced, through time, with some ritual or symbolic justification (1976:132). To postulate an original, if arcane, technological solution, prioritises the etic over the emic, and insinuates that only a technological understanding of clay and ceramic could instigate the production of pottery. Once this proper routine of manufacture was established, the (etic) reasons that controlled it could be forgotten, and replaced by some fanciful emic alternatives. It is preferable to envisage provisional atechnical explanations, invoked to explain different production processes, vindicated if these manufacturing strategies proved successful. Otherwise, the emic, effectively defined as the trivial negative of the etic, remains an unexplained, but fortunately superfluous, enigma. This is the inevitable consequence of a processualism that interprets the etic and emic as either an explicit or implicit awareness of technology respectively. The interpretive monopoly of a technological conception of ceramic production and use obscures more than it explains. The cultural choices made during pottery production, ranging from the selection of raw materials, the size and shape of the pottery itself, to the type of fuel and method of firing used, each become, at a fundamental level, if not technological decisions, then certainly decisions circumscribed by technological feasibility. This conception of the emic, *that of etic possibility*, fails to explain the selection of one particular, from many possible, emic choices feasible within the technological confines of the etic. Indeed, this explanation of the emic, as a successful adaptation to technology, states nothing more than the obvious, and betrays the explanatory poverty of processualism.

Ethno-archaeologists seldom manage to elicit concrete explanations to justify different aspects of ceramic production from their respondents. It is notoriously difficult to ascertain from potters why a specific raw material or manufacturing technique is employed in pottery production. The reason given, that the material or method used is the only one feasible, despite the existence and availability of numerous alternative substances or procedures, is seldom a reason at all. Yet this is precisely the point. Technological knowledge is seldom explicit or reminiscent of science in many ethno-archaeological contexts (Schiffer and Skibo 1987:596). Attempts to elucidate technological explanations for different aspects of ceramic production wrongly assume that manufacture is always conceptualised as a nexus of discrete technical procedures. The circularity of argument that a potter employs, in a self justifying response, to queries over specific details of production, attests to the efficacy of a technological knowledge that is gradually acquired, intuitively held, and alternatively expressed (see Schiffer and Skibo 1987:597-98). To misconstrue potters' conceptions of pottery production as superficial, ultimately flawed, alternatives to genuine technological explanations demonstrates a failure to recognise the efficacy or wider symbolic significance of the former interpretation to production.

3.3.3. Interpretive approaches

The inexorable quest to devise middle range theories applicable to the pottery in the archaeological record has encouraged the development of various innovative interpretive approaches. The ingenuity of many of these, often complementary, analytical techniques, which together are designed to identify the original composition and resultant formation processes of an assemblage, requires emphasis. The salience of function, and the adjunct methodological issues of refitting, use-life estimates, and quantification, in processual approaches to ceramics merit investigation. A critical resume of function, refitting, use-life, and quantification, with respect to the original assemblage, follows below.

3.3.3.1. The interpretation of function

Hally, writing over a decade ago, argued that the concept of function had been neglected, firstly, because it was irrelevant to stylistic analysis, and, secondly, because its evaluation required complete vessels rather than fragmentary sherds (1983:3; cf. Henrickson 1990:83; Rice 1990:1). A recent spate of functional analyses has done much to rectify this interpretive lacuna in the understanding of archaeological ceramics. Function is an attractive category of analysis because it apparently holds great interpretive potential for an archaeological understanding of the past uses of material culture. The physical design and technical properties of material culture are considered to constrain, if not entirely determine, the function of any given artefact. Material form, in particular, circumscribes functional possibility. However, the apparent inadequacy of an exclusive reliance on morphology to reconstruct the functional profile of an assemblage demands alternative investigative approaches to pottery function. A resume of morphological approaches to function is followed by a critique of the concept of function itself. A revised interpretation of function is then employed to introduce a discussion of use alteration studies.

Ceramic containers are frequently conceptualised as tools, as utensils designed to facilitate and fulfil a variety of utilitarian tasks (Braun 1983:107; Hally 1986:267-8; Henrickson 1990:83; Sinopoli 1991:83). It is reasonable, as a preliminary to any analysis, to classify an assemblage into functional categories to help ascertain its purpose (Orton *et al.* 1993:76). This classification should express the general morphological characteristics, rather than trivial stylistic variations, of the pottery, to identify basic functional differences within the assemblage (Millett 1979b:37). In domestic assemblages the main functions of pottery can be summarised as involving the transport, storage, preparation, cooking, and service of foodstuffs and other commodities (see Henrickson 1990:85; Orton *et al.* 1993:217; Rice 1987:208; Rye 1981:26). It is, then, a priority to construe assemblage composition in functional terms.

It is inevitable that morphology, the traditional preserve of stylistic comparisons, should retain its interpretive importance to become the prime focus of functional analyses. D. Arnold eulogises shape as: "...the basic unit of cultural behavior..." (1985:5), and recommends form as the fundamental component of ceramic classification (1985:237). Certainly, it is possible to develop a series of general correlates between form and function. Ethno-archaeological reports, from which these various principles are taken, vindicate the interpretation of morphological form as an essentially practical, even pragmatic, component of vessel design, calculated to enhance, not determine, the functional efficacy of pottery. It is necessary to assume the cross cultural applicability of the axioms that prescribe specific forms with definite functions (Henrickson and McDonald 1983:631; Henrickson 1990:85). Hally (1986:278-81) and Howard (1981: Table 1.1:9) both provide optimal morphological and technological postulates for various envisaged vessel functions. The ease of access to contents, and the capacity, stability, and portability of a vessel are all functional considerations that affect the morphology of resultant vessel design (Rice 1987:224-6; 1990:4). The rim and neck are the morphological facets most adaptable and influential to functional performance (Rice 1987:241; Woods 1984:28). Vessels employed in the preparation and cooking of food have wider orifices than vessels used for storage, and larger volume capacities than vessels used for the service of food; vessels employed in long term storage are larger than vessels used for short term storage; vessels that contain liquids have a smaller orifice than vessels used for any other purpose; vessels used for short distance transportation are larger than vessels used for long distance transportation; and vessels used for serving and eating invariably have open morphological profiles. These general maxims, which relate form and function to the actual use of pottery, require little explanation. The reasons behind the association of specific designs for particular functions are transparent. Form enables function. The design, dimensions and proportions of the orifice are particularly important to vessel utility (see Henrickson and McDonald 1983:631-34; Rice 1987:236-42; Sinopoli 1991:84; Woods 1984:28, 30).

These general aphorisms obscure the immense complexity of use and, importantly, reuse that occurs within an assemblage. Skibo has explored the possibility of a functional biography of pottery, to document successive episodes of intended and actual use and reuse of specific vessels (1992:44). But, in general, research into the biography of individual pots, from production and use, to discard and recycling, has been negligible (Arnold, P. 1991:72). It is apparent, from the ethno-archaeological record, that pottery use is frequently improvised and informal. The methodological and conceptual tools that comprise functional analysis are unable to encapsulate this fluidity of vessel use. Something of the functional mayhem that vessel use and reuse involves is discernible in ethno-archaeological examples.

Vessels can have several different functions (DeBoar and Lathrap 1979:124; Gosselain 1992:577; Orton *et al.* 1993:76; Rice 1987:209, 224, 232-33, 299, 301; 1990:6; Skibo 1992:38), and are often employed for unanticipated, even apparently unsuitable, purposes (Orton *et al.* 1993:226; Rice 1987:299; Shepard 1985:228; Sinopoli 1991:84; Skibo 1992:6, 35, 38). That vessels sometimes exhibit morphological attributes or elaborations that are either irrelevant or detrimental to optimal functional performance (Orton *et al.* 1993:28; Rice 1987:237) demonstrates the ambiguity of the relation between form and function. Gradual morphological alterations need not precipitate corresponding functional changes in a vessel.

Similarly, changes in the function of a vessel need not require morphological modifications (cf. Tobert 1984:60). There is, of course, no guarantee that vessels identified by specific functional terms were actually employed for such purposes (Orton *et al.* 1993:76). It is unreasonable to assume that empirical uniformity, or conversely, diversity, within a ceramic assemblage, represents a similarity, or variability, of function, respectively, within the original assemblage (Rice 1987:300-01). Vessel size, rather than shape, sometimes determines function, because vessels with identical form and proportion, but different dimensions, invariably have distinct, and often unrelated, functions (eg. Blitz 1993: *passim*; Gosselain 1992:577; Hally 1983:174; 1986:273,275; Henrickson and McDonald 1983:634-5; Rice 1987:299; 1990:6; Tobert 1984:57).

The intricacies of ceramic function are further complicated by selective reuse. Certain properties of ceramic, for example durability, inflammability and impermeability, are seldom replicated in raw materials available naturally (Sullivan 1989:111). Given these enviable qualities, it is inevitable that fragments of broken or damaged vessels are rarely discarded immediately, but more frequently reused for a variety of purposes. Indeed, where comprehensive refitting of an assemblage is pursued, evidence of reuse is invariably detected (eg. Mills *et al.* 1992). This suggests that reuse amongst ceramic using communities was probably more common than was previously thought (Sullivan 1989:111). It is perhaps prudent to assume the curation and reuse, rather than the disposal and abandonment, of broken pottery (Sullivan 1989:111). The fragmentary ceramics apparent in the archaeological record were eventually, not immediately, discarded after the initial breakage of the pots from which they are derived.

Confirmation of the systematic reuse and recycling of pottery comes from numerous ethno-archaeological sources (Hally 1983:176; Kramer 1985:89-92; Orton *et al.* 1993:209; Rice 1987:200, 303-04; Sinopoli 1991:84-5). Vessels are often modified or adapted to prolong their use, and retained until damaged beyond repair (DeBoar and Lathrap 1979:124, 127). Usable pots are seldom abandoned (Nelson 1991:179). Both complete vessels and certain portions of broken vessels are amenable to reuse. Complete vessels no longer able to fulfil a primary function are often employed for secondary functions (eg. Kramer 1985:90; Skibo 1992:72). Pots more frequently used, and so more commonly broken, are more likely to be reused or recycled (Rye 1981:6). Damaged or broken pots are sometimes retained until an appropriate function, for which these articles are suitable, arises (Deal 1985:253). Deal, in his ethno-archaeological investigation into discard practices in Tzeltal Maya communities in the Chiapas Highlands of Mexico, discovered that around one fifth of the ceramic inventory of each household comprised broken vessels or sherds due to the habitual reuse of damaged pottery (1985:258). Sherds are frequently reused for a bewildering, and often ingenious, variety of functions. Ethno-archaeological records document the reuse of sherds, and larger portions of broken vessels, to line window sills, demarcate flower beds, ferment beer, construct chicken roosts (Krause 1984:699), protect seedlings (Deal 1985:259), form base supports or turntables to facilitate further ceramic production (Dietler and Herbich 1989:152), and, also, to function as mixing bowls, toys, gaming pieces, missiles, building material (Deal 1985:259, 260, 266), scoops, drums, hearths, animal troughs, ornaments (Kramer 1985:89), griddles, cover sherds, pottery kilns, pot supports, pot lids, serving bowls (DeBoar and Lathrap 1979:125; Lindauer 1992:211), and, finally, scrapers (Sullivan 1988:23-4; 1989:111). Archaeological analyses seem unable or unwilling to emulate this chaotic diversity of pottery use and reuse.

Various ethno-archaeological studies demonstrate that an archaeological treatment of a selection of pottery from a modern ethno-archaeological context fails to elucidate the categorical and functional complexity of the assemblage (Miller 1985:51-74; Tobert 1984:59; Figure 4:64). Hally (1983:174), however, remains optimistic that ethno-archaeological study will furnish archaeology with a series of axioms to correlate form and function (eg. Hally 1986). Yet the unspecialised morphologies of many ceramic vessels in ethno-archaeological contexts frustrate archaeological attempts to correlate form and function (Rice 1990:8). It is possible that, prior to the introduction of non-ceramic alternatives, ceramic vessels were, in functional terms, more specialised (see Rice 1990:6). This, if it were indeed the case, suggests a reduction in the variety of functions each vessel performed, but not an improvement in the ability of form to determine function amongst archaeological ceramics. It is unfeasible to reconstruct, or convey the complexity, of the original functional profile of an assemblage with any accuracy. The despondency of Van As aptly encapsulates this situation:

> "Generally, the picture which may be formed of a prehistoric society by studying functional aspects of potsherds is, however, rather vague. Maybe we cannot learn much more from a functional analysis of pottery than the predictable knowledge that cooking pots and containers made of baked clay have indeed existed since the Neolithic period" (Van As 1984:132, 134).

Despite these various caveats and limitations, notable archaeological evaluations of function with respect to form, include those of Blitz (1993), Hally (1986), and Henrickson and McDonald (1983).

The frailty of the relation between form and function precludes decisive interpretation. There is no direct relation between morphology and function, with neither variable determinant with respect to the other (Ehrich 1965:8; Gosselain 1992:577; Rice 1987:224, 299; Rice 1990:4; Shepard 1985:224). To ascertain, or even discriminate between, the multiple functions of any given vessel within an archaeological assemblage is impossible. The shackles of morphology on functional possibility are sufficiently loose to ensure that form fails to predict function.

It is preferable to express the relation between form and function in terms that recognise, from a practical perspective, the apparent insignificance of morphology. Shape appears irrelevant during the actual use of a vessel because it fails to impinge upon its functional efficacy. It is only when shape impedes upon the utility of a vessel that morphology assumes an unwelcome significance. To express the relation between form and function in this particular way effectively demonstrates, and indeed accentuates, the inconsequential or inconclusive nature of the connection between them. The recurrent emphasis placed upon the association of these variables is usually inappropriate. Archaeological pottery exudes a functional versatility that is both exasperating and inscrutable, because it is neither predictable nor recoverable. An attempt to encapsulate the functional capabilities of a vessel ascends to a level of generality that is seldom especially informative.

An assessment of function is complicated by the need to consider the interaction of the pottery with various aspects of use. The envisaged and actual contents of a vessel, the contexts of use, the duration and frequency of use, the surfaces on which they are placed, the manner in which they are suspended, the methods by which a vessel is manipulated and handled, the utensils it is used in conjunction with, all variously affect the initial design specifications of, and resultant use alteration traces on, a vessel (Arnold, D. 1985:147, 149; Arnold, P. 1991:64; McGovern 1989:3-4; Nicklin 1971:25; Rice 1987:208; Skibo 1992:46; Woods 1989:200, 202). A focus on morphology alone is therefore unable to develop a mature understanding of function. Alternative approaches to the study of function, which concentrate on actual use and use alteration traces, include experimental archaeology, ethno-archaeological analogy, and the relevance of the technological characteristics, use alteration traces, and residual contents of a vessel, to its functional performance (see Braun 1983:108-09, 114-15; Hally 1983:3-4; Henrickson 1990:87-8; Moorhouse 1986:108-11; Orton *et al.* 1993:20-1, 217, 220; Rands 1988:167-68; Rice 1987:211, 232-36; 1990:4-7; Sinopoli 1991:83-5, 166-67; Steponaitis 1984:81; Vandiver 1988:141, 170; Woodland 1986:18-19). These different approaches encourage a redefinition of the concept of function. To include possible or envisaged vessel uses within the interpretive remit of function ensures that the general concept remains interminably abstract (cf. Rice 1990:1-2; Skibo 1992:35). It is preferable to redefine function as *actual* use, as evinced by use alteration traces and organic residues, and dispense with the definition of function as *possible* use, as circumscribed by morphological and technological features. Attempts to ascertain actual vessel function, from the study of use alteration traces, are more edifying because such analyses, focusing on the ways in which pottery was handled and manipulated, emphasise practice.

3.3.3.2. Use alteration studies

The considerable interpretive potential of abrasion, sooting and residue analyses have, until recently, been neglected in ceramic studies (Evans 1984:82; Hally 1983:7, 14; Orton *et al.* 1993:215; Skibo 1992:40-1). Yet a consideration of use alteration traces is vital to an understanding of pottery use if the interpretation of function given above is deemed acceptable. Abrasion and sooting patterns, and the presence of charred food residues, sometimes inform upon culinary practices and vessel function (Evans 1984:83-4; Evershed *et al.* 1991:540,543; Evershed *et al.* 1992:187; Hally 1983:7-10; Henrickson 1990:88; Heron *et al.* 1991:332; Moorhouse 1986:108, 110; Orton *et al.* 1993:222; Rye 1981:57, 120; Sinopoli 1991:85, 161; Skibo 1992:38 *ff.*, 147). The interpretive implications of the study of abrasion, sooting, and food residues are explored successively below.

The friable, low fired fabrics of much archaeological pottery, vulnerable to abrasion, are ideal for abrasion analysis (Skibo 1992:143; Skibo *et al.* 1989:127, 143). Unsurprisingly, vessel strength is directly proportional to abrasion resistance. Fabric composition, porosity, surface treatment, and original firing temperature, as the determinants of vessel strength, therefore control abrasion resistance (see Skibo 1992:46-7, 108-09). The type, size, quantity, distribution, and orientation of inclusions within a fabric influence its susceptibility to abrasion (Schiffer and Skibo 1987:607; Skibo 1992:108). Fabrics with organic tempers are less resilient than other fabrics and, as a consequence, more vulnerable to abrasion (Bollong *et al.* 1993:41; Schiffer and Skibo 1987:607; Skibo and Schiffer 1987:94; Vaz Pinto *et al.* 1987:122-23, 128). Organic tempered fabrics have a high porosity and rough surface topography due to the innumerable voids that permeate the ceramic structure. The physical condition of these fabrics makes them amenable to abrasion (Bollong *et al.* 1993:52; Skibo *et al.* 1989:129; Vaz Pinto *et al.* 1987:122). Abrasion resistance varies inversely with fabric porosity (Vaz Pinto *et al.* 1987:122). The original firing temperature of a ceramic is of fundamental importance to the abrasion resistance (Skibo 1992:108; Skibo *et al.* 1989:128). Indeed, the significance of variations in fabric composition, with respect to abrasion resistance, decreases, as firing temperature increases (Schiffer and Skibo 1987:607; Skibo *et al.* 1989:128; Vaz Pinto *et al.* 127). A higher firing temperature facilitates greater sintering, which improves fabric strength and resultant abrasion resistance (Vaz Pinto *et al.* 1987:121, 127). Surface treatment applied during manufacture, and residues accumulated during use, influence abrasion resistance (Hally 1986:275; Skibo 1992:47, 109; Skibo *et al.* 1989:127; Vaz Pinto *et al.* 1987:121, 129). An exclusive focus on the intrinsic properties of pottery is insufficient to realise the interpretive potential of abrasion analysis. The type of abrader and the mechanisms of abrasion, neither of which is intrinsic to pottery, also affect abrasion resistance (Skibo and Schiffer 1987:88). The relation between fabric composition and abrasion resistance is, therefore, one of considerable complexity. Generalisation is at present both futile and undesirable (Vaz Pinto *et al.* 1987:128). Attempts to equate abrasion patterns to actual functions are considered below.

Abrasion informs upon the initial uses of the original vessel, the subsequent reuses of damaged vessels or sherds, and the effects of post depositional disturbance and decay (Henrickson 1990:88; Moorhouse 1986:108; Orton *et al.* 1993:21, 32-3, 61; Sinopoli 1991:85; Skibo *et al.* 1989:44, 127; Vaz Pinto *et al.* 1987:119-20). A vessel can acquire, with regular use for a particular function, a distinct pattern of abrasion (Rice 1987:234; Skibo 1992:48). Some functional operations do not, of course, involve the attrition of the ceramic surface, and fail to leave an abrasive trace (Skibo 1992:117, 121, 131, 136). A comprehensive understanding of the intrinsic properties of the ceramic, the nature of abrader, and the mechanics of the actual abrasion process is essential to establish correlations between use and resultant abrasion patterns (Skibo 1992:107-09). Some general statements to relate distinctive abrasion patterns with specific vessel functions are given below.

Abrasion on the interior surface of a vessel is influenced by its contents and the manner in which they are treated (Hally 1986:275; Skibo 1992:142). Abrasion is more severe in the presence of moisture or liquid (Skibo 1992:106, 109; Skibo and Schiffer 1987:84-85, 87, 91). Vessels which, in use, contain liquids are liable to endure severe abrasion (Skibo and Schiffer 1987:94). The gradual weakening of the fabric in use, a consequence of thermal stress for example, accentuates abrasion (Skibo 1992:47, 106). It follows that cooking pots are liable to abrade faster than other wares, because they often contain liquids, endure thermal stress, and suffer a greater intensity and frequency of use (Skibo and Schiffer 1987:89-90). Abrasion on the interior of a vessel indicates contact with utensils, or the pounding, scraping, grinding, and stirring of the contents (Hally 1983:19-20; Skibo 1992:132-41). Abrasion on the exterior surface indicates the various methods of carrying, rotating and handling a vessel (Skibo 1992:118-28). Abrasion on the exterior of the base, for example, suggests the vessel rested in an upright position (Skibo 1992:113-18). Similarly, abrasion on the rim surfaces and interior of the neck suggests contact with utensils or lids (Skibo 1992:128-37). Abrasion is most likely to occur on both the interior and exterior of the base, and on the interior sides, particularly around the rim (Rice 1987:234). Cleaning, which requires the gentle attrition of the ceramic surface with an abrasive substance, makes a salient contribution to the abrasion of a vessel (Rice 1987:235; Skibo 1992:141-42). Abrasion studies usually produce a mechanical rather than functional explanation of the processes allegedly responsible for an abrasive trace. The conclusions of an abrasion study, unable to identify a specific function, are frequently abstract statements of attritional process.

It is extensive abrasive *patterns*, rather than individual abrasive *marks*, that identify possible functions. Hally, for example, laments the similarity of abrasive pits on vessels with very different abrasive patterns (1983:15). This exclusive reliance on abrasion patterns has obvious detrimental interpretive repercussions. Abrasion patterns, often localised on complete vessels, become obscure and confused on fragmentary sherds. It is difficult to ascertain the structure of abrasion patterns, and therefore infer the function of the original vessel, from sherd evidence (Moorhouse 1986:108; Rice 1987:235). Abrasion analysis, obliged to exclude sherds, is effectively restricted to whole or reconstructable vessels. Schiffer and Skibo, however, remain optimistic that different abrasive processes produce diagnostic types of surface modification (1987:93). Some discrimination between abrasion marks exists. Skibo (1992:115-16, 28-9), and Skibo and Schiffer (1987:90-1), variously identify chips, pits, pedestalled inclusions, and scratches, and postulate explanations, either mechanical or physical, rather than functional, to account for the manifestation of each, on the abraded ceramic surface. This research is attractive because it extends the interpretive potential of abrasion analysis to sherds.

It is essential, in the analysis of archaeological ceramics, to separate use abrasion from post depositional abrasion. In the absence of reliable criteria to identify the cause of abrasion from the intrinsic characteristics of the resultant abrasive trace on the ceramic surface, it is frequently difficult to distinguish between them. The presence of abrasion across sherd edges is a useful indication of reuse (Lindauer 1992:210; Mills *et al.* 1992:222) or post-depositional disturbance and residuality (Moorhouse 1986:113; Orton *et al.* 1993:32-3, 214-15). Vessels which lie, after discard, in wet depositional contexts, are especially susceptible to severe abrasion (Skibo and Schiffer 1987:94). A greater degree of rounding is apparent on sherd edges subject to wet, rather than dry, abrasion (Skibo and Schiffer 1987:87). If abrasion extends across the entire surface area extant, and especially onto sherd edges, it is reasonable to attribute such abrasion to taphonomy. The severity of post depositional attrition on sherds frequently effaces any evidence of use abrasion (Rice 1987:235). The coarse and friable fabrics typical of neolithic pottery are susceptible to post depositional attrition in the unfavourable taphonomic conditions prevalent in temperate Europe. This is certainly the case for much neolithic pottery in Scotland, where the preservation of use related abrasion patterns on the material available for study is minimal.

Soot deposits, which comprise distilled resins, oxidised resins, and free carbon, are the derivatives of fuel combustion (Moorhouse 1986:108; Hally 1983:7; Skibo 1992:147). Soot deposits accrue as resinous vapours, emitting from the combustion of the fuel, to condense on the ceramic surfaces (Hally 1983:10; Skibo 1992:132). Different types of soot accumulate on a vessel placed over a fire. On a cooking vessel placed within an open fire, for example, a thick matte layer of sooting, primarily composed of solid carbon and easily removed by rubbing, gathers on its lower exterior surface. A thin shiny layer of sooting, probably composed of resins and solid carbon, unable to be removed by rubbing, gathers on the upper exterior and rim surfaces of a vessel (Hally 1983:8; Skibo 1992:53, 159-62). The distinct distribution of these different types of sooting is probably a function of the distance of the ceramic surface from the heat source (Hally 1983:10; Skibo 1992:154-55). This suggestion is indeed plausible, because ceramic surface temperature, a function of distance from heat source, determines soot condensation (Hally 1983:10; Skibo 1992:157, 166). The glossy, as opposed to matte, layer of soot is created by the resins that only condense on the cooler ceramic surfaces some distance from the fire (Skibo 1992:162, 173). The contents of a vessel will influence the temperature of its ceramic surfaces (see Skibo 1992:162-68).

Soot patterning indicates how a vessel was positioned in relation to fire during use (Moorhouse 1986:110; Hally 1983:10; Skibo 1992:40, 171-72) and, on occasion, the type of fuel used (Moorhouse 1986:108). Sooting, on an exterior surface, indicates that the vessel was placed over a fire. Sooting, on an interior surface, indicates that the vessel either contained, or was inverted over, a fire (Hally 1983:9; 1986:275; Rice 1987:235). More precisely, if a vessel is suspended *over* a fire, soot will accumulate across the *entire* exterior surface, including the base. If a vessel is placed *in* the actual fire, soot will accumulate on all but the basal exterior surface. Sooting, in either instance, is heaviest around the middle exterior surface, at the maximum circumference of the vessel, and becomes more sparse towards the rim or the base (Hally 1983:10-11; Orton *et al.* 1993:222; Skibo 1992:118, 122, 154). The intensity of heat in a normal cooking fire is sufficient to remove any smudging or sooting, and prevent any further sooting, on a ceramic placed within the flames (Skibo 1992:160-61; Steponaitis 1984:85; *pace* Woods 1986:158). This explains the absence of either deposit on those parts of a vessel, the base for example, that are in contact with the flames of a clean burning fuel in an open fire (Hally 1983:10, 11; Skibo 1992:156). It is possible that very small vessels, placed in such a fire, would not accumulate sooting (Hally 1983:10, 11).

Various studies demonstrate the interpretive potential of sooting analysis (eg. Hally 1983:7-10; Moorhouse 1986:108-10; Skibo 1992:147-73). An investigation into sooting has, for example, the capacity to elucidate functional differences amongst vessels with identical shapes, or, similarly, identify regional differences in the preparation, cooking and serving of food (Moorhouse 1986:108, 110). A vessel with soot deposits on the exterior is usually interpreted as a cooking ware. It is reasonable to assume that sooted vessels have been used to heat their contents (Hally 1983:10). Vessels placed over a fire were probably used for simmering or frying; vessels placed in the fire were probably used for boiling (Rice 1987:235). Soot patterns around the rim indicate whether a lid was employed in the heating process (Moorhouse 1986:110). Sooting is alleged to afford some inadvertent benefits to the functional performance of ceramics. It enhances the heat retention capacity of a vessel (Rice 1987:235) and, together with food residues, works to further seal the fabric (Oetgen 1984:44). Soot layers are often thick enough to exfoliate, and even impede abrasion (Skibo 1992:112,154).

The type of fuel used in a fire may influence the form of any subsequent sooting. Moorhouse demonstrates that charcoal, with different heating properties to either coal or wood, creates a distinctive sooting residue (1986:108, 110). Skibo, however, shows by experiment that different types of wood produce similar sooting patterns (1992:168-70). It is, in these separate studies, presumably the patterns, rather than the types, of sooting that are distinguishable. It remains unclear whether it is feasible to discriminate between fuel types from the resultant sooting types or patterns (Rice 1987:235-36).

Smudging, a form of sooting, is mentioned here because many of the sooting traces on the pottery analysed in chapters five through eight are perhaps the vestiges of smudging. This technique involves the deliberate accumulation of a layer of sooting on the surfaces of a vessel during the actual firing process. Smudging does not necessarily require a reducing atmosphere (Shepard 1985:219). The open fire is deprived of oxygen, usually by smothering the flames with some combustible organic material, which subsequently deposits considerable quantities of soot onto the ceramics (Rice 1987:158; Shepard 1985:88-91, 216), affording them a darker blackened appearance (Shepard 1985:219). The criteria Hally (1983:9) uses to discern between smudging and sooting are intended for complete pots. Briefly, smudging is invariably manifest as a ubiquitous, thin, uniform, and seamless darkening of a vessel surface. Sooting is usually present as a thicker, more restricted, frequently cracked layer on the middle to upper surfaces of a vessel (Hally 1983:9). The effects of taphonomy could well confuse this slender distinction. The criteria to distinguish between smudging and sooting, which rely heavily on the overall structure of the separate residues, are inapplicable to sherds.

The identification of food residues in this research is restricted to a macroscopic recognition of substantial organic accretions visible on the exposed surface of the ceramic. The different analytical techniques to determine the chemical composition, and therefore identify the type, of organic contents that adhere to a vessel are not discussed as a consequence. Indeed, the most effective technique, fatty acid analysis, relies on organic deposits within, rather than on the surface of, the permeable fabric (see Skibo 1992:81 *ff.*). It is impossible to detect or identify such deposits in a cursory macroscopic investigation (Evans 1990:7). Carbonised food residues, caused by the charring of food, are however, detectable to the naked eye, even if such deposits are rather unusual (Evershed *et al.* 1992:189). The potential of visible charred deposits to inform upon the functional performance of ceramics is considerable. Interior vessel moisture, heat source, and heat intensity, influence the nature of carbon deposition on the interior vessel surfaces (Skibo 1992:148). The fabric of a cooking vessel will, after regular use, contain traces of its previous contents. Carbon deposition occurs when the intensity of heat on a vessel is sufficient to instigate, and the moisture in its fabric insufficient to prevent, the carbonisation of these absorbed food residues. The location of these adhesions on the vessel surfaces provide information on functional performance (Skibo 1992:148-52). Charred food remains also occur on the outside of vessels. Moorhouse (1986:110) interprets the exterior deposits on some medieval ceramics as the vestiges of organic sealing agents designed to create an air tight vessel for use in oven baking. A charred food deposit merely confirms that a vessel once held food.

3.3.3.3. The potential of refitting

Refitting, the practice of identifying sherds from the same vessel, is of fundamental importance in the interpretation of ceramics. The process of refitting has always enjoyed tacit acceptance in archaeology because, at the very least, it identifies the minimum number of vessels represented in an assemblage. Individual vessel reconstructions, the preserve of traditional refitting strategies (Hofman 1992:1), afford a more complete appreciation of techniques of manufacture and morphology, to facilitate the stylistic comparison of assemblages (Rye 1981:11). The interpretive potential of refitting has, with the demise of the traditional concerns of pottery analysis, been explored and advocated more recently in various processual approaches to ceramics (eg. Hofman and Enloe 1992; Sinopoli 1991:88; Skibo *et al.*

1989:402). Because refitting characterises an assemblage as the number of vessels represented, it plays an integral part in attempts, firstly, to reconstruct the original assemblage, and, secondly, to inform upon the formation processes responsible for its eventual archaeological condition.

The interpretive benefits of refitting are numerous. Sherd refits inform upon the nature of past activities, and resultant formation processes, on a site. Sherds from the same parent vessel can, for example, confirm the depositional integrity of the relevant stratigraphy if found in close contextual proximity; detect post depositional disturbance and identify residuality if located in a variety of disparate contexts; investigate the possibility of selective deposition; assess ceramic curation, recycling and reuse; discern discrete activity areas and use locations; and evaluate the intensity and duration of site occupation (see Orton *et al.* 1993:210-11; Hofman 1992:1; Larson and Ingbar 1992:151; Lindauer 1992:210-12; Moorhouse 1986:88-97; Villa 1982:285, 287). The interpretive potential of refitting has been adeptly demonstrated by, amongst others, Hally (1983) and Skibo *et al.* (1989).

The quality of the archaeological evidence often inhibits the innovative interpretations suggested by refitting. It is inevitable that even the most rigorous refitting programme will fail to identify every vessel represented and, similarly, fail to allocate every sherd to the apposite sherd family (Hally 1983:169; Mills *et al.* 1992:219). Conjoinability is relatively rare in most assemblages (Sullivan 1989:104), particularly where sherds have incurred post depositional abrasion (Lindauer 1992:211). The various criteria proffered to separate sherds into discrete vessel groups in the absence of conjoinability, for example fabric, colour and surface finish (see Carr 1993:100-1; Hofman 1992:10; Mills *et al.* 1992:218; Moorhouse 1986:88; Sullivan 1989:104), are often inappropriate, due to the intrinsic variability of these factors in hand built, open fired pottery, susceptible to post depositional alteration after breakage. That conjoinable sherds frequently differ markedly in appearance (Hofman 1992:11) demonstrates the difficulties of identifying non-conjoinable sherds from the same vessel. It is usually futile to pursue refitting from a superficial visual inspection of the available sherds (Carr 1993:100). Refitting, effectively restricted to distinctive, though not necessarily conjoinable, sherds, is obliged to ignore the bulk of an assemblage as uninformative (eg. Hally 1983:166). On a more practical, and prosaic, level, the comprehensive refitting of an assemblage is a time consuming (Larson and Ingbar 1992:151) process that requires a considerable amount of study space (Hofman 1992:11) to be effective. The facilities made available for refitting in ceramic research are usually inadequate. Because refitting is seldom a systematic exercise, and therefore difficult to quantify with any accuracy (Orton *et al.* 1993:210-12), it should instead be motivated by a specific research design (Hofman 1992:11). The role of refitting in this study is discussed fully in chapter four.

3.3.3.4. Use-life estimates

Use-life estimates, intended to elucidate the intricacies of assemblage formation processes, are an integral component of processual attempts, firstly, to identify the composition of the original assemblage, secondly, to calculate the duration of occupation of the site, and, thirdly, to estimate the size of the population serviced by this pottery (see Arnold, P. 1991:72; Foster 1960:606; Mills 1989:134; Orton 1993:178; Rice 1987:302; Shott 1989:9, 17; Sinopoli 1991:86, 166).

Ethno-archaeological studies have identified numerous factors that influence, and impinge upon, the use-life of pottery. These include vessel function, the manner in which the vessel is handled and manipulated during use, the context and frequency of use, and the value, replacement costs, and intrinsic mechanical strength of the vessel. That domestic animals are responsible for a substantial proportion of vessel breakage demonstrates the haphazard way in which most vessel breakages occur (Foster 1960:608). It is possible to develop some general maxims to predict vessel use-life estimates. Pottery subject to frequent movement or regular contact with fire, especially cooking vessels, are more susceptible to breakage than pottery seldom moved or heated, for example storage vessels. Small vessels, more manageable and readily moved, are more liable to breakage than larger vessels (see Arnold, D. 1985:152-5; Arnold, P. 1991:61, 72-4; David 1972:141; DeBoar 1985:348-50; DeBoar and Lathrap 1979:127-28; Foster 1960:608; Howard 1981:8-10; Lightfoot 1993:171; Longacre 1985:340; Mills 1989:135-41, 144; Nelson 1991:179; Orton *et al.* 1993:207; Rice 1987:200, 298-99; Sinopoli 1991:87).

Despite the considerable effort that has gone into the collection and interpretation of use-life data from ethno-archaeological sources, it remains difficult to employ the resultant use-life estimates in archaeology. However, use-life projections, if expressed in terms that relate to the intrinsic properties of ceramics, can be adapted for archaeological purposes. Vessel size and weight provide a useful estimation of use-life, because they are directly proportional to one another (DeBoar 1985:349; Mills 1989:142). Shott, directly correlating rim diameter and vessel weight, uses the former measurement to elucidate use-life estimates (1989:16-7). Vessels with thicker walls are more likely to have a long use-life (DeBoar and Lathrap 1979:128). Use alteration traces that suggest heating over a fire, for example sooting, invite a short use-life estimate. Yet these features are mere indications of the possible duration of vessel use. The fact remains that actual duration of use-life is neither determined by, nor detectable from, the intrinsic features of the pottery under study (Shott 1989:13). It is significant that Hally (1983:178) is able to cite only one study, by DeBoar (1974), as an attempt to employ ceramic use-life data for the purposes it was always intended. The applicability of use-life estimates to the archaeological record remains questionable.

It is not hard to envisage factors, both ethnographic and archaeological, that complicate the expectations of even the most general use-life statements. Firstly, in ethnographic terms, the different vessel types within an assemblage usually embody a tremendous diversity of use-life estimates, ranging from a few months to several decades (Rice 1987:296-7). Some vessels, particularly those used for storage or ritual purposes, have been known to survive for several generations (Howard 1981:10; Rice 1987:297).There is no reason to suppose that variation in use-life estimates only occurs between pottery types. The actual lifespan of different vessels of the same type, employed for the same function, is variable (Shott 1989:10). This apparent discrepancy is, in some cases, attributable to the varying quality of raw materials, differing conditions and contexts of use, fluctuating replacement costs, and, finally, according to societal context (Arnold, D. 1985:152; Arnold, P. 1991:76-9). To discuss average or typical use-life estimates is therefore misleading (Rice 1987:297). Yet to facilitate the comparison of assemblages, it is necessary to assume, as universally applicable, the average use-life estimates developed for each vessel type (Orton 1993:179). In archaeological terms, the lack of any necessary correspondence between form and function means that use-life estimates, which generally relate to function, cannot comfortably be distinguished or calculated on the basis of form. The reuse or recycling of portions of already broken vessels (see Kramer 1985:89-92), and a dearth of information on the replacement rates of broken pottery (Rice 1987:303), further confuse the issue of use-life duration. Indeed, there is no guarantee that damaged or irreparable vessels will be replaced (Orton *et al.* 1993:209). Together, these ethnographic and archaeological caveats, frustrate attempts to calculate plausible use-life estimates.

The interpretive aspirations that lie behind the concept of use-life remain unfulfilled. The few use-life statements that are credible, made at a level of generality that is uninformative, are verging on the banal. Domestic assemblages, for example, will contain an artificial surplus of cooking and serving wares in relation to storage wares, because the former vessel types have a shorter use-life, and higher rate of discard and incorporation into the archaeological record, than the latter vessel type (Orton *et al.* 1993:208-09). This general statement is unable to provide the level of detail, the interpretive focus, necessary to elucidate the very specific processual wishes summarised earlier. It is this sort of ambiguity that ensures use-life estimates remain largely impractical (*pace* Nelson 1991:179). Use-life studies, if anything, confirm, with the recognition of the differential rates of incorporation of different types of pottery into the archaeological record (Skibo 1992:5), the considerable discrepancy between the original assemblage and the gradual accumulation of pottery that comprises the resultant archaeological assemblage.

3.4. Methods of quantification

The adverse interpretive repercussions of pottery surviving in sherd rather than vessel form are by now readily apparent. The predominantly fragmentary nature of most neolithic pottery from Ireland and Britain frustrates interpretation. The interpretive value of an assemblage largely depends on the size, type and physical condition of the extant sherds (Rice 1987:182). It is unfortunate that body sherds, the most abundant sherd type in an assemblage, are also the most uninformative (Rice 1987:223). Many of the interpretive ideas applauded in the literature are unfeasible in practice and inapplicable to the majority of assemblages (Hally 1983:176; Howard 1981:4, 10). Howard, writing on neolithic pottery from southern Britain, recognises the need for analytical approaches applicable to sherds (1981:10). There is, unfortunately, no magical methodology able to identify the composition of the original assemblage without recourse to refitting. The limitations imposed on interpretation by the fragmentary condition of most assemblages of neolithic pottery become apparent during attempts at quantification.

Quantification refers to different methods of estimating, or calculating, in terms of vessel quantities, types, and sizes, the original ceramic composition of an assemblage (Orton 1993:169; Orton *et al.* 1993:21; Rice 1987:288-89). Such investigations are necessary to elucidate the original composition and formation processes of the eventual archaeological assemblage. Quantification, which initially appears deceptively simple (Rice 1987:289), is only reluctantly explored in ceramic studies due to the methodological difficulties it entails and the interpretive repercussions that ensue (Orton *et al.* 1993:4). Complications arise in practice due to difficulties of sampling and translating partitive sherds into whole pots (Rice 1987:289). To characterise and compare ceramic assemblages requires a suite of methods to translate information from sherds into a knowledge of complete pots (Orton and Tyers 1992:164). Quantification must be both accurate and practicable (Millett 1979c:78). In the ensuing discussion, the concept of a sherd family is taken as a convenient metaphor to denote a collection of sherds from the same parent vessel.

Sherd count, sherd weight, sherd surface area, minimum number of vessels (MinNV), maximum number of vessels (MaxNV), estimated number of vessels represented (EVRep) estimated vessel equivalence (EVE), and pottery information equivalence (PIE), are all quantitative measures that inform upon the original condition of the assemblage. To acquire a more accurate impression of the quantity of material that survives, it is desirable to employ a variety of quantitative methods, and assess the discrepancies between the various estimates. Of the different techniques available to characterise and compare different assemblages, the most suitable are sherd weight and EVE, and the least suitable are sherd count and EVRep (Millett 1979c:78; Orton 1993:178-80; Orton and Tyers 1992:166-7; Orton *et al.* 1993:168-71). Convenient critical reviews of these different quantitative techniques are available elsewhere (see Millett 1979b; Orton 1993; Orton and Tyers 1992:166; Orton *et al.* 1993:21-2). The interpretive potential of sherd counts, weight counts, total sherd surface area, vessel equivalents, and vessels represented, are contemplated below. These methods, portraying assemblages in terms of fabric and form, quantify the relative frequencies of different vessel types within or between assemblages. The interpretive efficacy of each is assessed with respect to such a purpose.

3.4.1. Brokenness and completeness

The concepts of brokenness and completeness are germane to a quantitative methodology. These are useful interpretive devices to help clarify some of the caveats involved in the comparison of assemblages ravaged by post depositional processes (Orton 1993:176). Brokenness, for a particular vessel type, is defined as: "...the average number of sherds into which pots of that type have broken..." (Orton *et al.* 1993:169), and, similarly, completeness is defined as: "...the proportion of the original pot actually present in an assemblage..." (Orton *et al.* 1993:167). At the level of an assemblage, brokenness is the sherd count divided by the EVE value, and completeness the EVE value divided by the EVRep value (Orton 1993:176; Orton *et al.* 1993:178). The fabric, size, shape, wall thickness and original firing temperature of a vessel all influence its propensity to fragmentation. Indeed, vessels that are either large, thin walled or low fired are more susceptible to thorough breakage than vessels that are small, thick walled or high fired (Rice 1987:291; Sinopoli 1991:86). It is apparent that the concepts of brokenness and completeness, designed largely to express the contemporary empirical condition of an archaeological assemblage, assume the archaeological record to be a transparent reflection of the past. Orton *et al.* allege that brokenness depends on vessel type, size and context, some types being inherently more breakable than others, whereas completeness depends only on context (1993:179). Completeness, in contrast to brokenness, is therefore unrelated to the physical properties or original uses of the relevant ceramics. It is, presumably, for this reason that Orton *et al.* (1993:179) recommend completeness as a useful variable to study site formation processes. Yet instances in which completeness relates to vessel use, as, for example, in sherd reuse or selective deposition, can easily be envisaged. The density and duration of occupation, the intensity of depositional practices, the vagaries of post depositional disturbance, and the extent of excavation, all influence either the initial breakage or the subsequent recovery of the pottery, which subsequently affect both the brokenness and completeness, that is the quantity, of sherds in a ceramic assemblage (Carr 1993:97; Egloff 1973:352;

Sinopoli 1991:87). The comparison of assemblages requires equal values of both completeness and brokenness (Orton *et al.* 1993:169-70). A notable exception is estimated vessel equivalence, able to circumvent this necessity, because it is formulated independently of either quality (Orton *et al.* 1993:171).

3.4.2. Sherd count

The number of sherds in an archaeological assemblage, the sherd count, does not translate easily into the number of vessels in the original assemblage (Egloff 1973:352). A sherd count is, therefore, an indication of the amount of material present in a given assemblage, and a measure of its brokenness (Orton *et al.* 1993:169). Vessels subject to greater post depositional disturbance and abrasion are liable to be over represented in an assemblage (Rice 1987:291). To evaluate an assemblage using sherd count is to assume, as irrelevant, the diverse array of factors that contribute towards brokenness. Indeed, if sherd count is employed to make statements about assemblage composition, it is necessary to know, or assume as identical, the number of sherds into which each vessel type breaks (Orton 1993:179). In the comparison of assemblages, sherd count is unsuitable, because it is necessary to assume a uniform degree of brokenness for each vessel type in the different assemblages (Orton 1993:179; Orton *et al.* 1993:169). An alternative to an inclusive sherd count is a more restrictive rim sherd count, effectively an estimate of vessels represented, preferably adjusted in some way to compensate for vessels not represented by rim sherds. The rim count, divided by the more inclusive sherd count, ascertains the degree of brokenness of the different vessel types apparent in the assemblage (Orton 1993:173).

3.4.3. Sherd weight

Sherd weight is an indication of the amount of material present, and a measure of the relative weight of different complete vessel types. Sherd weight, in contrast to sherd count, is unaffected by the degree of brokenness (Orton *et al.* 1993:169). The weight of a complete vessel remains the same regardless of the number of sherds into which it fragments. Weight, as a quantitative measure, is unaffected by variations in sherd size and thickness (Rice 1987:291). Unfortunately, sherd weight incorporates sherd thickness, irrelevant to an estimation of the proportion of vessel represented, into the final weight measurement (Orton 1993:172). Heavy vessels are over represented in relation to light ones (Orton *et al.* 1993:169). It is necessary to know the average or relative weights of each vessel type represented, information seldom available, if sherd weight is to inform upon assemblage composition (Orton 1993:179). It is, however, feasible to use sherd weight to compare the relative proportion of vessel types between, rather than within, assemblages, assuming that the relative weights of the different vessel types remain constant in these different assemblages (Orton 1993:179; Orton *et al.* 1993:169).

3.4.4. Estimated vessel equivalence

Estimated vessel equivalence (EVE) effectively approximates the number of vessels that could be constructed from the number of sherds extant. The fundamental principles of this measurement, evident in a number of sources (eg. Egloff 1973:352; Lightfoot 1993:171; Rice 1987:292-3; Sinopoli 1991:88-9), receive a formal definition and treatment in Orton (1993:173; Orton and Tyers 1992:166; Orton *et al.* 1993:21,172-3). The EVE measurement utilises the truism that each sherd represents a fraction of a complete vessel. If the proportion of the original vessel represented by each sherd can be quantified, it becomes possible to calculate the number of vessels to which the assemblage is equivalent. This simple premise is difficult to realise in practice, because it is frequently impossible to assign sherds to particular vessel types, or to ascertain the proportion of the complete vessel that each sherd represents. The technique is restricted, as a consequence, to sherds that are both diagnostic of, and quantifiable as, a discrete fraction of a specific vessel type. Rim or base sherds are suitable, because they usually exude an excess of stylistic detail, and encompass a fraction of the circumference of the vessel. However, to calculate the proportion of a vessel a rim or base sherd represents, from the percentage of circumference that remains intact on the extant rim or base surface, is to ignore both the actual dimensions of the sherd, and the rest of the assemblage (cf. Rice 1987:292-93). This technique, a partial rather than comprehensive quantification, provides an estimated, rather than actual, vessel equivalence.

The standardised weight approach, a useful alternative to the EVE method, requires each vessel type identified in an assemblage to be assigned a standard weight value. The total weight of a sherd family, divided by the standard weight value of the vessel type from which they are derived, yields the proportion of this vessel type, represented by the sherd family, that remains extant (Orton 1993:171-2,181; Orton and Tyers 1992:178-9; Orton *et al.* 1993:172; Rice 1987:292). This method is unworkable unless the complete vessel weights of the different types identified in the assemblage are known. Similarly, sherd surface area, proffered as a refinement of sherd weight (Orton 1993:172), provides a useful indication of the proportion of the original vessel represented by a sherd. If the dimensions and general shape of the vessel are known, taken from diagnostic sherds within the sherd family, it is possible to calculate the total surface area of the vessel. The combined surface area of a sherd family, divided by the total surface area of the original vessel from which they are derived, indicates the proportion of this vessel, represented by the sherd family, still extant.

Importantly, an EVE measurement, unaffected by the vagaries of either completeness or brokenness, is therefore suitable for comparison both within and between assemblages (Orton *et al.* 1993:171). Only an EVE value, of the different techniques under discussion, can characterise and contrast the composition of different assemblages, without recourse to untenable, and premature, assumptions regarding the nature of the material that is itself the intended focus of analysis (Orton 1993:179). The statistical transformation of EVE into PIE, which converts a vessel equivalence into the statistical equivalent of a vessel total, legitimates various statistical techniques, previously invalid, to more fully quantify assemblages (Orton 1993:173; Orton and Tyers 1992:167-73; Orton *et al.* 1993:173-5).

The dependence of the majority of the above measures on the completeness and brokenness of vessels in an assemblage is immediately apparent. An estimate of the number of vessels present is more reliable if both the completeness and brokenness of the assemblage are sufficiently high to ensure that all vessels attain a recognisable salience as sherd families (Orton *et al.* 1993:169-70). It is notoriously difficult to make a definitive assignation of unconjoinable sherds to discrete sherd families, or even to recognisable archaeological ceramic types. The similarity of many sherds, perhaps from the same vessel or from different vessels, frustrates attempts to identify the number of vessels extant in an assemblage (Hally 1983:166-67; Orton *et al.* 1993:172). The interpretive significance of the different methods employed to calculate vessel representation are discussed below.

3.4.5. Vessel representation

It is perhaps trite to remark that the maximum number of vessels (MaxNV) is less than or equal to the total number of sherds in an assemblage. Yet this observation manages to adeptly convey the dubious interpretive utility of a maximal estimate. A MaxNV value is obtained by refitting as many sherds as possible, and adding the number of resultant vessels, or sherd families, to the number of solitary sherds remaining (Millett 1979c:77). A MaxNV value almost always overestimates the number of vessels present (Rice 1987:291).

Attempts to ascertain the minimum number of vessels (MinNV) effectively ignores sherds unassignable to definite sherd families (eg. Hally 1983:167). This preserves the integrity, and guarantees the reliability, of the resultant estimate as the absolute minimum number of vessels. Rice (1987:292) laments that an MinNV figure almost always underestimates the number of vessels, yet this is precisely its advantage over the alternatives. An EVE measurement provides an absolute minimum estimate for MinNV (Orton *et al.* 1993:172).

The use of either MaxNV or MinNV involves an indulgence in extremes. An estimate of vessels represented (EVRep), or number of vessels inferred (NIV) (see Rice 1987:292), fulfils the same purpose, but avoids the unnecessary interpretive complications that the use of either MaxNV or MinNV entail (Orton *et al.* 1993:172). To assess assemblage composition, it is necessary to assume that each vessel type breaks into the same number of sherds, to ensure that each vessel has an equal chance of archaeological survival, recognition, and inclusion, in any EVRep calculation (Orton 1993:179). It is necessary, in the comparison of assemblages, to assume that the relative degrees of brokenness between different vessel types are constant across these various assemblages (Orton 1993:179-80).

Methodological difficulties regularly hamper the successful application of the different quantitative approaches discussed above. It is necessary, prior to analysis, to classify an assemblage on the basis of fabric and form. Orton *et al.*, for example, urge the definition of types exclusively on fabric, and the analysis of assemblages on the basis of diagnostic material (1993:171). The condition of the pottery available for study made it impossible to apply subsequently a provisional fabric series, or typological series, to the material in a systematic manner. This failure to realise a classification amenable to quantitative evaluation severely impeded the development of meaningful statements regarding the original composition of these assemblages. This difficulty exemplifies the incongruity of these techniques to the profuse quantities of small, abraded, undiagnostic sherds that typify the archaeological condition of neolithic pottery. Essentially, the quantitative techniques available are of little use in dealing with the neolithic pottery from the Western Isles.

3.5. In pursuit of the original assemblage

Functional analyses, refitting strategies, use-life estimates, and quantitative evaluation coalesce in the pursuit of the original assemblage. It follows, from the definition given at the start of this section, that the original assemblage is not a representative sample of the pottery from the archaeological assemblage, but is rather the actual selection of pottery in use simultaneously within a finite area. Hally defines the original assemblage, or, in his terminology, full vessel assemblage, as the:

> "...array of physically and functionally distinct vessel types that are recognized and utilized by the members of a community or society..." (Hally 1983:175).

That ethno-archaeological accounts are able to identify a coherent repertoire of pottery as an original assemblage is not in dispute. The applicability of the concept to the archaeological record is, however, contestable. A critique of the concept of the original assemblage, from an archaeological perspective, is given below.

The original assemblage, as a collection of pottery, is irretrievable in methodological terms, and, as a theoretical proposition, inappropriate in conceptual terms. The methodological difficulty involves the transformation of an archaeological assemblage into one or more allegedly original assemblages. The problems encountered in this conversion, including the necessity of refitting and a reliance on use-life estimates, are legion (eg. see Mills 1989:134; Mills *et al.* 1992:217; Pool 1992:301). The use of separate areas for different activities, varying rates of deposition due to different disposal strategies, and structured deposition in ritual practices are some of the numerous factors that confuse attempts to calculate the composition of the original assemblage (see Hally 1983:178-79; 1986:276; Lightfoot 1993:168; Mills 1989:134 *ff.*; Montgomery 1993:159-161). Instances in which the original assemblage is recoverable from an archaeological assemblage are likely to be few (Hally 1983:176). These methodological difficulties exemplify the theoretical inadequacies of the concept of the original assemblage.

In theoretical terms, the notion of an original assemblage is a misnomer because it presents pottery, and, by implication, material culture in general, as an abstract functional device rather than as a sentient material resource, integral to the discursive continuity of social discourse. The treatment of the concept of the original assemblage by Lightfoot (1993) is instructive. Lightfoot, in an attempt to reconstruct the original assemblage at the Duckfoot site in south west Colorado in North America, employs estimates of vessels represented, and corresponding use lives, in the archaeological assemblage to calculate the frequency of each vessel type in the original assemblage (1993:170-2). This hypothetical reconstruction of the original assemblage, or, in Lightfoot's terminology, the systemic inventory, is subsequently compared and contrasted with ceramic deposits from elsewhere on the site to inform upon formation processes (1993:172-4). The original assemblage is effectively an acontextual comparative measure, an abstract interpretive device, designed to characterise, rather than merely itemise, the resultant archaeological assemblage. An obvious criticism, from which Lightfoot's investigation is exempt, is that, in most cases, the reconstruction of the original assemblage will be predicated on the archaeological ceramics it is intended to explain. Nonetheless, the deliberate curation of a coherent array of ceramics, with consistent proportions of specific types represented, is inconsistent with the conception of pottery as formative material culture, actively used in a variety of different contexts, often for contrasting purposes, then finally discarded, perhaps disturbed or even reused. The composition of an assemblage in use is likely to fluctuate according to inconsistencies between breakage and replacement rates (Longacre 1985:341). Other issues, not explicitly connected with pottery are likely to influence the ceramic composition of an assemblage. The nature of the prevalent economic climate, or the desirability of non-ceramic containers, for example, provoke change or ensure continuity within the available ceramic repertoire (eg. Longacre 1985:344-45).

The concept of the original assemblage is compatible with a traditional archaeological understanding of material culture, but fails utterly to accommodate a revised interpretation of material culture as a formative and discursive social resource. Pottery both embodies a continuity and exudes a fluidity of interpretive possibility that confounds the essentially conservative sentiment of the original assemblage. The original assemblage is typically conceived and described as a coherent functional entity. The concept of function consolidates and, indeed, legitimates the idea of the assemblage as a replete and balanced ceramic repertoire. But it is unhelpful to address an often disparate collection of pottery as a homogeneous totality. There is no reason to suppose that modern archaeological concepts of function coincide with those of the past (Rice 1990:8). It is unlikely that the term assemblage, defined as a discrete collection of ceramics, made any sense to the people responsible for its manufacture, use and discard. The original assemblage precipitates, and indeed perpetuates, the assumption that the archaeological record is a passive material reflection of the past. The recovery of the original assemblage, itself a theoretical fallacy, remains a methodological impossibility. There is no such thing as an original assemblage. Attempts to resurrect it demonstrate the inadequacy of the archaeological record as a record (cf. Barrett 1987:6), and the futility of attempting to interpret it as such.

3.6. Conclusion

Almost all of the literature cited in the above critique of alternative approaches to ceramics derives from north America. This fecundity of research is a direct consequence of the intellectual dominance of processualism in American archaeology. The pottery employed in this research, taken from the local archaeological record or exotic ethno-archaeological contexts, is completely unlike the neolithic pottery from Ireland and Britain, and, arguably, of little relevance as a consequence (see Woods 1986). Whether the conclusions of research into, for example, ceramic decoration (eg. Skibo *et al.* 1989), ceramic technology (eg. Young and Stone 1990), or formation processes (eg. Lightfoot 1993), predicated on assemblages from the American south west, are applicable elsewhere is doubtful. Comparable research on prehistoric ceramics from Ireland and Britain is, to my knowledge, negligible. Investigations into, for example, function (Cleal 1992; Howard 1981; Woodward 1995), technology (Woods 1984; 1986; 1989), or decoration (Boast 1990; Mizoguchi 1995), are more the exception than the rule. This research lacuna is attributable, firstly, to a general reluctance to embrace processualism, and, secondly, a paucity of suitable material available for study, in this country. Ceramic research, other than the continual production of basic specialist reports for inclusion in excavation reports, still concentrates on traditional issues like the clarification of chronological or stylistic ambiguity (eg. Sheridan 1985; 1995). The methodological strategy outlined in the following chapter is designed to facilitate a more challenging interpretation of pottery.

[1] The interpretation of the Allt Chrisal assemblage, for example, emphasising typology and chronology, is traditional (see Gibson 1995). This is disappointing, given the amount of pottery recovered, and the level of contextual detail recorded, at sites T26/26A. Admittedly, the SEARCH project, of which the Allt Chrisal excavations were a part, aspires only to basic reportage of the empirical evidence (Branigan and Foster 1995:xv). Yet no attempt is made to integrate the conclusions of the pottery report into the wider interpretation of the Allt Chrisal sites (Foster 1995:97-9).It is difficult to utilise the information on the pottery, as published, for anything other than traditional debate on typological affinity and chronological intrigue.

[2] The concept of ceramic, apparently a universal category, encourages abstract generalisation of the sort promulgated by ceramic technology (cf. Hodder 1991:71). Many of the scientific techniques used to investigate low fired, porous, and heterogeneous archaeological pottery were developed to analyse high fired, vitrified, homogeneous, commercial ceramics. The interpretive repercussions of this methodological discrepancy remain obscure (Bronitsky 1986a:53; 1986b:259; Woods 1986:170). The sources of this ambiguity lie with the types of clay, and methods of firing, used to produce the experimental ceramics that are obliged to simulate the relevant archaeological pottery. It is probable that the mineralogical differences between archaeological and experimental clays have a formative effect on their resultant technological properties and functional qualities (Feinman 1987:609). The equivalence of an open firing of archaeological pottery and a kiln firing of substitute ceramics is doubtful (Cooper and Bowman 1986:40; cf. Rice 1987:108).

Chapter four
A methodology of ceramic analysis

4.1. Introduction

The empirical aspect of the research involves a consideration of the ceramic assemblages from Eilean an Tighe, Clettraval, Unival and Rubha an Udail Site 6 on North Uist, and an assessment of decoration in the ceramic assemblage from Northton on Harris. This analysis is not a comprehensive survey of the extant neolithic ceramics from the Western Isles. My research strategy does not aspire to the traditional notion of synthesis in which an exhaustive coverage of the material is attempted. Instead, this research is designed to demonstrate the interpretive potential of archaeological ceramics using a select number of appropriate assemblages. The majority of the assemblages necessary for comprehensive analysis were, at any rate, unavailable for study, because my research timetable clashed with the post-excavation schedules of several sites which yielded relevant material. Attempts to gain access to the assemblages from Bharpa Carinish on North Uist, and from Allt Chrisal on Barra, were unsuccessful as a consequence. Access to study the assemblages from Eilean Domhnuill a Spionnaidh on North Uist and Dalmore on Lewis, both in the catalogued collections of the National Museum, was denied, due to limitations of available resources and, in particular, study space. The assemblages available for study are dealt with in considerable detail, to demonstrate the interpretive potential of a ceramic analysis that focuses upon an eclectic variety of different interpretive approaches, rather than the usual searches for comparative material elsewhere in the archaeological record.

A superficial examination of the substantial assemblage from Eilean Domhnuill a Spionnaidh indicated that it contained material similar to the assemblages analysed in this study. The methodology of the ceramic analysis is designed to produce results in a format compatible with those anticipated for the ceramics from Eilean Domhnuill a Spionnaidh. To facilitate comparisons between the different assemblages the methodological approach taken here is adapted from that of the Eilean Domhnuill a Spionnaidh ceramic analysis (see Brown nd.). However the categorical structure of the latter study, designed to achieve a general characterisation of the Eilean Domhnuill a Spionnaidh assemblage, is inadequate for the detailed interpretive aspirations of my research strategy. The compatibility of the two separate research programmes is assured at a general level, given the broad similarities between them in methodological terms.

4.2. The impossibility of a reliable macroscopic fabric series

The research strategy does not include a systematic analysis of fabric. To construct a fabric series, with any archaeological integrity and interpretive reliability, by macroscopic analysis, requires a fresh break in each sherd, to expose a representative fracture across its constituent fabric (see Orton *et al.* 1993:135-36; Rice 1987:322; Rye 1981:50). The necessity of a recent fracture is particularly acute, with respect to the neolithic pottery from the Western Isles, due to the intrinsic properties of many fabrics, and the current condition of the pottery. The identifiable fabrics are differentiated only by the proportion of minuscule quartz and quartzite fragments, presumably added inclusions, exposed in the sherd fracture profiles. The proportion of inclusions exposed, however, often varied on the different fracture profiles of the same sherd, or actually appeared misleading, on sherds broken in storage, already displaying a fresh break. The conditions of storage of the pottery, particularly the assemblage from Eilean an Tighe, with vast quantities of sherds left to abrade slowly against each other in large wooden boxes, meant that the majority of sherds were covered with a fine dust, derived from abraded fabrics, which cleaning with a photographic blow brush only partially removed. Essentially, much of the pottery was filthy. The high proportion of refitted vessels, particularly in the assemblages from Clettraval and Unival, effectively made many fracture profiles on such vessels inaccessible. It was neither possible to break a corner from selected sherds with pincers, nor even to wash, the material made available for analysis, given the conditions of access. These circumstances precluded any systematic macroscopic evaluation of fabric.

Despite these difficulties, a *provisional* macroscopic fabric series, comprising eight different fabrics, was compiled during an initial evaluation of the Eilean an Tighe assemblage. To discriminate between fabrics on the basis of the type, frequency, degree of sorting, and sphericity or angularity, of inclusions is often impractical, given the condition of the extant pottery, despite the availability of various schemes to help quantify these characteristics of fabric (eg. Mathew *et al.* 1991:211-63). At any rate, this fabric series, in which fabrics with quartz, quartzite, probably feldspar, and other indeterminate rock and organic inclusions were all represented, attested to a considerable diversity of fabrics. Certain fabrics, separable solely on the basis of differential proportions of quartz sand inclusions, compared readily with fabrics identified at Allt Chrisal on Barra (see Gibson 1995:100), Callanais on Lewis (Henshall nd.), and Eilean Domhnuill a Spionnaidh (Nigel Brown nd.), Unival, Clettraval, and Rubha an Udail Site 6, on North Uist. At many sites, the proportion of inclusions varied within, not simply between, the fabrics of several sherds examined, presumably due to the poor preparation of the clay during manufacture. Discrimination between the fabrics in the provisional fabric series, involving a considerable degree of subjectivity, was seldom uncontentious (cf. Brown nd.; Gibson 1995:100; Henshall nd.). It is difficult to retain confidence in a fabric classification able to accommodate the same sherd in different categories. Due to this unfortunate ambiguity of classification, and the prohibition on creating a fresh fracture profile on selective sherds, it was felt that this fabric series had little interpretive validity, and was not, as a consequence, incorporated into the analysis. It is preferable to dispense with fabric, and recognise the detrimental interpretive repercussions of such a methodological caveat, rather than operate with a travesty of a fabric series, particularly one predicated on a macroscopic analysis, in which no confidence can be placed.[1] The veracity of many macroscopic fabric series for prehistoric pottery is probably exaggerated. A systematic recording of fabric was completed only for the material from Rubha an Udail Site 6, the only assemblage from a machair environment, and not requiring washing prior to analysis (see section 8.4.1.1.).

The material studied was characterised according to the ceramic recording system detailed in section 4.3. below. The various attributes, and corresponding possible attribute states, are itemised and discussed together.

4.3. A ceramic recording system

The variables recorded in this analysis were selected to inform upon specific aspects of ceramic use and elicit details of the formation processes of the archaeological assemblage. The variables are presented in Figure 4.1, and discussed subsequently, under general thematic headings.

Figure 4.1.: variables recognised and recorded during ceramic analysis

General descriptive variables

Sherd number
Context
Number of sherds
Weight
Reconstruction
Burnt or overfired
Miscellaneous
Concretions
Illustration

Manufacturing variables

Manufacturing method
Internal surface treatment
External surface treatment

Morphological variables

Rim form
Rim orientation
Rim diameter
Rim percentage
Vessel form
Vessel type
Sherd size
Feature sherd
Sherd thickness
Base form

Decorative variables

Decorative technique
Decorative position
Decorative motif
Decorative scheme

Use alteration variables

Internal abrasion
External abrasion
Internal residues
External residues

4.3.1. General descriptive variables

4.3.1.1. Sherd number

This label, a combination of numbers and letters, provides each individual sherd with a unique identity. The exact format of these exclusive markers is determined by the manner in which the material is catalogued and stored in the then National Museum of Antiquaries of Scotland (NMAS) in Edinburgh. Items in the Museum collections are identified with both catalogue and registration numbers (NMAS 1984:1). The relevant ceramics from the Western Isles were all originally accessioned and catalogued in accordance with conventional stylistic categories. Catalogue numbers often refer to multiple, rather than individual, sherds as a consequence. The sherd numbers in my analysis comprise a system of unique identifications that preserve, but also elaborate upon, the structure of the NMAS catalogue. These labels recognise and, where appropriate, further discriminate between the catalogue numbers of the entries in the Museum accession register. A numerical suffix is employed, where necessary, to further differentiate NMAS catalogue numbers. In the Northton assemblage, yet to be accessioned formally, the neolithic material is stored according to salient differences in decoration, and the beaker material according to the occupation phases on the actual site. Again, the use of a numerical suffix guarantees the integrity of the original storage order of this assemblage.

4.3.1.2. Context

The context category indicates the stratigraphic or contextual location of the sherd(s) to which the record refers.

4.3.1.3. Number of sherds

This category records the number of sherds to which the pro forma record refers.

4.3.1.4. Weight

This category records the weight of the sherd(s) to which the pro forma record refers. The weight is measured to the nearest gram. The minimum weight recognised by this methodology is one gram. Sherds of less than one gram were designated this value as an arbitrary minimum weight. Vessel reconstructions were weighed where practicable.

4.3.1.5. Reconstruction

Unfortunately, for reasons both practical and empirical, the beguiling interpretive potential of refitting remains largely unrealised in this analysis. The selective refitting conducted on some of the material from the Western Isles, was intended to inform upon depositional practices and post depositional disturbance. The size and fragmentary nature of many assemblages meant that it was impossible to assign the vast majority of sherds in each to discrete vessel groups. The insufficient space made available for artefact analysis in the National Museum, in which the majority of the pottery was examined, further compounded these limitations.

Fortunately, the original post-excavation procedures, conducted on the various assemblages used in the current study, all resulted in some tentative reconstructions to illustrate, and encourage a comparison of, the different ceramic styles represented in each assemblage. It is inevitable, in culture historical terms, that such reconstructions bestow an inordinate interpretive salience on whole vessels at the expense of loose sherds. But the promotion of some styles, as intact vessels, and the subjugation of others, as disparate sherds, is inevitable. The existing reconstructions were employed as appropriate to investigate depositional practices and post depositional processes and originally intended.

The fragility or fixity of some vessel reconstructions meant that some attribute states were unobtainable. It was frequently impossible to ascertain the size, thickness, or weight of the individual sherds in these composite reconstructions due to practical constraints. At any rate, many of the reconstructions comprise more plaster of paris than original ceramic.

4.3.1.6. Overfired or burnt

Over-firing refers to an excessive temperature during open firing. Burning refers to an inadvertent firing subsequent to initial breakage. The burnt condition of some sherds therefore provides important information on the nature and extent of post-depositional disturbance in certain depositional contexts. Even the highest temperatures obtainable within an open firing are insufficient to induce warping of the ceramic body. Evidence of over-firing is limited to an apparent discoloration of the resultant fabric, rather than any deformation in the intended morphology, of the vessel in question. It is largely impossible to distinguish between burning and over-firing.

4.3.1.7. Miscellaneous

The category of miscellany records numerous features that occur irregularly on various sherds. These different miscellaneous features are itemised below.

A - cordon
C - carination
L - laminar fracture of sherd surface
N - sherd from necked bowl
O - pre-firing perforation
P - post-firing perforation
Q - severe abrasion
R - ridge
S - lug

4.3.1.8. Concretions

Concretions, for the purposes of this study, are interpreted as inorganic accretions attributable to natural post-depositional processes. The accumulation of inorganic concretions through vessel production or use is exceptional, although inorganic adhesions, derived from production tools, are known in some cultural contexts (Deal 1988:131). However, concretions invariably extend onto the fracture edges of sherds, confirming formation subsequent to vessel breakage. Some sherds from the Western Isles, particularly those in the Erskine Beveridge collection, are often covered by large patches of dense black concretions, which obscure entirely the original sherd surfaces, and impede interpretation. These concretions are presumably a consequence of taphonomy rather than neglectful storage.

The following values relate more to the location of these concretions rather than the composition or nature of the actual concretion.

I - concretion on the exterior surface
J - concretion on the interior surface
K - concretion on the interior and exterior surfaces
L - concretions on both surfaces and edges of the sherd

4.3.1.9. Illustration

The illustrations, primarily of the pottery from Eilean an Tighe, are designed to exemplify the classification system used to record the various assemblages that form the empirical focus of this research. The drawings depict the classification of rim forms, vessel forms, decorative motifs and decorative schemes. Other important aspects of the classification scheme, for example abrasion and surface treatment, are not illustrated. Pottery that cannot be incorporated satisfactorily into the classification is also illustrated.

4.3.2. Manufacturing variables

4.3.2.1. Manufacturing method

The different productions methods relevant to the manufacture of prehistoric pottery are dealt with adequately elsewhere and require no further comment here (see Rice 1987:124-8; Sinopoli 1991:17-20). Instead, the diagnostic characteristics of coil joining, slab building, and lateral joining, the techniques employed to manufacture neolithic pottery from the Western Isles, are discussed.

Diagnostic characteristics of different manufacturing methods are seldom exclusive to a specific technique. It is difficult to ascertain the exact method of manufacture used from the archaeological ceramics alone. Distinctive indications of coil joining include exposed building coils and negative coil cavities visible in fracture profile, horizontal corrugations tangible on the interior surface, horizontal cracking, a stepped fracture profile, and inclusions aligned with the original ceramic surface (Gibson and Woods 1990:36-40; Orton *et al.* 1993:118-20; Rye 1981:67-8; Shepard 1985:183-85; Stevenson 1953:66; Woods 1984:103; 1986:159; 1989:196). Pinching, drawing, and slab building exhibit no distinctive characteristics (see Gibson and Woods 1990:40; Rye 1981:70, 72). Evidence of coil joining is therefore likely to be over represented in any systematic survey of manufacturing techniques.

Much of the neolithic pottery from the Western Isles, suffering from endemic laminar fracture, was probably manufactured, effectively assembled, by a combination of coiling and lateral joining (Stevenson 1953:66, Figure 1, no. 10:67). Indeed, lateral joins, more than simply exaggerated sloping coil joins, are frequently discernible in sherd fracture profiles. Unfortunately, laminar fracture, variously indicating lateral joining, slab building (Rye 1981:72; Shepard 1985:185), or the use of the beater and anvil technique (Stevenson 1953:65), is an unreliable feature to employ to identify manufacturing method. Although Rye states that laminar fracture does not occur on coil built pottery (1981:68), this construction method aligns the inclusions in the fabric parallel to the ceramic surface, suggesting a tendency towards laminar fracture (Feathers 1989:581). Coil building need not preclude laminar fracture, particularly if sloping coil joins were used, or where the surfaces of the vessel were consolidated subsequently by beating.

The category of manufacture records the techniques of construction used in the production of each vessel. It is difficult to ascertain the method of manufacture in the vast majority of cases because the various surface treatments employed as secondary manufacturing processes usually obscure the construction joins. The fracture profiles on the sherds are, with the exception of the occasional example of coil building, invariably undiagnostic.

A - coil join
B - slab join
C - lateral join
D - join between previously prepared parts of the vessel

4.3.2.2. Surface treatments

Surface treatment refers the different methods used to prepare the interior and exterior surfaces of the vessel before firing. The various surface treatments employed in the making of prehistoric ceramics are effectively secondary manufacturing techniques, designed to consolidate the primary construction, and enhance the functional performance of the vessel. The surface treatments relevant to the neolithic pottery from the Western Isles are wiping, smoothing, burnishing, slipping, slurrying, roughening and, possibly, coating with organic substances. Importantly, almost all of these different surface treatments, as secondary manufacturing techniques, effect similar physical transformations to the ceramic, and reduce the friability and porosity of the surface, if not the interior, of the fabric, by either compaction or sealing, to make the surface harder and less permeable. The archaeological characteristics of these surface treatments are evaluated below.

Wiping, smoothing, burnishing and polishing are differentiated largely by degree, rather than method, of application. Many of these myriad surface treatments are vulnerable to taphonomic decay due to their superficial nature (Skibo 1992:45). Slips are especially susceptible to decay, whereas burnishing creates a more resilient surface (see O'Brien 1990). However, the varying effects of taphonomy, transforming a burnished surface into a smoothed one by physical attrition, for example, frustrate the identification of original surface treatments. The distinctive granular texture and plastic flow lines created by wiping, conducted on clayware surfaces, distinguish it from other surface treatments, conducted on leather hard surfaces (Shepard 1985:188, 190, 191). Smoothing, which creates a matte surface, does not result in the lustre typical of burnishing or polishing (Sinopoli 1991:25-6). A burnished surface often exhibits an inconsistent lustre (Rice 1987:138; Rye 1981:90), particularly if the clay is insufficiently, or exceedingly, dry (Gibson and Woods 1990:42-3; Shepard 1985:123). Polishing creates a uniform gloss with negligible traces of tool marks (Sinopoli 1991:26). The presence of burnishing is, however, more readily attested by the presence of a lustrous surface than the foregoing diagnostic traces. The lustre on neolithic pottery from the Western Isles is more likely a consequence of burnishing, than the intrinsic refractory properties of the fabric.

Various archaeological features facilitate the macroscopic detection of a slip. These include a colour difference between the surface and the interior of the ceramic, hexagonal cracking on the surface that does not extend into the interior of the ceramic, and diagnostic traces of application technique (Rye 1981:41, 54; Shepard 1985:191; Sinopoli 1991:63, 65). Various unrelated phenomena, including certain effects of wiping, smoothing, beating, drying, and firing, are readily confused with a slip due to a similar resultant surface appearance (see Orton *et al.* 1993:126; Rice 1987:150, 151; Rye 1976:131, 134; 1981:57, 85; Shepard 1985:193).

The recognition of organic surface treatments, readily confused with use related organic residues (Henrickson and MacDonald 1983:637; Vitelli 1989:22), is unlikely, even if the organic coating survives the detrimental effects of use (see Schiffer 1990:379-80) or taphonomy (Skibo 1992:107; Vitelli 1989:22). There is, at any rate, some evidence to suggest that food accretions and carbon residues acquired through use operate as sealants when absorbed into the fabric, and have a similar effect to post firing organic coatings (Oetgen 1984:44; Rice 1987:231; Schiffer 1990:380). Presumably, many deliberate organic coatings applied to neolithic pottery are routinely mistaken for macroscopic food residues.

The different types of surface treatment recognised in this analysis are itemised below.

1A - slip on external surface
1B - slip on both internal and external surfaces
1C - slip on internal surface
2 - smoothed
3 - burnished
4 - roughened or slurried
5 - interior wipe
6 - exterior wipe
7 - interior and exterior wipe

4.3.3. Morphological variables

4.3.3.1. The archaeological portrayal of morphology

The inordinate significance of shape in traditional ceramic analysis facilitate the conception of vessels as an amalgam of discrete morphological facets. This preoccupation with form is taken to extremes in the treatment of rim morphology (cf. Rice 1987:215; Shepard 1985:252). One of the major opportunities for stylistic elaboration in pottery design lies in the treatment of the rim (Miller 1985:41). The variety and diversity of design feasible in rim mouldings is incalculable. As a consequence, rim forms, able to sustain classifications of prodigious complexity, are a fecund categorical resource (Shepard 1985:245-56).

However, minor variations in rim morphology are more readily attributable to the malleability of clay than differential cultural expression:

> "Another sweep of the potter's fingers might have produced a different shape" (Shepard 1985:246).

The enhanced clarity of morphology evident in cross-section is neither apparent on, nor relevant to, unbroken vessels:

> "It is well to consider extent of visibility in the surface view because variations in the form of the concealed part will be fortuitous unless they were functional... ...A well-stylized rim may be a very useful diagnostic in classification, but a minor variation may be a minutia which is meaningless in the study of style" (Shepard 1985:247; cf. Cleal 1992:290).

Ceramic ethno-archaeological studies suggest that the morphological intricacies of rim design are inconsequential to the people who manufacture, use and discard pottery (Rice 1987:270). Miller documents the design variability apparent amongst rims from supposedly identical pots (1985:41, Figure 9:42). These rim forms exhibit morphological variations sufficient to accrue a typological significance in archaeological classification. It is a fallacy to attribute such variability of rim design to imperfect or careless manufacture. The potters responsible for these variations consider themselves to have made identical vessels. Trivial morphological divergence in rim design is an irrelevance to the classification procedures that identify these vessels as identical. It is no surprise, then, that ethno-archaeological results dispute the relevance of archaeological arguments predicated on arbitrary representations of rim designs which afford morphological profile a profound interpretative significance.

Interpretations that emphasise style are not inconsistent with attempts to explain rim design in functional terms; for example, as a thickening of the vessel wall to reinforce the orifice, otherwise perhaps the most fragile part of the vessel. Attempts to describe the shape of pottery, discussed below, rely more on concepts of proportion, to emphasis functional utility, than on abstract stylistic comparisons, to suggest cultural affinity.

The popular terms used to describe ceramic shape, such as jar and bowl, are convenient but ambiguous, precisely because they enjoy ubiquitous use in the archaeological literature (Rice 1984:276; 1987:211, 215, 217; Shepard 1985:225). Uncritical allusions to function are implicit within this popular terminology (Henrickson 1990:84). The shapes to which these familiar terms refer are intuitively recognisable (Shepard 1985:240). However, function is an unsuitable and inadequate concept with which to conceptualise morphology (see section 3.3.3.1.; cf. Shepard 1985:224). Attempts to eradicate the inconsistencies inherent in the intuitive recognition of morphology have instead encouraged the objective description of shape. These different conceptualisations of vessel morphology, as a combination of contours or geometrical composites (Orton *et al.* 1993:80, 158; Rice 1987:217-22; Shepard 1985:225-48), standardise the classification of shape to facilitate the comparison of assemblages. The various schemes that exist to describe morphology range from the simple, in which the rudimentary morphological components of a pot are the orifice, the body, and the base (Rice 1987:212), to the complex, where each component of the morphology and decoration is given a formal definition to encapsulate the nuances of vessel design (eg. Krause 1984:622-27). The use of ratio measurements to convey the relative proportions of vessel shape represents a further quantitative control on morphology (Rice 1987:215-17; Shepard 1985:238; Sinopoli 1991, Table 3.2:61).

The objectivity to which these classifications aspire replace an intuitive appreciation of shape with a formal evaluation of geometry. The envisaged mathematical rules are agreeable to the interpretive aspirations of processualism (eg. Skibo 1992:36). These definitive rules attract various criticisms. Firstly, the morphological rigidity of hypothetical geometrical shapes inappropriate to the classification of hand built pottery, where exact replicability of morphological form is seldom achieved (Shepard 1985:233). Secondly, there is no guarantee that such morphological precision is relevant to the potters responsible for its manufacture. Thirdly, the cost of this objectivity is an increasingly abstract vocabulary, in which the austere mathematical terminology of both contour and geometrical classifications transform familiar shapes into a verbose geometry. It is undesirable to pursue the extirpation of familiar descriptive labels if they articulate a particular shape with clarity and expression (cf. Rice 1987:211). Fourthly, these geometrical classifications are difficult to apply to sherds (Orton *et al.* 1993:158).

These different methods of morphological description contain, despite their disadvantages, the potential to portray and interpret shape in functional terms. The classification adopted here, following Cleal (1992:290-304), Shepard (1985:228-30), and Sinopoli (1991:60), conceptualises vessel shape as either open, neutral or closed. Diverging walls define an open, converging walls a closed, and roughly parallel walls a neutral, morphological profile. Simplicity is the crucial advantage of this classification over the more sophisticated contour or geometrical versions mentioned earlier. It is possible to evaluate and then assign sherds to the appropriate morphological category on an intuitive basis. The categories are sufficiently inclusive to allow the characterisation of assemblages that survive predominantly in sherd form. Only a small proportion of the original vessel is required to identify its rudimentary morphological profile as either open, closed, or neutral. The classification is not exclusive to rim sherds, although it is inevitable that certain sherds, depending on their size or position on the original vessel, remain undiagnostic. The open, closed and neutral categories do not simply describe but also indicate the functional remit of each vessel form. Function, although sometimes implicated, is not an explicit investigative priority in traditional pottery typologies.

4.3.3.2. The ambiguity of morphological classification

The vagaries of morphology commonly found on prehistoric pottery include undulating rim surfaces and warped or asymmetrical bodies. These features are not always apparent on the derivative sherds, which are too small to display such general inconsistencies of form. Yet there is a tendency to reconstruct, from these sherds, an original pot with uniform morphology and perfect symmetry. That complete vessels exude morphological inconsistencies enough to encompass several categories of rim form, for example, demonstrates as a nonsense the concept of a definitive classification. Several sherds, representing vessels E14, E28, E62, and E391, for example, and some partial or complete reconstructions, representing vessels E512, E716, and E3739, for example, from Eilean an Tighe, amply demonstrate this point. Archaeological classification involves a typological conspiracy to contrive synthesis and enable generalisation.

It is inevitable that even a comprehensive classification will fail to banish ambiguity from the material culture it is designed to categorise. There are numerous sherds within the assemblages that defy the categorical conventions of the classification of rim forms used here. This is an inevitable consequence of, firstly, the inherent structure of the typology, and, secondly, the empirical diversity of the pottery. The stylistic consistency anticipated by typology remains elusive in the archaeological reality of morphological inconsistency and decorative insensibility. It is, then, difficult to distinguish between separate categories of rim form, for example types 10 and 13, as manifest on E38 (see Figure 2.2) and E46 (see Figure 2.45) respectively, or, similarly, types 7B and 12A, as manifest on E338 and E64 (see Figure 2.44) respectively, when confronted with sherds that confuse the stylistic distinctions between them. Indeed, some sherds embody the defining characteristics of different rim designs. It is, for example, possible to classify the rim design of E211 as either type 8 or 12B, and, similarly, the rim design of E217 as either type 4 or 8, depending on which stylistic criteria require emphasis.

Dubious assignations amongst the classification of rim forms include E82 (see Figure 2.44), E91 (see Figure 2.2), E110, E111(see Figure 2.4), E186, E189 (see Figure 2.4), E206, E208, E223 (see Figure 2.5), E299, E303 (see Figure 2.2), E304 (see Figure 2.3), E311 (see Figure 2.45), E312 (see Figure 2.43), E314 (see Figure 2.45), E322 (see Figure 2.5), E344 (see Figure 2.40), E352 (see Figure 2.44), E405 (see Figure 2.2), E410 (see Figure 2.43), E520, E543 (see Figure

2.41), E3741 (see Figure 2.32), E3742 (see Figure 2.31). Indeed, with respect to the categorisation deployed here, an alternative classification of ambiguous rim forms, presented in Figure 4.2. below, is discernible. This represents a fragment of a second typology of rim mouldings that remains necessarily undeveloped. Essentially, any number of alternative, and equally plausible, categories could by formulated to classify adequately the relevant assemblages. The classification adopted here, like all classification, is inherently divisive; it provokes rupture and develops structure amongst the pottery. The dubious categorical assignations and alternative classifications given above are the casualties of a formative typological process that promotes some aspects of the material, but discriminates against others, on an entirely arbitrary basis.

Some rim forms are sufficiently unusual to be almost unique. The elaborately shaped rims on E422 (see Figure 2.40) and E681 (see Figure 2.40), from Eilean an Tighe deserve especial mention in this respect.

Figure 4.2.: an alternative categorisation of rim forms

1	flattened horizontal rim surface; pinched external expansion; examples include E83 (see Figure 2.38), E84 (see Figure 2.5), E85 (see Figure 2.5)
2	bulbous external expansion, created by folding necessary clay over on itself on the exterior surface; examples include E299 (see Figure 2.5) and E352 (see Figure 2.44)
3	distinctive internal expansion; examples include E12 (see Figure 2.34) and E303 (see Figure 2.2)
4	initial rectangular external expansion, with additional clay luted onto lower rim surface on the exterior surface to create triangular external expansion; examples include E15 (see Figure 2.43) and E175 (see Figure 2.3)
5	bulbous external expansion, with smaller internal expansion created by folding necessary clay over on itself; examples include E66 (see Figure 2.44) and E93 (see Figure 2.2)
6	thickened rim with flattened horizontal rim surface and pinched internal expansion examples include E79 (see Figure 2.44) and E362 (see Figure 2.44)
7	concave horizontal rim surface with horizontal notch along exterior surface defining rim edge; examples include E297 (see Figure 2.5), E304 (see Figure 2.3)
8	everted simple rim with concave horizontal rim surface and near vertical internal bevel; examples include E486, E490, E492, E493, and E495

The different variables used to describe ceramic morphology do more than merely depict the physical condition of the material. They enable different interpretive strategies to elucidate the original composition of the different assemblages, and allow an insight into post depositional formation processes on the corresponding sites. The various morphological variables are listed below.

4.3.3.3. Rim morphology

Many of the differences between rim forms in my classification are arbitrary or minuscule. They are intended, not as an unnecessary typological indulgence, but as a comprehensive resume of empirical variation in rim form. The 14 specific types of rim recognisable in the pottery studied are itemised in Figure 4.3. below.

Figure 4.3.: a heuristic classification of rim morphology

1 -	plain, simple
2A -	everted
2B -	rolled
3 -	long external expansion
4 -	short external expansion
5 -	thick, truncated external expansion
6 -	T - shaped
7A -	collared, overhangs on exterior surface
7B -	collared, inturned
8 -	inturned, concave interior surface
9 -	inturned, concave exterior
10 -	thickened
11 -	internal expansion
12A -	external bevel, pronounced externalexpansion
12B -	external bevel, inturned, with minimal external expansion
13 -	triangular expansion
14 -	plates, dishes and lids

4.3.3.4. Rim orientation

Two measurements are taken to establish the original position of the rim. Firstly, the angle of the main rim surface and, secondly, the orientation of the entire rim moulding, relative to the contour of the vessel wall, are recorded.

The values employed to describe the angle of the main rim surface are as follows.

H - the main rim surface is horizontal
I - the main rim surface is inverted
E - the main rim surface is everted
C - the main rim surface is convex

The values employed to describe the orientation of the rim moulding are as follows.

1 - rim from an open vessel
2 - rim from a closed vessel
3 - rim from a straight sided vessel

4.3.3.5. Rim diameter

The diameter of each vessel represented was measured to the nearest five millimetres. In instances where the rim diameter was impossible to ascertain, the width of the horizontal rim surface was recorded instead, to provide an indication of the permissible dimensions and prevalent scales of different rim forms.

4.3.3.6. Rim percentage

The rim percentage is the proportion of the circumference surviving on each rim sherd. It was only possible to determine the rim percentage where the original orientation and diameter of the rim were measurable. A rim percentage provides an indication of the reliability of the accompanying measurement of the rim diameter.

4.3.3.7. Vessel form

Each sherd is, whenever possible, allocated an open, neutral or closed morphological profile, to convey the general shape of the original vessel. The use of a more elaborate classification, involving the further sub division of the envisaged scheme, or a more formal description with composite geometrical shapes, was eschewed, because so few complete or reconstructable vessel profiles survive. The overwhelming predominance of apparently orphan sherds in the relevant assemblages prevents the systematic application of an elaborate classification (cf. Shepard 1985: *passim*; Cleal 1992:290-304). The values employed to characterise vessel form, the definitions taken from Cleal (1992:304), are summarised below.

1 - an open profile (the diameter of the mouth exceeds that of the body)
2 - a closed profile (the diameter of the body exceeds that of the mouth)
3 - a neutral profile (the diameter of the mouth and body are roughly the same)

4.3.3.8. Vessel type

Although this analysis attempts to construct an alternative interpretation of neolithic pottery in the Western Isles, it remains necessary to translate this material into a traditional typological vocabulary. It is only possible to establish the vessel type for those vessels represented by sizeable or distinctive sherds. That only a tiny proportion of the assemblages studied can be accommodated using a conventional classification is an indication of the fragmentary condition of the pottery and the limited interpretive efficacy of a traditional typology. The vessel types itemised in Figure 4.4. below are taken from the typology used to catalogue the assemblage from Eilean Domhnuill a Spionnaidh (see Brown nd.).

Figure 4.4.: a heuristic classification of vessel morphology

1A - cups
1B - necked cups
2A - open bowls
2B - open bowls (flanged bowl)
3 - necked bowls
4 - bag shaped jars
5 - ridged bag shaped jars (hebridean ware)
6 - barrel shaped jars
7 - carinated bowls
8 - unstan bowls
9 - bipartite closed bowls (beacharra ware)
10 - lids or shallow dishes

11 - beakers

4.3.3.9. Sherd size

Size, the maximum extant dimension of the sherd, is recorded to facilitate an evaluation of the nature of depositional practices at each site. Although this measurement fails to characterise the shape of these sherds, it does provide a common quantitative standard to facilitate comparison between the various sherds from different parts of the site, to assess the potential significance of depositional practices and post depositional processes.

4.3.3.10. Feature sherd

Sherds are classified as representing either the rim, neck, shoulder, body, body/base or base of the vessel from which they derive. A formal definition of each feature sherd category are provided below.

R - rim sherd (a rim surface is extant)
N - neck sherd (the exterior surface of the sherd is concave)
S - shoulder sherd (the exterior surface of the sherd incorporates a point of inflexion)
W - body sherd (the exterior surface of the sherd is convex)
WB - body/base sherd (the distinction between the body and base is either indiscernible or indistinct, and the sherd embodies components of both the body and the base)
B - base sherd (a base surface is extant)
P - miscellaneous sherd (for example, a detached cordon or manufacturing debris)

4.3.3.11. Sherd thickness

The thickness of each sherd is measured to provide a rough indication of original vessel size. An average value is taken for sherds and vessels with minor undulations in wall thickness. No value is recorded for sherds with a widely varying or diverging wall thickness, or for sherds in which either the interior or exterior surface is missing.

4.3.3.12. Base form

The majority of base sherds from round based vessels are difficult to detect and easily confused with body sherds. Two types of base are recognisable.

1 - round bottomed
2 - flat bottomed

4.3.4. Decorative variables

There are innumerable studies of decoration on material culture to form a suitable precedent to the analysis of design undertaken on the pottery analysed. Many of these previous studies, not all of which focus on pottery, are intended as enquiries into the nature of style in material culture. Although space precludes a thorough consideration of these numerous studies, some preliminary comments on select analyses are desirable to situate the methodology employed in this research in a familiar theoretical context.

It is possible, with respect to archaeological approaches to decorative analysis, to make a distinction, ubiquitous in perceptual, if not fundamental in cultural, terms, between the constituent motifs and the overall design in which such motifs are situated (see Gombrich 1979). The intellectual expenditure on the significance of, and relation between, the individual motifs and the wider pattern of which they are an integral part, is considerable, if not always profitable. Arguments on the original significance (eg. Hodder 1986:39) or analytical suitability (eg. DeBoar 1990:87) of motifs abound. Such debate adeptly confirms the futility of attempting to extract and isolate specific motifs from their decorative context to assign them each a definitive, and intrinsic, meaning. Indeed, there is a traditional reluctance, which stems from the interpretive conventions of culture-historicism, to indulge in such speculation. The influence of structuralism, in certain post-processual studies, has ensured that a confrontation with the actual meanings decoration was presumed to evoke, in its original aesthetic capacity in the past, have been avoided in deference to a focus on the relations between motifs.

The numerous different archaeological approaches to decoration offer a bewildering variety of methodological choice from which to select an appropriate analytical strategy. A culture historical methodology involved little more than the description and comparison of apparently salient aspects of decoration. The seminal processual studies of Deetz (1965), Hill (1970), Longacre (1970) and Whallon (1968), which initiated and encapsulated the interpretive optimism of the so-called ceramic sociology, demonstrated the interpretive potential decoration was considered to hold. Decorative analyses which employ methodological approaches indebted to structuralism are prevalent in post-processualism (eg. Lévi Strauss 1973; Hodder 1982a; 1982b; Shanks and Tilley 1987; Tilley 1984; Washburn 1983; 1990). The investigations of Hodder (1982b) and Tilley (1984; Shanks and Tilley 1987b:155-71) explored more fully below, provide the necessary methodological precepts followed in this research. It is, in these different studies, the relations between the motifs rather than the individual motifs themselves that are relevant. This ensures that a focus on the organisation of motifs, on decorative structure, is inevitable. That the decoration on these particular ceramics is composed entirely of abstract, that is, geometric designs, lends the material to, and enriches the interpretive potential of, a structural analysis.

Hodder investigates the decorative structure of Trechterbeker (TRB) and Protruding Foot Beaker (PFB) ceramics from the Netherlands (1982b:162-70). He conceptualises the decorative structure of the TRB pottery as a hierarchical series of oppositions between motifs juxtaposed in either vertical or horizontal alignments:

> "The design structure can be represented as the generation of the h/v [horizontal/vertical] dichotomy to form a dendritic pattern... ...Not all pots have the full dendritic system, but most do use the same generative rules" (Hodder 1982b:165).

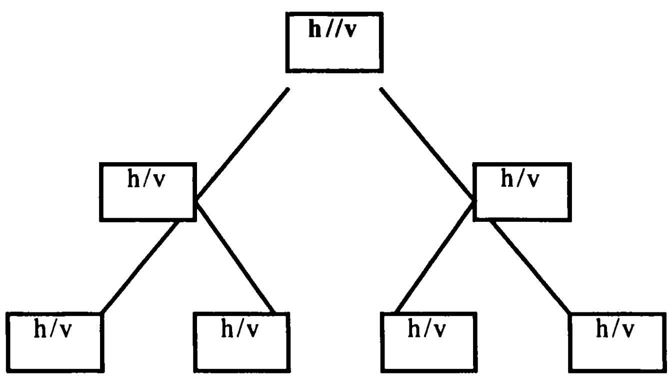
The coherence of hierarchy: "...built up from a basic contrast between horizontal and vertical organisation" (Hodder 1982b:166), permeates the decoration:

"A distinctive characteristic of this type of design is that the original design structure severely constrains further development and elaboration. The design proceeds by the subdivision of bounded areas, and the placing of the motifs at one stage is limited by the boundaries that have already been created" (Hodder 1982b:165).

This fundamental structure of design is illustrated in Figure 4.5. below.

Although this decorative structure, susceptible to diachronic variation, is not immune from a chronological displacement, it provides a basic aesthetic template with which to coordinate the superficial alterations of design manifest as motifs.

Figure 4.5.: the generative design structure of decoration on Dutch early TRB pottery
(*after* Hodder 1982b, Figure 7:166).



'h' = horizontal motif
'v' = vertical motif
'//' = major decorative distinction between design groupings including amalgams of both horizontal and vertical decorative motifs

Hodder again emphasises structure to characterise the horizontal bands of decoration found on the PFB ceramics that supersede the TRB material:

"If the zone nearest the rim is labelled A, and the next zone A if it is similar to, and B if it is different from, the first zone, then a series of alternating zones can be described..." (Hodder 1982b:168, cf. Figure 12:168).

In this instance, the methodology encourages a cumulative rather than a hierarchical conceptualisation of decorative structure:

> "...the PFB design structure is built up as a series of horizontal zones and the structure allows addition and expansion..." (Hodder 1982b:168).

Similarly, Tilley, in his assessment of the decoration on Battle Axe/Corded Ware (BAC) and Funnel Necked Beaker (TRB) ceramics, offers a succinct statement of methodological intent:

> "The classification system utilised in the study of designs on the sherd material is hierarchical in form, involving the partitioning of the total data-set from more to less inclusive levels" (1984:128).

The decoration, separated first into bounded and unbounded designs, is further categorised according to a suite of recognised geometric motifs (Tilley 1984:129-30, Figures 10-12:131-3; 1987:156-57, Figure 7.4:159). Design sequences, similar to those recorded by Hodder (1982b:168), are compiled for various TRB ceramics:

> "The design occurring in the top zone of the vessel, on or immediately below the rim on the outside was coded as A, the following design was also coded as A if it was the same as the first design or as B if it was different. A series of alternating zones on any particular vessel can thus be described in terms of alphabetical sequences..." (Tilley 1984:134).

These decorative signatures are written as relations between particular motifs and also as binary combinations of either bounded or unbounded images (Tilley 1984:134-35, Tables 5, 6:136; 1987:157-60, Tables 7.1-7.4:161-63).

The wider interpretive implications of these studies are not reiterated because, in this instance, their relevance is strictly methodological. These analytical procedures are designed to characterise, at an empirical level, the various decorative motifs and motif combinations, or signatures, in evidence amongst the various assemblages studied in the succeeding chapters.

Decoration on neolithic ceramics from the Western Isles consists of a bewildering variety of abstract geometrical motifs, occurring in innumerable combinations, often in profuse quantities. There is a tendency to dismiss this complexity of decoration as indecipherable. The different assemblages that contain such vessels, plagued by this morass of imagery, are taken to exhibit an indefinable decorative equivalence. The predominance of sherds in these assemblages further confuses, and prevents the resolution of, this decorative obfuscation. This analysis focuses on the relation between individual motifs, combinations of motifs, various pottery types, and different assemblages.

4.3.4.1. Decorative technique

The category of decorative technique recognises the different methods employed to inscribe decoration onto a vessel surface. The detailed classification of decorative techniques generates particular difficulties due to the diversity of decorative techniques and motifs that can be achieved with the same implement. That the same tool is capable of both incision and grooving makes the distinction between them in the decorative classification always arbitrary and often ambiguous. Yet the manipulation of width, depth and orientation to create different forms of grooving or incision demands a classification scheme sufficiently complex to encapsulate these subtle variations of relief. Stab'n'drag decoration aptly reveals how different decorative effects can be developed with the same implement. There is often an intricate relation between decorative technique and the resultant decorative motif, because specific methods are frequently used to achieve particular designs. The different types of decorative technique discernible are listed and explained below.

A - incision
B - grooving
C - slashing
D - impression
E - stab and drag
F - fingertip
G - fingernail
H - cardium shell edge
I - square-tooth comb

J - cord
K - pointed-tooth comb

This basic characterisation of decorative method is inadequate to encapsulate the subtle variations of technique apparent in the resultant decoration. Minor variations of technique are employed to embellish and further distinguish between different areas of the vessel surface. In an attempt to articulate this variation, and increase the flexibility of the classification, certain decorative techniques are further divided as follows.

A - The sub divisions of incision are given below.

A1S - narrow, shallow incisions (scratch marks)
A2S - general, shallow incisions
A3S - wide, shallow incisions

A1D - narrow, deep incisions
A2D - general, deep incisions
A3D - wide, deep incisions

B - The sub divisions of grooving are given below

B1N - shallow, narrow grooves
B2N - general, narrow grooves
B3N - deep, narrow grooves

B1W - shallow, broad grooves
B2W - general, broad grooves
B3W - deep, broad grooves

C - slashing

This particular type of decorative technique remains unused because such method is considered to be incorporated into the various incision and grooving values iterated above.

D - The sub divisions of impressions and stabbings are given below.

D1 - concave, circular indentations
D2 - kidney shaped indentations
D3 - crescentic or hemispherical indentations
D4 - minuscule dot indentations
D5 - stabbed
D6 - short, linear indentations

E - The sub divisions of stab and drag are given below.

E1 - contiguous, truncated sequence of impressions
E2 - contiguous, elongated sequence of impressions
E3 - consecutive series of impressions

The other decorative techniques listed above are not further divided and require no additional mention.

4.3.4.2. Decorative position

The category of decorative position is designed to elucidate the relation between the decorative and morphological aspects of ceramic style. Although the prevalence of sherds in all assemblages inhibits such interpretive aspirations, it remains possible to document the preponderance of specific motifs in different morphological locations across the vessel form. These positions, devised in relation to the original ceramic vessel, are also designed for sherd material. The different decorative positions, which correspond to the feature sherd values, are itemised below.

A1 - the upper rim surface (the prominent horizontal or bevelled surface of the rim)
A2 - the external rim surface (the exterior surface of the rim elaboration on the outside of the vessel)
A3 - internal rim surface (the interior surface of the rim elaboration on the inside of the vessel)

B - neck (the exterior surface of the vessel below the rim elaboration; designates decoration confined to this immediate area)

C - shoulder

D - base

E - all over (the entire exterior surface of a complete or reconstructed vessel)

F - exterior (the *extant* exterior surface of a sherd; decoration extending across the entire surface
represented by the sherd)

G - interior

4.3.4.3. Decorative motif

The decorative motifs, effectively the smallest decorative components recognised in this classification, comprise the constituent elements of decoration. The motifs itemised in Figure 4.6, largely consisting of various combinations of linear and curvilinear lines, adequately categorise the decorative designs encountered in the various assemblages. These motifs are illustrated subsequently in Figures 4.7. to 4.11.

4.3.4.4. Decorative scheme

The decorative scheme refers to the overall arrangement of the decoration on a complete vessel. It is only possible to ascertain the decorative scheme if a sufficient proportion of the original vessel survives. The prevalence of sherds in all assemblages severely limits the interpretive efficacy of this analytical category. The relevance of this variable is therefore extended, where appropriate, to the organisation of decorative motifs as apparent on sherds. The apparent assignation of an expansive decorative scheme to a diminutive sherd with finite decorative surface may seem a rather futile exercise of interpretive desperation. Yet the use of these values, taken from the decorative scheme category, provides a convenient characterisation of the decorative structure extant on the sherds.

A general feature of the neolithic ceramics from the Western Isles is the arrangement of decoration in successive horizontal bands across the entire surface of the vessel. The ubiquity of this rather rigid decorative structure means that alternative organisations of decorative motifs are exceptional. In the inventory of decorative schemes provided below, the general arrangement of the constituent decorative motifs in horizontal bands is assumed. The exception to this is the value 'P', which indicates the layout of decorative motifs in vertical panels or metopes. The different decorative schemes recognised in this analysis are itemised below.

A - mirror translations of a single motif, across the entire sherd or vessel
B - confinement of decoration to rim and neck of rim sherds or vessels
C - single motif repeated across entire vessel
D - mirror translations of a single motif, confined to upper parts of vessel
E - different decorative motifs across entire exterior of sherd or vessels
F - exact repetition of single motif, across entire sherd or vessel
P - arrangement of decoration motifs as successive vertical panels (metopes)

To ascertain the significance of the different combinations of decoration possible on the often elaborate morphology of the rim and neck, the decorative scheme with value 'B' is further developed as follows.

B1 -	decoration on the exterior of both the rim and neck
B2 -	decoration on the exterior of the rim only
B3 -	decoration on the exterior of the neck only
B4 -	decoration on the interior surface of either the rim or the neck

Figure 4.6.: decorative motifs recognised and recorded during ceramic analysis

1A -	herring bone (pointing left)
1B -	herring bone (pointing right)
2A -	diagonal linear lines (sloping right)
2B -	diagonal linear lines (sloping left)
3 -	opposed diagonal linear lines
4 -	horizontal linear lines
5 -	vertical linear lines
6A -	alternate vertical and linear lines
6B -	alternate vertical and diagonal lines
7 -	short vertical linear lines (horizontal alignment)
7A -	short vertical linear lines (irregular alignment)
8 -	short horizontal linear lines
8A -	short linear lines (irregular alignment)
9 -	short regular linear lines (horizontal alignment)
9A -	short regular linear lines (irregular alignment)
10 -	banded stab marks
11 -	horizontal linear lines with diagonal line infills
11A -	diagonal linear lines with various motif infills
12 -	horizontal linear lines of stab and drag
13 -	integrated groups of concentric arcs
14 -	cross hatched lines
15A -	concentric lines, pattern A
15B -	concentric lines, pattern B
15C -	concentric lines, pattern C
15D -	concentric lines, pattern D
15E -	concentric lines, pattern indeterminate
15X -	multiple, interconnecting concentric lines, pattern indeterminate
16A -	circular indentations
16B -	kidney shaped indentations
16C -	crescentic or hemispherical indentations
16D -	minuscule dot indentations
16E -	short, linear indentations
16F -	miscellaneous or indeterminate indentations
17 -	cross hatched on flat rim surface
18 -	single, horizontal linear incision
19 -	elliptical hollows from fingertip impressions
19A -	crescentic fingernail impressions
19B -	miscellaneous fingernail impressions
20 -	parallel lines in indeterminate direction
20X -	multiple sets of juxtaposed parallel lines in indeterminate direction
21 -	overlapping triangles
22 -	horizontal zigzags
23 -	vertical zigzags
24 -	zigzags in indeterminate direction
25 -	impressions within diagonal panels
26 -	intersecting crosses
27 -	superimposed diagonal lines
28 -	opposed herring bone motifs
29 -	infilled zig zag motifs
30 -	single or double zig zag lines
31 -	connected radial lines
32 -	zig zag motifs interrupted with horizontal lines
33 -	opposed diagonal lines
34 -	vertical herring bone motifs
35 -	vertical parallel lines, interspersed with diagonal parallel lines
36 -	vertical single or double zig zag lines
37 -	enclosed triangles
38 -	zig zag motifs within diagonal lines
39 -	infilled, interconnected lozenges
U -	undecorated area within larger decorative pattern

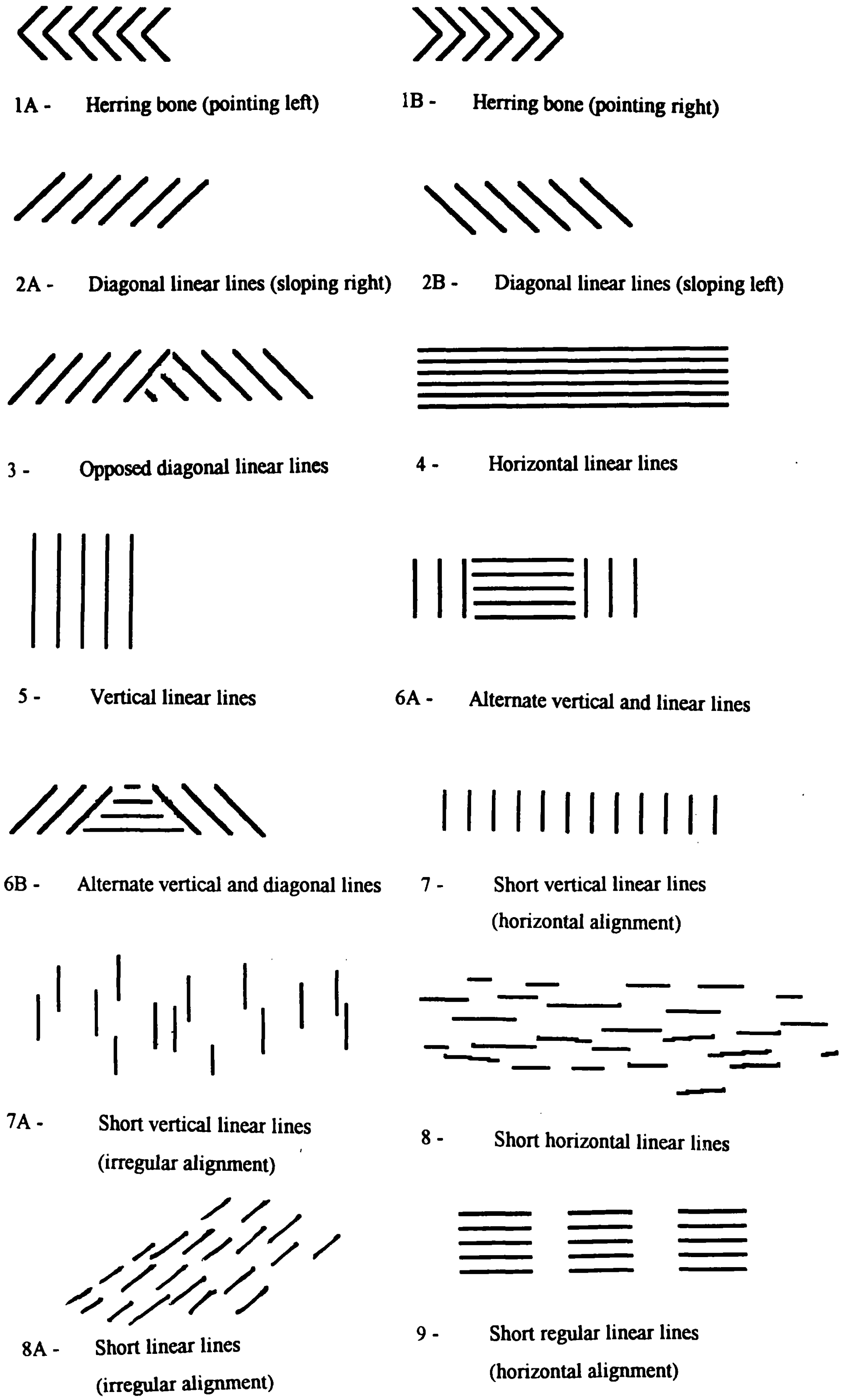
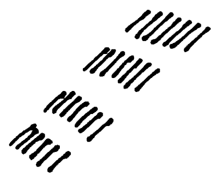
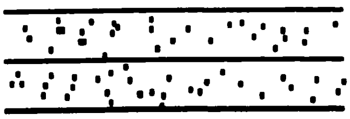


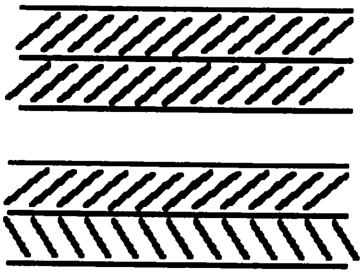
Figure 4.7.: illustrations of decorative motifs 1 to 9



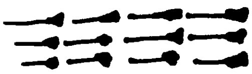
9A - Short regular linear lines (irregular alignment)



10 - Banded stab marks

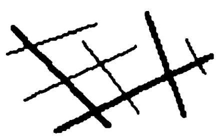


11 - Horizontal linear lines with diagonal line infills



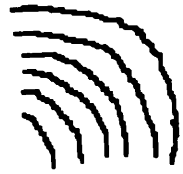
12 - Horizontal linear lines of stab and drag

13 - Integrated groups of concentric arcs

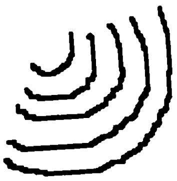


14 - Cross hatched lines

15A - Concentric lines, pattern A



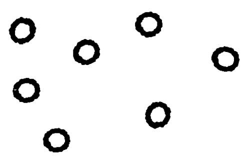
15B - Concentric lines, pattern B



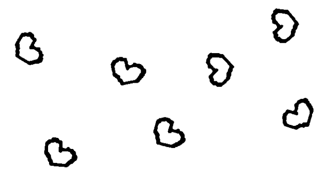
15C - Concentric lines, pattern C

15D - Concentric lines, pattern D

Figure 4.8.: illustrations of decorative motifs 9A to 15D

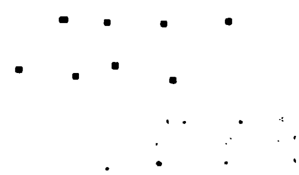


16A - circular indentations



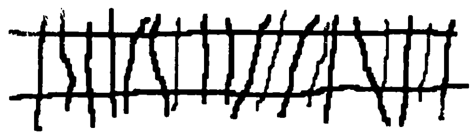
16B - kidney shaped indentations

16C - crescentic or hemispherical indentations



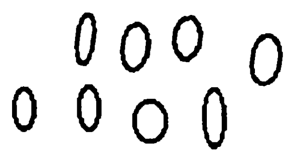
16D - minuscule dot indentations

16E - short, horizontal indentations

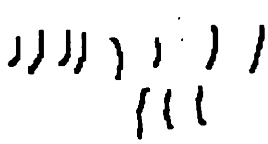


17 - cross hatched on flat rim surface

18 - single, horizontal linear incision



19 - elliptical hollows from fingertip impressions



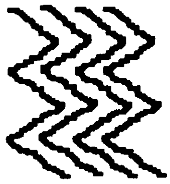
19A - crescentic fingernail impressions

20 - parallel lines in indeterminate direction

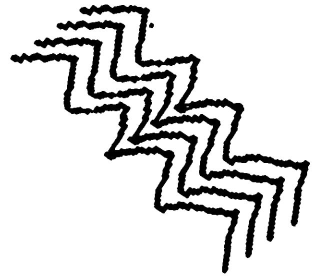
21 - overlapping triangles

22 - horizontal zig zags

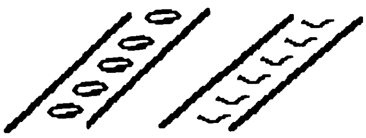
Figure 4.9.: illustrations of decorative motifs 16A to 22



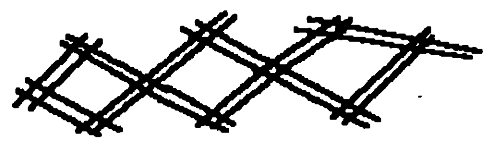
23 - vertical zig zags



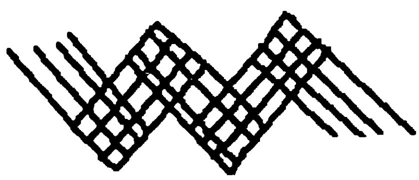
24 - zig zags in indeterminate direction



25 - impressions within diagonal panels



26 - intersecting crosses

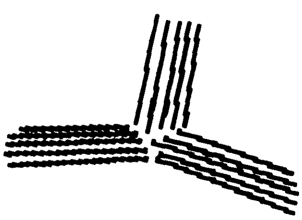


27 -

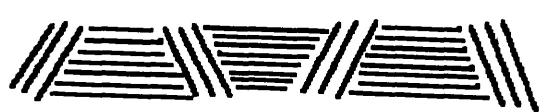
28 - opposed herring bone motifs

29 - infilled zig zag motifs

30 - single or double zig zag lines



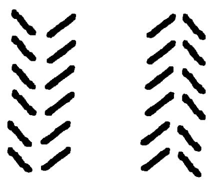
31 - connected radial lines



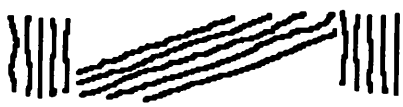
32 - zig zag motifs interrupted with horizontal lines

Figure 4.10.: illustrations of decorative motifs 23 to 32

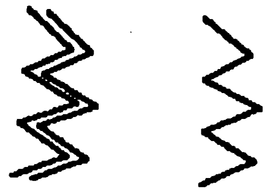
33 - opposed diagonal lines



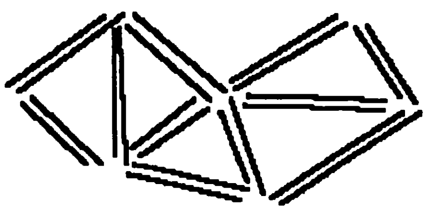
34 - vertical herring bone motifs



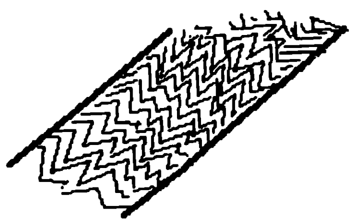
35 - vertical parallel lines, interspersed with diagonal parallel lines



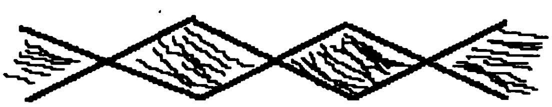
36 - vertical single or double zig zag lines



37 - enclosed triangles



38 - zig zag motifs within diagonal lines



39 - infilled, interconnected lozenges

Figure 4.11.: illustrations of decorative motifs 33 to 39

4.3.5. Use alteration variables

4.3.5.1. Abrasion

The abrasion category records various degrees of attrition, from partial to total abrasion, for the interior and exterior surfaces of each sherd. The prevalence of abrasion in the various ceramic assemblages from the Western Isles is more an indication of casual post depositional attrition than deliberate intensity of use. A discrete area of abrasion tends to indicate use alteration, whereas comprehensive abrasion tends to indicate taphonomic alteration. The different states of abrasion are itemised below.

1 - universal abrasion across the entire exterior surface
2 - universal abrasion across the entire interior surface
3 - universal abrasion across the surfaces and edges of the sherd
4 - finite abrasion on the exterior surface
5 - finite abrasion on the interior surface

There is an additional value, labelled Q, in the miscellaneous category, which denotes severe abrasion. In such instances the sherd is almost always uninformative, and frequently unrecognisable as anything other than ceramic.

4.3.5.2. Residues

The category of residues records the presence of food-residues and the different types of sooting extant on interior and exterior surfaces of the sherd or vessel. The different values for the residue category are listed below.

A - residue or sooting on the exterior body surface
B - residue or sooting on the interior body surface
C - residue or sooting on the exterior rim surfaces
D - residue or sooting on the interior rim surface
E - residue or sooting on the exterior of the shoulder or the carination
F - residue or sooting on the interior of the shoulder or the carination
G - residue or sooting on the exterior of the base
H - residue or sooting on the interior of the base

These values discriminate between the different aspects of vessel morphology. Unfortunately, this scheme is unable to elucidate in sufficient detail the diversity of residues a cursory examination of these ceramics reveals. To rectify this detrimental situation each of the above values is appended with a numerical suffix, which further informs upon the nature of the sooting or residue, and these are listed below.

1 - uniform black sooting, with high lustre
2 - sporadic or inconsistent black sooting, with dull lustre
3 - unconsolidated black residues, presumably charred food remains, adhering to surface

Alternative explanations of these different sooting phenomena are possible. The uniform black sooting, with a high lustre (1), could be deliberate smudging; the sporadic or inconsistent black sooting, with a dull lustre (2), could variously be fireclouding, some other unrecognised firing phenomena, or even, in some case, a vestigial slip or wash. The unconsolidated black residues, presumably charred food remains, adhering to the surface (3), could be deliberate post firing organic sealants, designed to enhance the impermeability of the vessel.

4.4. Conclusion

The extended methodological statement made in this chapter is designed to facilitate a more edifying interpretation of pottery. A detailed exploration of the assemblages from Unival, Clettraval, Eilean an Tighe, Northton, and Rubha an Udail Site 6, attempting to conceptualise pottery as a discursive social resource, follows in the succeeding chapters.

[1] It seems that a comprehensive fabric series is fundamental to any attempt to reconstruct the original ceramic profile of an assemblage, or understand the depositional practices and post depositional processes responsible for its archaeological condition: "Size and fragmentation are related so closely to fabric and form that it is not possible to make use of such data independent of fabric and form" (Orton *et al.* 1993:214). The relation between fabric strength and susceptibility to comminution of a sherd or vessel is indubitable. Yet the available evidence indicates that the significance of fabric to sherd size depends not simply on fabric strength, but also on post depositional circumstance. Separate studies, focusing on different sites, demonstrate either a positive or inconsequential relation between fabric strength and sherd size (Bradley and Fulford 1980; Evans and Millett 1992). Such research confirms the importance of post depositional process, over the significance of fabric, to an understanding of the contemporary condition of archaeological ceramics. Arguably, the predominance of the former variable over the latter is especially acute when dealing with the soft, poorly fired fabrics typical of neolithic pottery in the Western Isles.

Chapter five
Ceramics and mortuary practice: the pottery from chambered cairns on North Uist

5.1. Introduction

Pottery from chambered cairns has proved a lucrative source of ceramic styles to refine typological understanding and sustain stylistic comparison. Unfortunately, the decline of culture historicism has transformed these traditional interpretations from meaningful and informative explanations into rote exercises bereft of intellectual authority. An attempt is made in this chapter to develop an alternative understanding of these chambered cairns and the material culture they contain. The ceramic assemblages from the chambered cairns of Clettraval, Unival, Geirisclett, Bharpa Langass, South Clettraval, Loch Glen na Feannag, and Airidh nan Seilicheag, all on North Uist, and depicted in Figure 5.1., are discussed below.

5.2. Previous work on chambered cairns in the Western Isles

Chambered cairns in the Western Isles, if described using the conventional terminology of culture historicism, are either hebridean or clyde type tombs (see Armit 1996:70; Chrisp 1990; Henshall 1972:15-157, 460-68, 480-91,495-534; Müller 1988:19-26). Clettraval (Chrisp 1990, no. 30; Henshall 1972:506-11) and Geirisclett (Chrisp 1990, no. 34; Henshall 1972:515-17) are clyde tombs; Unival (Chrisp 1990, no. 17; Henshall 1972:529-534) and Bharpa Langass (Chrisp 1990: no. 14; Henshall 1972:500-03) are hebridean tombs. These classifications are based predominantly on the architecture of the interior chambers. At Clettraval and Geirisclett, the interior consists of a series of contiguous compartments; there are five successive segments at the former, and at least two at the latter. Both Unival and Bharpa Langass have short passages culminating in a roughly oval

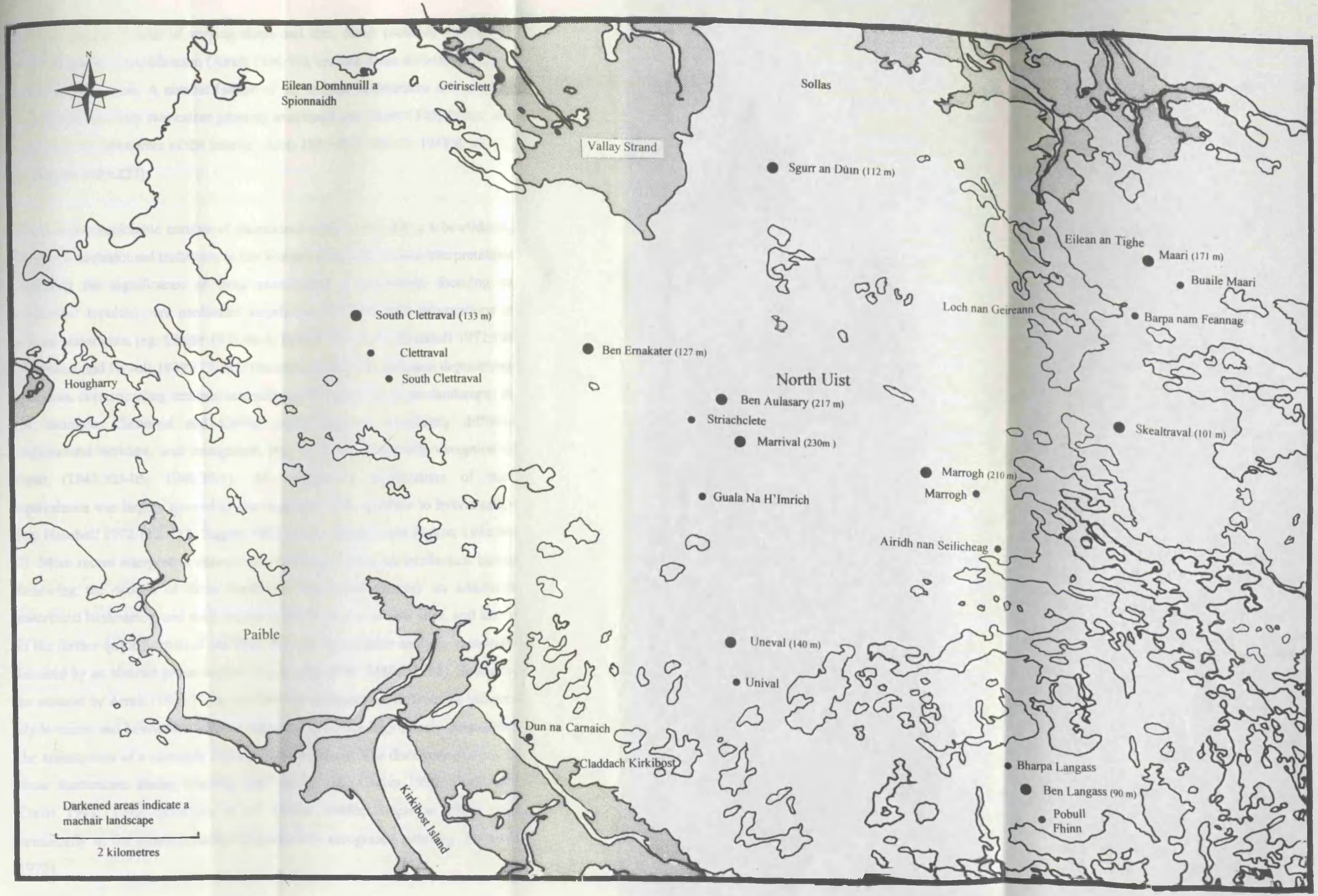


Figure 5.1. Topography and landscape of chambered cairns in North Uist

shaped chamber. Cairns of varying shape and size, many probably embodying several phases of modification (Armit 1996:70), enclose these different forms of internal architecture. A notable feature of the internal architecture at Clettraval and Unival, the only two cairns properly excavated (see Scott 1935; 1948), is a cist in the far left corner of the interior (Scott 1935:487, 526-27; 1948:8, 12, 31; cf. Piggott 1954:227).

There is a considerable number of chambered cairns, embodying a bewildering variety of architectural traditions, in the Western Isles. Traditional interpretations regarding the significance of these monuments in prehistory, focusing on megalithic typology, are predicated largely on the theoretical assumptions of culture historicism (eg. Childe 1935:40-4; Daniel 1941:44-9; Henshall 1972:198 *ff.*; Daniel and Powell 1949:177-78). The close similarities between depositional practices, corresponding ceramic assemblages, and position in the landscape, at, for example, Clettraval and Unival, cairns with a completely different architectural heritage, was recognised, but, with the predictable exception of Scott (1942:303-05; 1948:30-1), the interpretive implications of such equivalence was largely ignored or else explained with reference to hybridisation (eg. Henshall 1972:112, 113; Piggott 1954:224-32; Piggott and Piggott 1946:96-7). More recent interpretive endeavours, operating within an intellectual lacuna following the demise of these traditional approaches, display an admirable theoretical bankruptcy, and seek redress in the discovery of new sites, and solace in the further quantification of old ones, through topographic analysis apparently inspired by an abstract processualism (eg. Chrisp 1990; Müller 1988). Similarly, an attempt by Armit (1996:76) to attribute the architectural differences between clyde cairns and hebridean cairns to ethnicity or chronology merely perpetuates the assumptions of a curiously familiar culture history. The discovery of more of these monuments during ongoing field survey (eg. Chrisp 1990; Curtis and Curtis 1993; 1995; Granville *et al.* 1986a; 1986b; Stapleton 1980) adds continually to the existing corpus of previously recognised sites (eg. Henshall 1972).

The futility of descriptive, quantitative, and comparative approaches to the interpretation of chambered cairns is conspicuous. Space precludes a comprehensive review of previous research on the chambered cairns of the Western Isles. A detailed description and interpretive history of each of the chambered cairns from which pottery was recovered is therefore considered superfluous. Adequate accounts of these various monuments are available in the original excavation reports (see Scott 1935:484-94; 1948:7-11) and germane corpora (Henshall 1972: *passim*). Instead, the opportunity is taken to deploy the ceramic evidence in the development of a revised interpretation of these intriguing monuments. An alternative understanding of chambered cairns focuses on the nature and significance of the mortuary rituals enacted at these sites in neolithic and early bronze age societies. These monuments are not merely burial sites, designed to accommodate permanently successive interments (cf. Armit 1996:77), but rather sacred artefactual repositories, intended to store temporarily specific items of material culture, for example skeletal remains or ceramic fragments, integral to the efficacy of the mortuary rituals performed at these sites.

5.3. The role of pottery in mortuary rituals

The role of the deposition of material culture, and particularly ceramics, in the mortuary process requires scrutiny. The presence of pottery in chambered cairns attests to the existence of deliberate depositional practices involving material culture in the neolithic and early bronze age. The equation between pottery and people, with the former accompanying the latter in a utilitarian capacity as containers, to provide the corpse with sustenance in the journey of death, combines functional explanation with cultural representation. This liaison between specific pots and particular people is immediately recognisable as an implicit corollary of the traditional equation between ceramic styles and the wider community perpetrated by culture historicism. There remains a reluctance to concede to material culture, in this instance ceramics, the ability to sustain, as materiality, an afunctional, possibly symbolic, interpretation.

It is, then, inappropriate to conceptualise ceramic assemblages from chambered cairns as the accumulated debris of material culture accompanying successive interments at the monument (*pace* Henshall 1972:82, 86-7). Instead, if the interpretation of chambered cairns as monumental foci designed to facilitate mortuary rituals, rather than simply as grandiose burial vaults designed to accommodate the multiplying dead, is followed, the presence of pottery at these sites becomes more intriguing. These ceramics, no longer the cumbersome luggage of the deceased, become items of material culture necessarily deposited to ensure the efficacy of mortuary practices. Importantly, there is no reason to suppose that such pottery was immediately, and permanently, discarded. It is reasonable to envisage the inclusion of pottery in such rites for a variety of purposes prior to ultimate deposition. The presence of certain vessels may, for example, have been necessary at prescribed moments, in defined places, under the care of specific people, during the mortuary procedure. Pottery was perhaps incorporated into these sepulchral activities, involved in, say, the preparation and consumption of foodstuffs germane to the mortuary process, on several occasions before selection for deliberate deposition. Presumably, the controlled deposition of pottery, especially instances resulting in irrevocable breakage, precipitated an irreversible transformation in the status of the vessels concerned. It is reasonable to anticipate the disturbance, relocation or removal of ceramic previously placed or deposited during preceding rituals. According to Henshall:

> "...in many cases the quantity of finds recovered from the chambers is probably little indication of the quantity placed in them..." (Henshall 1972:85).

Ceramic assemblages from chambered cairns are more an incomplete catalogue of vessels not removed, rather than a comprehensive corpus of vessels deposited, during mortuary practices (cf. Armit 1996:95). The presence of incomplete artefacts, not restricted to ceramics represented by a meagre number of sherds, in chambered cairns, attests either to the partial deposition or partial removal of a fragmentary material culture. Henshall considered the latter possibility more plausible:

"The deliberate removal of parts of or of whole artifacts, as of bodies, is either for use because they have some magical quality, or to prepare the tomb for another phase of burials..." (Henshall 1972:86).

5.4. The pottery from the chambered cairns in the Western Isles

The alternative understanding of ceramic deposition at chambered cairns, outlined briefly in section 5.3. above, suggests that further scrutiny of the existing assemblages, already adequately published (see Henshall 1972; Scott 1935; 1948).

5.4.1. Previous evaluations of the pottery

A brief résumé of the original interpretations of the ceramics from the chambered cairns under scrutiny in this chapter is given below. Since the peculiar presence of ceramics and other material culture at these sites, interred with the corpse as grave goods, was readily understood, the paramount concerns of a cultural archaeology became the development of a chronology for the site, and a consideration of the cultural affiliations of the mourners and the deceased, based on an analysis of the depositional sequence, and a stylistic comparison, of the pottery.

5.4.1.1. The ceramic assemblage from Clettraval

The main structural components of the chambered cairn at Clettraval are depicted in Figure 5.2.. The majority of the pottery was recovered from section I, the innermost compartment of the chamber (Scott 1935:496). Sherds of substantial size were discovered in an artificial cavity under the raised floor in section III, and within a natural hollow covered by a paving slab in section V. Scott interpreted the presence of pottery beneath the floor in these compartments as an

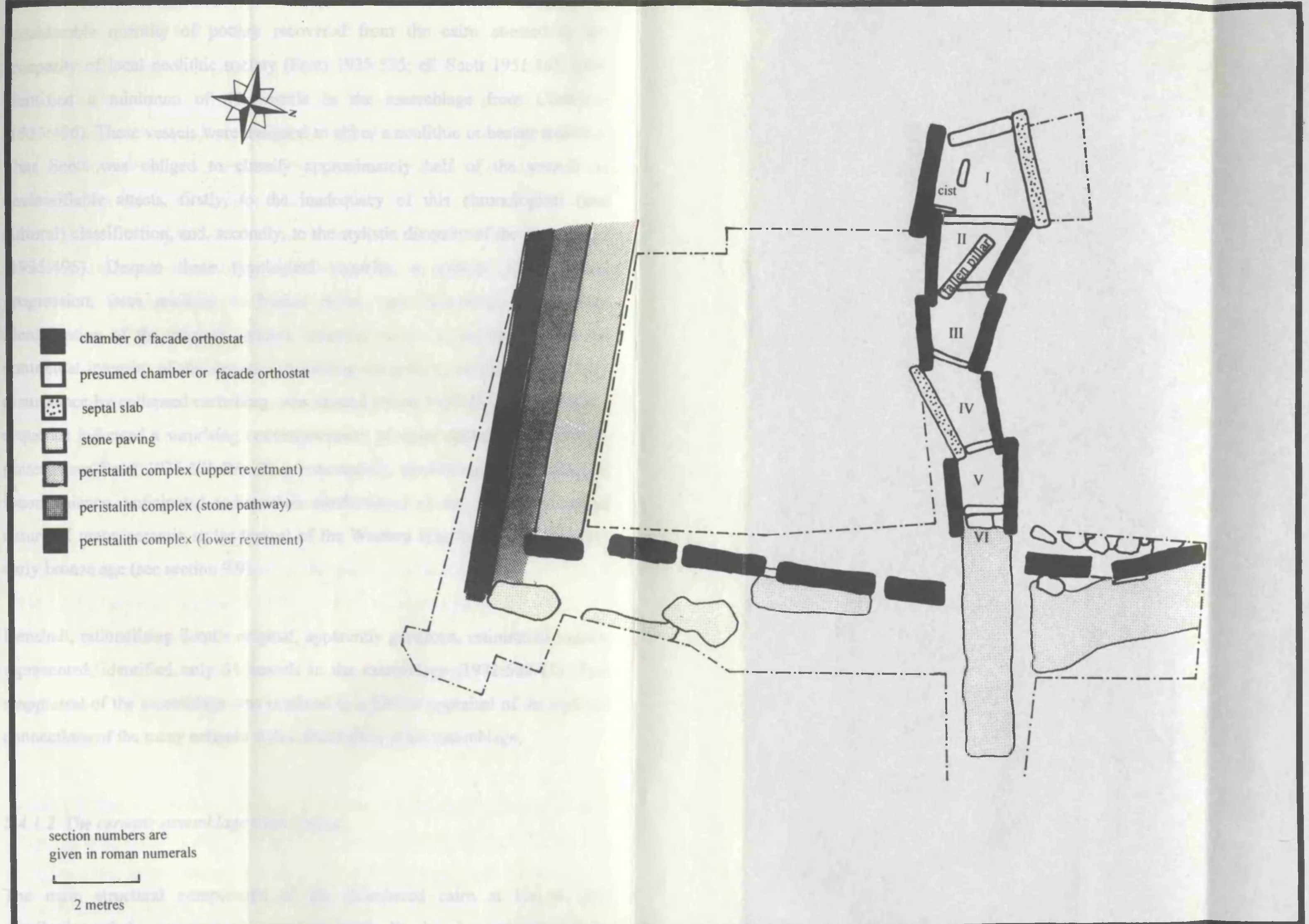


Figure 5.2. The chambered cairn at Clettraval
(after Scott 1935, Plate I: facing page 536)

indication of phasing in the structural sequence, attesting to refurbishment of the floors after an initial episode of ceramic deposition (see Scott 1935:486-87). The considerable quantity of pottery recovered from the cairn attested to the prosperity of local neolithic society (Scott 1935:535; cf. Scott 1951:16). Scott identified a minimum of 45 vessels in the assemblage from Clettraval (1935:496). These vessels were assigned to either a neolithic or beaker tradition. That Scott was obliged to classify approximately half of the vessels as unclassifiable attests, firstly, to the inadequacy of this chronological (and cultural) classification, and, secondly, to the stylistic diversity of the assemblage (1935:496). Despite these typological vagaries, a general chronological progression, from neolithic to beaker styles, was discernible. Indeed, the identification of the original ceramic sequence was a formality, because the contextual integrity of the deposits containing the pottery, protected from later disturbance by collapsed corbelling, was assured (Scott 1935:497). The resultant sequence indicated a surprising contemporaneity of styles amongst the neolithic pottery (see Scott 1935:528-29). This concurrence, something of a typological inconvenience, anticipated radiocarbon confirmation of the seemingly coeval nature of many ceramic styles typical of the Western Isles in the neolithic and early bronze age (see section 9.9).

Henshall, rationalising Scott's original, apparently generous, estimate of vessels represented, identified only 33 vessels in the assemblage (1972:508-11). This reappraisal of the assemblage was confined to a further appraisal of the stylistic connections of the many ceramic styles discernible in the assemblage.

5.4.1.2. The ceramic assemblage from Unival

The main structural components of the chambered cairn at Unival, and distribution of the accompanying pottery within the interior, are depicted in Figure 5.3.. Scott identified eighteen vessels (Scott 1948:15)[1], and Henshall (1972:531-33), in her re-assessment of the pottery, identified twenty two vessels, in the assemblage from Unival. The ceramic and skeletal evidence was employed to elucidate the sequence of human interments and accompanying pottery at Unival (Scott 1948:13 *ff.*). Henshall (1972:143-44, 148-49, 533), despite a disagreement regarding the number of vessels represented, largely accepted the sequence of interments envisaged by Scott. This sequence was predicated on the following crucial assumptions: firstly, the chambered cairn was a burial vault; secondly, burials were accompanied by pottery; thirdly, bodies were initially interred in the cist in the south west corner of the chamber; fourthly, successive burials in the cist required the removal of skeletal remains and adjunct ceramics previously deposited there; fifthly, the exhumed bones and uplifted pottery were discarded elsewhere in the chamber. That these various assumptions are both reasonable and plausible is indubitable. Indeed, the distribution and condition of the skeletal and ceramic deposits in the interior of the chamber are adequately explained by this interpretive scenario (see Scott 1948:13-24).

Scott organised the ceramic assemblage into six discrete vessel groups, each containing two or more pots, and considered these groupings to reflect the sequence of initial deposition inside the cairn (1948:15-8). The intricacies of this ceramic sequence, expertly elicited in the original excavation report (see Scott 1948:18-24), are not reproduced in this section as a consequence. A reappraisal of the depositional maxims devised by Scott (1948:15-6) invalidate certain aspects of the resultant ceramic sequence. Only specific aspects of this original progression, germane to the ensuing discussion of depositional practices presented in section 5.4.2.3., are worthy of explicit mention here.

Vessel U13 (see Figure 2.1) beneath the entrance paving, interpreted by Scott as stone blocking installed after the first burial to seal the chamber (1948:16), was considered the earliest deposit (Scott 1948:16). The vessels still languishing in the cist upon excavation, vessels U10 (see Figure 2.21) and U11 (see Figure 2.29), were considered among the latest deposits, along with vessels U15 (see Figure 2.53), U16 (see Figure 2.48) and U19 (see Figure 2.48),[2] situated in the upper layers of the stratigraphy (Scott 1948:17-18). The vessels lying either on or

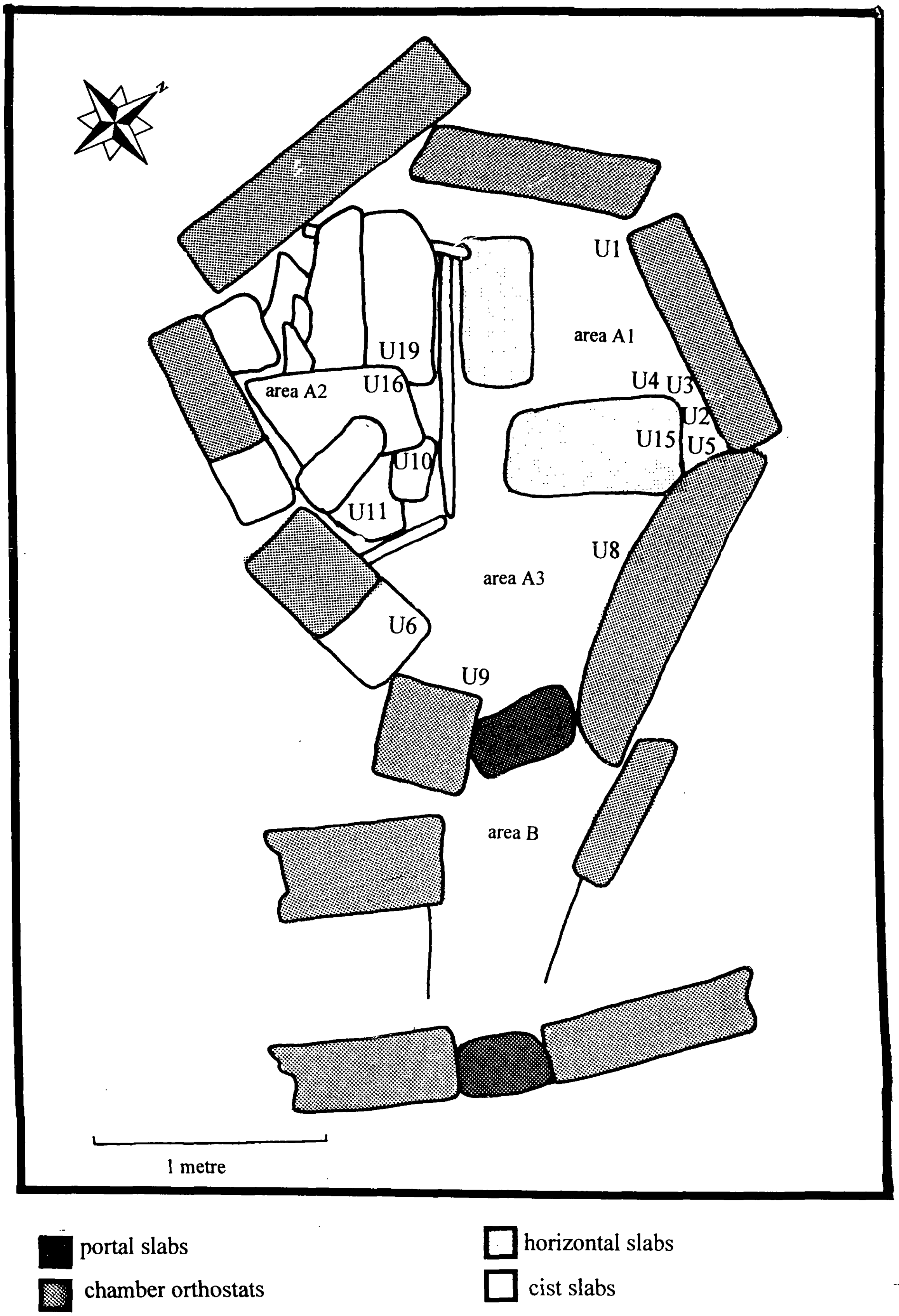


Figure 5.3.: The chambered cairn at Unival

(after Scott 1948, Figure 4:8, Figure 5:16) above the floor of the chamber, frequently scattered across its interior at varying levels within the stratigraphy, were interpreted as the intervening deposits, and arranged in a convincing sequence accordingly (Scott 1948:16-18).

5.4.1.3. The ceramic assemblages from Geirisclett, Bharpa Langass, South Clettraval, Loch Glen na Feannag, and Airidh nan Seilicheag on North Uist

The meagre assemblages from Geirisclett, Bharpa Langass, South Clettraval, Loch Glen na Feannag, and Airidh nan Seilicheag, all on North Uist, mainly comprising sherds from disturbed contexts, and representing the fragmentary remnants of an eclectic selection of ceramic styles, are worthy of mention largely for the sake of completeness. A reading of Beveridge's antiquarian travelogue of these sites suggests that the chambers at Bharpa Langass, South Clettraval, Loch Glen na Feannag, and Airidh nan Seilicheag were ransacked previously (1911:247, 250, 251, 255). The sherds from Bharpa Langass, illustrated in Figure 5.4, were probably originally deposited in the chamber:

> "Upon the surface of the cairn, immediately north of the entrance passage, recently lay a heap of débris removed from the interior, and in this were found several fragments of thin pottery..." (Beveridge 1911:247; cf. Armit 1996:70).

The ceramics from South Clettraval were discovered within the confines of a disturbed chamber:

> "Upon the floor of this chamber, as also in the passage, were found several fragments of pottery, evidently sepulchral, and it was clear that some excavation had been attempted" (Beveridge 1911:252).

The artefactual assemblage at Loch Glen na Feannag was manifestly disturbed:

> "This chamber has evidently been dug to its floor, and part of the contents thrown out, including fragments of sepulchral pottery (one patterned), bits of wood-charcoal, and charred bones, together with kitchen-midden shells" (Beveridge 1911:251).

Similarly, pottery from Airidh nan Seilicheag, illustrated in Figure 5.4, was apparently recovered from the passage:

> "The contents of the smaller chamber [passage] have clearly been disturbed; within it was found a fragment of charred bone, and elsewhere part of the rim of a large thin urn" (Beveridge 1911:250).

At Geirisclett, where Beveridge was responsible for the rudimentary excavations, the ceramics, illustrated in Figure 5.5, were definitely retrieved from the chamber compartments:

> "*When cleared of the accumulated rubbish* this chamber was found to be paved throughout, the inner half standing at a slightly lower level. Inside were discovered several fragments of patterned pottery..." (Beveridge 1911:255; emphasis added).

The small size, and uncontextualised nature, of these assemblages, ensures that only a stylistic comparison remains possible. On the basis of fabric or morphology, all the sherds from South Clettraval (GT 618), Loch Glen na Feannag (GT 620, GT 621) and Airidh nan Seilicheag (GT 618), and certain sherds from Barpa Langass (EO 981, EO 892), are more likely iron age than neolithic (Henshall 1972:156, 496, 503, 522, 527). A fine carinated bowl, B1, apparently atypical of the Western Isles, and an achnacree bowl, G1, are represented at Barpa Langass (see Henshall 1972, no. 1: 152, 310, 502) and Geirisclett (Henshall 1972, no. 1:100, 310, 516) respectively. Three beakers each are represented at Barpa Langass, namely B2, B3, and B4 (see Armit 1996:70-2; Henshall 1972:310, 502-03) and Geirisclett, namely G2, G3, and G4 (see Henshall 1972:310, 516-17). At least one of the beakers from Barpa Langass displays a stylistic affinity with the beaker designs at Clettraval (Henshall 1972:155). Interestingly, the juxtaposition of cord impressed linear lines and impressed ovals, interspersed by alternate horizontal banding, is unknown elsewhere (Henshall 1972:105-06). Similarly, the horizontal zigzag design (motif 22) on vessels G3 and G4 is not definitely encountered in any of the other assemblages studied (*pace* Henshall 1972:106). That many vessels at Geirisclett, specifically G1 and G2, are relatively well represented, frequently by sizeable sherds, suggests the discard of vessels either intact, or as substantial fragments.

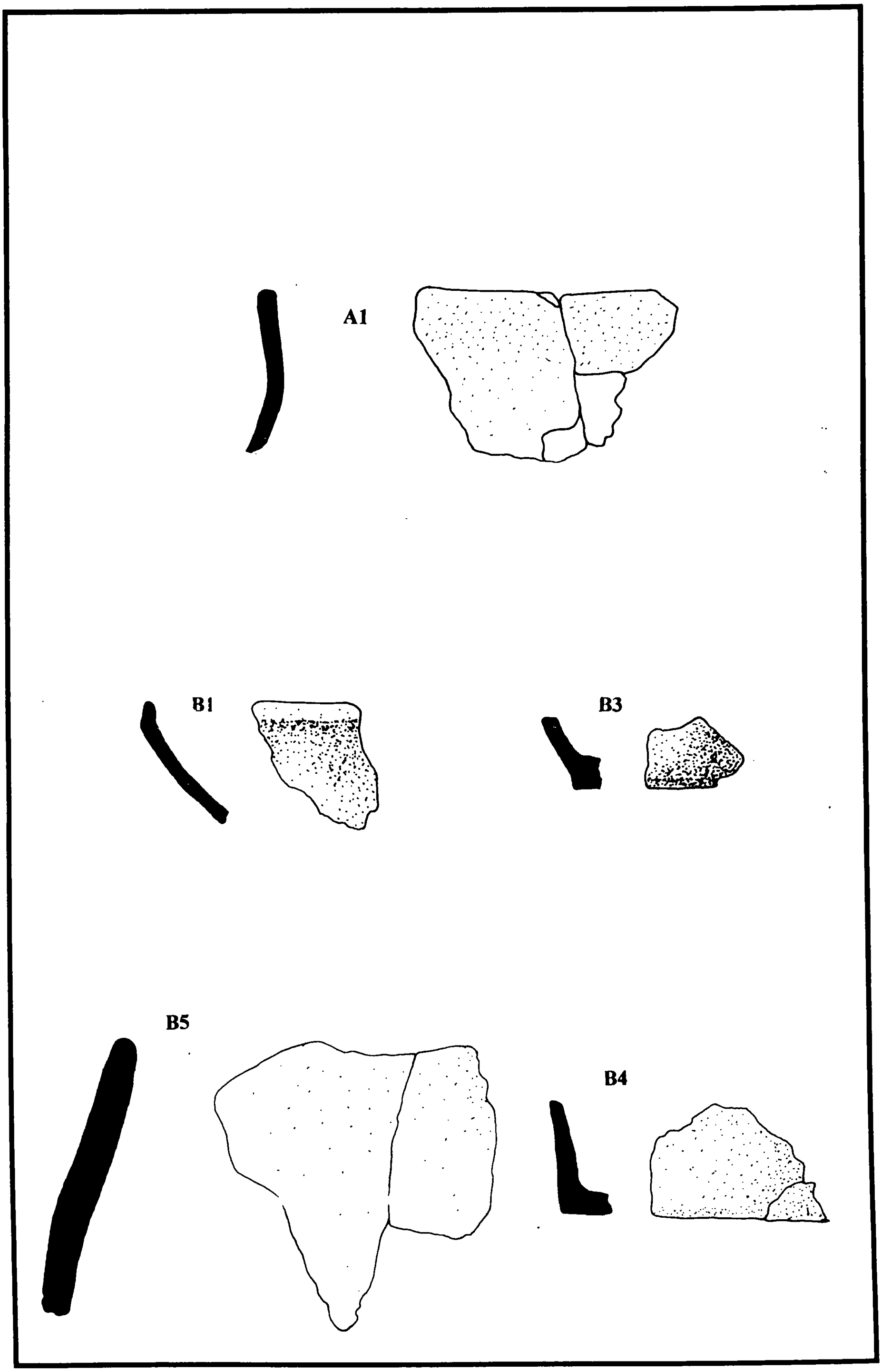


Figure 5.4.: The pottery from Bharpa Langass
and Airidh nan Seilicheag, North Uist

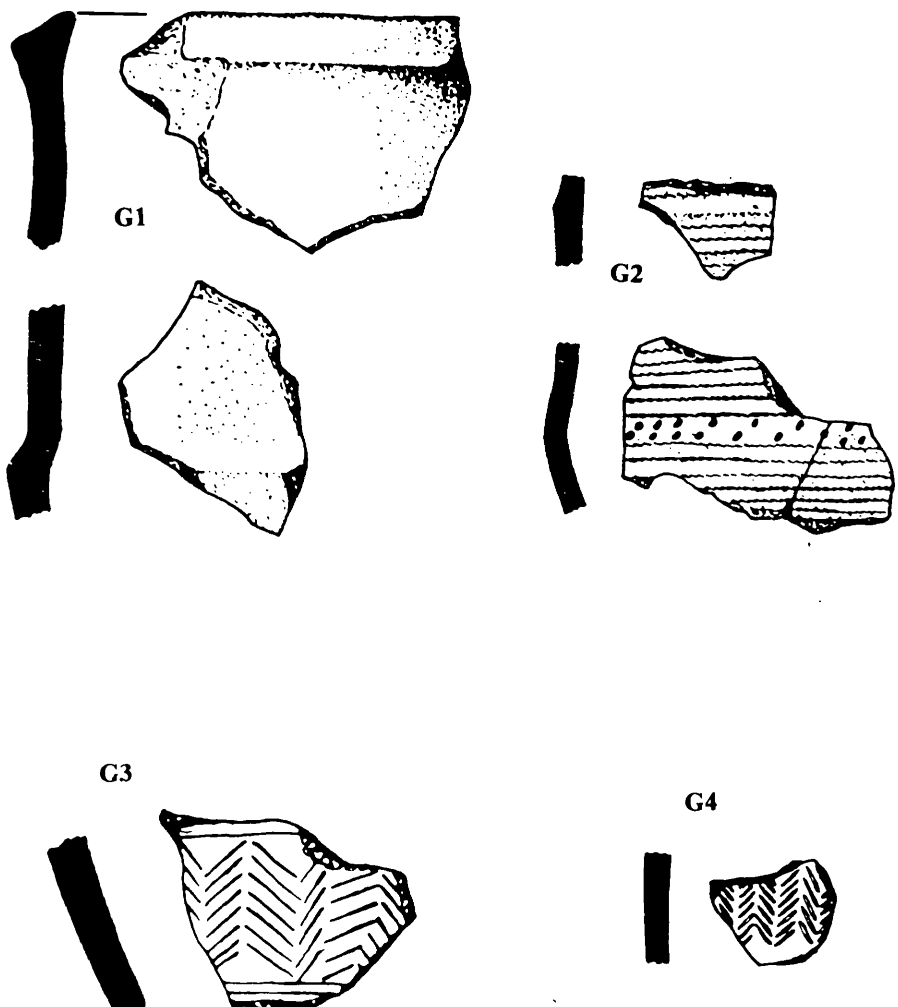


Figure 5.5.: The pottery from Geirisclett, North Uist

(after Henshall 1972:310; G1, G2, G3 and G4 are vessels 1, 2, 3 and 4 respectively)

5.4.2. A re-evaluation of the pottery from chambered cairns in the Western Isles

The assessment of the ceramic assemblages from Unival and Clettraval is presented as an integral part of a holistic interpretation of these chambered cairns. The nature of the assemblage and the role of depositional practices at each chambered cairn are analysed. A history of ceramic deposition is compiled and compared for each chambered cairn. The significance of these assemblages, with respect to the styles and functions of the vessels represented, are surveyed, in conclusion, in section 5.4.2.5..

The analysis of these assemblages encountered several practical difficulties inherited from preceding work conducted on the pottery. Firstly, some vessels, namely U24, U25, U26, and part of U15 (see Figure 2.53), from Unival, were unlocated in the museum and therefore catalogued as missing. Contrastingly, some vessels were apparently represented by sherds unmentioned in published accounts of the assemblages.[3] Secondly, due to differing research priorities, a considerable proportion of the assemblages were incorporated into replica or reconstructed vessels during the original post excavation analysis. Such reconstructions, designed to facilitate an analysis of ceramic styles, inadvertently impede a consideration of depositional practices, predicated on an examination of the constituent sherds.[4]

The stratigraphy discernible in these chambered cairns requires scrutiny. It is, strictly speaking, not possible to establish the stratigraphic relationship between certain contexts in these monuments. This contextual circumstance has considerable implications for the development of a ceramic sequence predicated on stratigraphy rather than style.[5] These unavoidable circumstances are compounded by an inadequate, inconsistent or inappropriate treatment of context during excavation. Strangely, Scott excavated according to stratigraphy, but recorded small finds exclusively according to three dimensional location. It is not always possible to deduce the actual context of specific sherds, nor the relations between sherds, from their three dimensional co-ordinates at Clettraval or Unival as a consequence.[6]

5.4.2.1 The pottery from Clettraval

The following analysis of the pottery from Clettraval focuses, firstly, on the nature of the assemblage, and, secondly, on depositional practices at the chambered cairn (*pace* Armit 1996:76).

The assemblage contains no fewer than 33, and no more than 56, vessels. Distinctive vessels, definitely represented, include C4, C5, C6 (see Figure 2.52), C7 (see Figure 2.21), C9 (see Figure 2.52), C27, C30, C31, C32 (see Figure 2.52), C33 (see Figure 2.52), C34, C35, C36, C37 (see Figure 2.48), C38 (see Figure 2.23), C39 (see Figure 2.24), C40 (see Figure 2.52), C41 (see Figure 2.1), C42 (see Figure 2.23), C40, C43 (see Figure 2.21), C44, C45 (see Figure 2.14), C46 (see Figure 2.24), C48, C49, C50 (see Figure 2.9), C51 (see Figure 2.14), C52 (see Figure 2.24), C53 (see Figure 2.16), C54 (see Figure 2.52), C55, C56. Additional vessels, also possibly represented, include C1, C2, C3, C8, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C22, C23, C24, C35, C26, C28, C29, and C47. Vessels represented by a meagre number of diminutive and undiagnostic fragments are dubious identifications requiring cautious interpretation. Many of the provisional vessel identifications, listed in the latter inventory, possibly duplicate some of the definite vessel assignations, itemised in the former inventory. Scott, in addition to vessels explicitly identified and described, recorded a variety of sherds representing a minimum of eight vessels in the upper layer of section I (1935:505), and at least two vessels in the lower layer of section III (1935:512). Henshall evidently preferred to equate many of these same sherds with vessels previously identified (1972:510, no. 24). These miscellaneous fragments are the source of many of the vessels possibly represented in the assemblage.

The assemblage contains approximately 460 sherds, weighing some ten and a half kilograms. The average sherd size is 45 millimetres (mm); the maximum and minimum sherd sizes are approximately 150 mm and 15 mm respectively. Over half of the assemblage, expressed in terms of sherd quantity, and four fifths of the assemblage, expressed in terms of sherd weight, are incorporated into reconstructions, many of which are substantial. Some 20 vessels, out of a possible maximum of 57 vessels, are either wholly or partially reconstructed.

The interior of the chambered cairn, the area relevant to an evaluation of depositional practices, comprises a passage over 10 m in length, divided into compartments by lateral septal slabs, placed at regular intervals across the passage, forming a series of contiguous compartments of roughly equal size. Scott identified the entrance compartment as section VI, and the five successive compartments as sections V through to I respectively (Scott 1935:484-86). The south east corner of the innermost compartment, section I, was enclosed by an arrangement of vertical slabs, which further differentiated this corner from the remainder of the interior (Scott 1935:487).

Table 5.1. provides a summary of the distribution of pottery according to context, as expressed by a combination of spatial area and absolute level. Unfortunately, the absence of weight values for the majority of sherds precludes a sherd weight analysis.[7] A quantitative evaluation of context is necessarily restricted to the number, rather than the weight, of sherds. With respect to compartments, over half of the assemblage, expressed in terms of sherd quantity, and the largest vessel fragments, occur in section I; approximately a tenth of the assemblage occurs in sections II and V each, and nearly two fifths occurs in section III. Variation in average sherd size across compartments is minimal. With respect to levels, a meagre amount of pottery, precisely seven sherds, derives from the rock

Table 5.1.: quantity, weight and size of sherds from Clettraval by context

context	level	number of sherds	average sherd size	max. sherd size	min. sherd size
-	-	16	46	87	17
I	B	215	38	149	16
I	C	44	51	120	17
I?	B?	2	21	23	19
II	B	25	33	49	21
II	C	33	59	133	24
III	B	5	44	99	28
III	C	82	54	115	20
III?	B?	1	40	40	40
IV	B	2	51	61	40
V	C	29	48	102	18
V	D	7	58	109	35
VI	C	2	43	47	38

hollow (stratum D) in section V. The average, and indeed minimum, sherd size, approximately 60 mm and 35 mm respectively, are notably larger for this deposit than for ceramic in overlying contexts. Around two fifths of the assemblage, expressed in terms of sherd quantity, occurs in the lower deposit (stratum C), and over half occurs in the upper deposit (stratum B). Interestingly, the sherd size in the upper level is, on average, smaller than that of the lower level, suggesting perhaps a higher degree of disturbance, and residuality, amongst sherds in the former deposit. Admittedly, the largest sherds also derive from the upper level.

Section III contains the largest amount of pottery in the lower layer, nearly half of the sherds there represented; section I contains the vast majority of pottery in the upper layer, nearly nine tenths of the sherds there represented. These rudimentary frequencies indicate that the innermost compartment was the focus of depositional intensity. A cursory assessment of the number of vessels represented in each context, itemised in Table 5.2. below, provides confirmation of the figures calculated from a simple sherd count. The vast majority of vessels were evidently deposited in the innermost compartment.

Table 5.2.: number of vessels represented in each context at Clettraval

number of vessels	context	level
30	I	B
6	I	C
6	II	B
2	II	C
5	III	B
11	III	C
2	IV	B
2	V	C
2	V	D
1	VI	C

A consideration of depositional practices is intended, firstly, to elucidate something of the manner in which pottery was discarded inside the monument, and secondly, to document the sequence of deposition of these vessels or vessel fragments. A succinct depositional biography for the vessels from each compartment is provided, to elucidate fully the history of deposition and disturbance in the interior of the cairn. Table 5.3. provides a sherd profile for each vessel identified in the assemblage. The following review of vessels deposited in the interior of the cairn, dealing successively with vessels represented in single, and then multiple, contexts, progresses across sections I through VI.

Table 5.3.: a quantitative summary of the contextual derivation of vessels represented in the assemblage from Clettraval

vessel code	context	level	number of sherds	number of sherds as % of sherds representing vessel	average sherd size	max. sherd size	min. sherd size
C1	I	C	3	100	19	20	17
C2	I	C	3	100	31	52	18
C3	I	B	1	50	30	30	30
C3	III	C	1	50	36	36	36
C4	I	B	7	100	28	41	21
C5	II	B	1	9	49	49	49
C5	I	B	9	82	33	41	24
C5	IV	B	1	9	40	40	40
C6	-	-	1	5	22	22	22
C6	III	B	1	5	29	29	29
C6	II	B	17	85	31	42	22
C6	III?	B?	1	5	40	40	40
C7	I	B	30	97	46	149	24
C7	-	-	1	3	45	45	45
C7?	I	B	19	100	38	77	26
C8	I	B	6	100	31	42	24

vessel code	context	level	number of sherds	number of sherds as % of sherds representing vessel	average sherd size	max. sherd size	min. sherd size
C9	III	B	1	100	37	37	37
C10	I	B	1	100	34	34	34
C11	I	B	2	50	31	40	22
C11	III	C	2	50	34	36	31
C12	I	B	2	67	31	38	24
C12	-	-	1	33	25	25	25
C13	I	B	1	100	36	36	36
C14	I	B	2	67	32	36	28
C14	-	-	1	33	38	38	38
C15	I	B	1	100	25	25	25
C16	I	B	1	100	22	22	22
C17	I?	B?	1	100	23	23	23
C18	III	C	8	89	36	46	28
C18	III	B	1	11	28	28	28
C19	III	C	3	100	28	34	20
C20	III	C	2	100	39	40	38
C21	III	C	1	100	43	43	43
C22	III	C	1	100	25	25	25

vessel code	context	level	number of sherds	number of sherds as % of sherds representing vessel	average sherd size	max. sherd size	min. sherd size
C23	III	C	1	100	26	26	26
C24	I	B	2	100	28	32	23
C25	I?	B?	1	100	19	19	19
C26	I	B	7	100	41	54	20
C27	I	B	3	100	39	50	27
C28	I	B	1	100	51	51	51
C29	I	B	2	100	19	22	16
C30	I	B	12	92	35	48	26
C30	-	-	1	8	35	35	35
C31	I	B	9	69	56	121	26
C31	-	-	4	31	67	78	55
C32	III	B	1	3	99	99	99
C32	I	B	37	97	35	66	20
C33	II	B	4	44	33	38	29
C33	I	B	5	56	40	58	21
C33?	-	-	2	50	17	17	17
C33?	I	B	2	50	39	41	36
C34	I	C	1	100	18	18	18

vessel code	context	level	number of sherds	number of sherds as % of sherds representing vessel	average sherd size	max. sherd size	min. sherd size
C35	I	B	1	100	43	43	43
C36	I	C	1	100	44	44	44
C37	VI	C	2	100	43	47	38
C38	-	-	2	22	59	61	57
C38	V	D	6	67	60	109	35
C38	V	C	1	11	25	25	25
C38?	I	B	1	100	33	33	33
C39	V	C	28	100	49	102	18
C40	-	-	1	33	38	38	38
C40	V	D	1	33	46	46	46
C40	IV	B	1	33	61	61	61
C41	III	C	1	50	38	38	38
C41	-	-	1	50	31	31	31
C42	-	-	1	5	87	87	87
C42	III	C	20	95	65	115	24
C43	III	C	42	100	58	110	37
C44	III	B	1	100	28	28	28
C45	II	C	19	100	44	67	24

vessel code	context	level	number of sherds	number of sherds as % of sherds representing vessel	average sherd size	max. sherd size	min. sherd size
C46	II	C	14	100	79	133	36
C47	II	B	1	100	21	21	21
C48	II	B	1	100	49	49	49
C49	II	B	1	100	38	38	38
C50	I	C	21	100	60	120	30
C51	I	C	15	100	52	97	24
C52	I	B	35	100	40	95	20
C53	I	B	13	100	31	74	18
C54	I	B	1	100	35	35	35
C55	I	B	1	100	45	45	45
C56	I	B	1	100	28	28	28

5.4.2.1.1. Vessels represented in single contexts

Vessels C1, C2, C34, C36, C50 (see Figure 2.9), and C51 (see Figure 2.9) derive exclusively from the lower layer of section I. Admittedly, some of these vessels are represented by an orphan sherd. Vessels C1 and C2, represented by body sherds, vessel C34, represented by a solitary rim sherd, and vessel C36, represented by a solitary sherd, derived from either a carination or base, are all manifestly incomplete. The constituent sherds of these various vessels display signs of post depositional degradation, and, for vessel C1, occasional reburning. Vessel C50, represented by rim, body and base sherds, is approximately half complete (see Figure 2.9). That many of the sherds are either substantial or contiguous suggests that the vessel was deposited intact, though not necessarily complete, and broken subsequently. Vessel C51, represented by rim, neck, shoulder body and base sherds, is almost entirely complete (see Figure 2.14). The vessel is in good condition, and was evidently deposited intact and broken subsequently.

Vessels C45 (see Figure 2.14) and C46 (see Figure 2.24) derive exclusively from the lower layer of section II. Vessel C45, represented by rim, neck, shoulder and body sherds, is, with the exception of the base, relatively complete. Many of the constituent sherds are abraded suggesting some degree of post depositional disturbance. Vessel C46 (see Figure 2.24), represented by rim, neck, shoulder and body sherds, is largely complete. That contiguous sherds display signs of differential reburning suggests some degree of post depositional disturbance. However, given the substantial size of many of these sherds, it is possible that some were reburnt during reuse *as* sherds in the mortuary rituals that required their eventual deposition.

Vessels C41 (see Figure 2.1), C42 (see Figure 2.23), and C43 (see Figure 2.21) derive exclusively from the lower layer of section III. Vessel C41, represented by two conjoinable rim sherds, is manifestly incomplete. The surviving fragment, given the presence of conjoinable sherds, was probably deposited intact and broken subsequently. Reburning on one of these contiguous sherds attests to differential post depositional disturbance. Vessel C42 (see Figure 2.23), represented by neck, body and base sherds, is largely complete. The vessel was probably deposited intact, given the conjoinable nature of the constituent sherds. Many of the sherds display signs of post depositional degradation. Vessel C43 (see Figure 2.21), represented by rim, neck, body and base sherds, is almost entirely complete. The vessel, given the conjoinable nature of its constituent sherds, many of which are substantial, was probably deposited complete. However, differential abrasion and reburning on contiguous sherds alludes to differing degrees of post depositional disturbance. Various vessels, represented by one or more uninformative, undiagnostic and diminutive sherds, including vessels C19, C20, C21, C22, C23 also derive from the lower layer of section III. All sherds display signs of post depositional degradation.

Vessels C4, C12, C24, C26, C27, C28, C30, C31, C35, C52 (see Figure 2.24), C53 (see Figure 2.16), C54 (see Figure 2.52), C55, C56 derive exclusively from the upper layer of section I. Vessels C4, C12, C24, C26, C27, C35, C54, C55, C56, each represented by meagre number of sherds, frequently a single fragment, are all manifestly incomplete. Vessel C53, represented by rim, neck, carinated and body sherds (see Figure 2.16), and vessel C30, represented by shoulder and body sherds, two of which are contiguous, are both partially complete. Vessel C31, represented by body and base sherds, one of which is substantial, is approximately half complete. Vessel C52 (see Figure 2.24), represented by rim, neck, shoulder, body and base sherds, is largely complete. The sherds surviving from vessels C4, C12, C24, C26, C27, C53 (see Figure 2.16), C55, C56 variously display signs of abrasion, laminar fracture, and reburning, suggesting either post depositional disturbance or degradation. Differential abrasion and occasional reburning on the constituent sherds of vessel C30 alludes to some degree of post depositional disturbance. By contrast, the orphan sherds from vessels C35 and C54 are in good and pristine condition respectively. Several vessels, including C24 and C31, are represented by conjoinable sherds. Vessel C24 is represented by two conjoinable rim sherds. Five conjoinable sherds from vessel C31 refit into a substantial basal fragment. All sherds from vessel C52 (see Figure 2.24) are effectively conjoinable. Many sherds representing vessel C53 (see Figure 2.16) are conjoinable; and there are three refits comprising two conjoinable sherds, and another refit comprising three conjoinable sherds. These vessel refit fragments, whether forming larger fragments or whole vessels, indicate that the refitted parts were deposited intact and broken subsequently. That only the lower portion of vessel C31 is present, suggests either the deposition, or the eventual removal, of specific parts of the vessel. That the constituent sherds of vessel C53 represent only part of the vessel suggests that the remainder was either not deposited or removed after breakage (see Figure 2.16). The absence of the rim and base of vessel C30 suggests that these parts of the vessel were either not deposited or removed after the remainder of the vessel was broken. Indeed, given the distinctive nature of rim and base morphology, these parts of the vessel were perhaps intact upon removal. The remaining sherds representative of vessel C30 are sufficiently small to have been neglected during retrieval. Various vessels, represented by one or more uninformative and undiagnostic body sherds, including vessels C8, C10, C13, C14, C15, C16, C17, C28, C29, and probably C25, also derive exclusively from the upper layer of section I. All sherds display signs of post depositional degradation.

Vessels C47, C48 and C49, all represented by solitary sherds, exclusively from the upper layer of section II, are manifestly incomplete. Vessels C47 and C48 display variously signs of abrasion, laminar fracture, and reburning. These sherds are preferably interpreted as residual. Vessel C49, represented by a solitary body sherd from the upper level of section II, is manifestly incomplete. The solitary presence of this sherd, given its probable iron age derivation (see Henshall 1972:510, no. 22), is preferably explained by infiltration.

Vessels C9 (see Figure 2.52) and C44, represented by a solitary body and rim sherd respectively, from the upper layer of section III, are manifestly incomplete. The orphan sherd from vessel C9, in marked contrast to the fragment from vessel

C44, is neither particularly abraded, nor at all reburnt. The size and condition of this latter diminutive orphan sherd, which displays signs of post depositional abrasion, suggest residuality.

Vessel C39 (see Figure 2.24), represented by rim, neck, shoulder, body and base sherds, is largely complete. The constituent sherds derive exclusively from the lower layer of section V. The vessel, given the presence of conjoinable sherds, was probably deposited intact. Many sherds display signs of post depositional abrasion, although there is no evidence of reburning. Presumably, some parts of the vessel were removed after breakage.

Vessel C37 (see Figure 2.48), represented by a rim sherd and a body sherd, is manifestly incomplete. These sherds, both from the lower layer of section VI, are conjoinable. These sherds display signs of post depositional degradation. This vessel fragment was evidently broken further after deposition.

5.4.2.1.2. Vessels represented in multiple contexts

Several vessels, namely vessels C3, C5, C6 (see Figure 2.52), C7 (see Figure 2.21), C11, C18, C32 (see Figure 2.52), C33 (see Figure 2.52), C38 (see Figure 2.23) and C40 (see Figure 2.52), embody sherds derived from multiple contexts. However, the majority of these vessels derive predominantly from a single context, and the few sherds from other contexts are preferably interpreted as residual or intrusive. The following review of vessels represented in multiple contexts progresses, as above, across sections I through VI.

Vessel C5, represented by shoulder, body and base sherds, is largely incomplete. The constituent sherds derive from the upper layer of sections I, II and IV; four sherds were recovered from the post abandonment layer, presumably in section I (see Scott 1935:503). Unfortunately, it is no longer possible to establish which sherds derive from this latter context. Interestingly, the solitary sherds from sections II and IV are amongst the largest, the heaviest, and perhaps least abraded, of all the constituent sherds. The absence of conjoinable sherds suggests that much of the vessel was removed after its initial deposition. The dispersal of the remaining sherds across contexts, particularly the post abandonment layer, alludes to a considerable degree of disturbance. It is not too fanciful to envisage a complicated depositional history, incorporating episodes of deposition, retrieval, and redeposition.

Vessel C7 (see Figure 2.21), represented by rim, neck and body sherds, is partially complete. The constituent sherds, some of which refit to form a substantial portion of the upper vessel, derive largely from the upper layer, but occasionally from the lower layer, of section I. Unfortunately, it is impossible to distinguish between sherds from the separate contexts. Many of the constituent sherds display signs of abrasion, reburning and laminar fracture, suggesting some degree of post depositional disturbance or degradation. At least part of the vessel was deposited intact and broken subsequently. Much of the vessel probably disintegrated after deposition. Given the fragmentary condition of the vessel, it is possible that it was disturbed and redeposited within section I during successive uses of this compartment.

Vessel C11, represented by body sherds, is manifestly incomplete. The constituent sherds derive from either the lower layer of section III or the upper layer of section I. The diminutive and abraded nature of these fragments suggests considerable disturbance. There is no appreciable difference between the sherds from the different contexts.

Vessel C18, represented by shoulder and body sherds, is partially complete. The constituent sherds derive from both the upper and lower layers of section III. Many of these sherds displaying signs of post depositional abrasion and reburning, are probably residual. There is no appreciable difference between the sherds from the different contexts.

Vessel C3, represented by two shoulder sherds, is manifestly incomplete. These sherds derive separately from the lower layer of section III and the upper layer of section I. The diminutive size and abraded condition of these sherds, particularly the fragment from section III, suggest some degree of post depositional disturbance or degradation.

Vessel C32 (see Figure 2.52), represented by rim, neck, shoulder, body and base sherds, is approximately half complete. The sherds from the upper half of the vessel are conjoinable. The remaining sherds include body and base sherds. The constituent sherds derive predominantly from the upper layer of section I; other sherds derive from the upper layer in section III and the post abandonment layer in section I. Unfortunately, it is impossible to ascertain, with the exception of a solitary fragment, which sherds originated in the post abandonment layer in section I or the upper layer of section III. Interestingly, the sherd known to derive from section III, the largest sherd from vessel C32 (see Figure 2.52), is more than twice as large as the average sherd size for the remaining constituent sherds. There is no appreciable difference between the condition of the remaining constituent sherds from different contexts. The presence of a large sherd in section III, and the majority of the remainder of the vessel, refitting to form a substantial part of the vessel, in section I, argues for deposition of separate parts of the vessel in different compartments.

Vessel C33 (see Figure 2.52), represented by rim and body sherds, is partially complete. The constituent sherds derive from the upper layer in sections I and II. Sherds from section II, including three conjoinable fragments, are, in general, less abraded than sherds from section I. Another two sherds possibly from vessel C33 (see Figure 2.52), also in section I, are reburnt. There is no appreciable difference in sherd size across contexts. It is probable that substantial parts of vessel C33 were deposited in both sections I and II. The intensity of depositional activity in section I probably ensured a greater level of disturbance of the vessel parts deposited in this innermost compartment.

Vessel C6 (see Figure 2.52), represented by shoulder and body sherds[8], is partially complete. The constituent sherds derive largely from the upper layer of section II; one or possibly two sherds derive from the upper layer of section III. Many of these sherds are diminutive, and display signs of post depositional abrasion, laminar fracture and occasionally reburning. The sherd definitely from section III, slightly more abraded than those from section II, is probably residual. The dearth of conjoinable sherds, and the absence of base or rim sherds suggests that much of the vessel was removed after deposition.

Henshall equates the solitary sherd from vessel C54 (see Figure 2.52) with another, heavily abraded, diminutive, and reburnt sherd, labelled vessel C47 in this analysis, from the upper layer in section II (Henshall 1972:511, no.27). Vessel C54, if the inclusion of a second sherd is acceptable, was evidently subject to differential post depositional disturbance. However, it is preferable to assign these two sherds to separate vessels due to the wholly indeterminate nature of the smaller, abraded fragment.

Vessel C40 (see Figure 2.52), represented by three body sherds, two of which are conjoinable, is manifestly incomplete. The contiguous sherds derive from the upper layer of section IV, and, inexplicably, the remaining sherd apparently derives from the rock hollow beneath the floor in section V. It remains difficult to explain the presence of this latter, not insubstantial, fragment within an apparently sealed feature by infiltration. It is preferable to interpret the refitted part of the vessel as removed from this early feature and redeposited; presumably, breakage occurred after such disturbance.

Vessel C38 (see Figure 2.23), represented by several rim, neck and body sherds, is partially complete. The constituent sherds derive from either the lower layer or from the rock hollow beneath the floor of section V. Another sherd, possibly from vessel C38 (see Figure 2.23), derives from the upper layer of section I. This latter sherd, severely abraded, is best interpreted as residual. Some of the sherds in section V refit into three larger fragments. Interestingly, the two contiguous sherds in one of these conjoinable fragments derive separately from the rock hollow and the lower layer in section V. Such depositional circumstance attests to the deliberate deposition of different fragments from the same vessel in separate contexts. Some of the sherds exhibit signs of post depositional abrasion and reburning, more likely attributable to degradation induced by taphonomy, and the inconsistencies of open firing, respectively. That many of the sherds from vessel C38 (see Figure 2.23), probably deposited in the rock hollow beneath the floor in section V, apparently displayed traces of abrasion and reburning requires explanation. It is unlikely that vessel fragments deposited in this relatively secure context were susceptible to disturbance. The worn appearance indicative of post depositional abrasion is more probably a consequence of degradation, the reburning more likely an original feature acquired during the vagaries of open firing.

Vessels C42 (see Figure 2.23) and C43 (see Figure 2.21), exclusively from the lower layer in section III, were presumably deposited intact, but largely complete, and broken subsequently. These ceramics are presumably the vessels deposited beneath the floor of the compartment (see Scott 1935:486-87). Certainly, some of the fragments from vessels C42 (see Figure 2.23) and C43 (see Figure 2.21) are sufficiently large to match the description of this pottery given by Scott (1935:487).

These successive vignettes, each a depositional history for a separate compartment within the interior the cairn, require synthesis. The majority of vessels represented in the assemblage derived from section I, the innermost compartment. The vessels represented in the remaining compartments gradually decreased in number towards the entrance (Scott 1935:496)[9]. The frequency distribution of vessels in the interior, presented in Table 5.3., reflected the differential intensity of depositional activities within the various compartments. There is considerable evidence to indicate the deposition of complete vessels. Vessels C32 (see Figure 2.52), C39 (see Figure 2.24), C42 (see Figure 2.23), C43 (see Figure 2.21), C51 (see Figure 2.14), C52 (see Figure 2.24) were probably deposited intact at various locations around the chamber. The evidence for the deposition, or at least the removal, of parts of, rather than complete, vessels, in the form of vessels partially represented by refitted fragments, or vessels missing specific parts, for example vessels C5, C6 (see Figure 2.52), C7 (see Figure 2.21), C18, C24, C30, C31, C33 (see Figure 2.52), C37 (see Figure 2.48), C38 (see Figure 2.23), C41 (see Figure 2.1), C45 (see Figure 2.14), C50 (see Figure 2.9), C53 (see Figure 2.16), is persuasive. The status of the remaining vessels, each represented by a meagre number of fragmentary sherds, suggests the removal of a considerable number of vessels. Many of the sherds representing these latter vessels were probably left behind inadvertently.

It becomes possible to articulate a ceramic sequence predicated on the probable order of deposition in the cairn. Vessel C38 (see Figure 2.23) derives from both the rock hollow beneath the floor, and the lower level immediately above the floor, in section V. Vessels C1, C2, C18, C19, C20, C21, C22, C23, C34, C36, C37 (see Figure 2.48), C41 (see Figure 2.1), C42 (see Figure 2.23), C43 (see Figure 2.21), C45 (see Figure 2.14), C46 (see Figure 2.24), C51 (see Figure 2.14), derive from the lower layer found in the various compartments. Vessels C4, C5, C6 (see Figure 2.52), C7 (see Figure 2.21), C8, C9 (see Figure 2.52), C10, C12, C13, C14, C15, C16, C24, C26, C27, C28, C29, C30, C31, C32 (see Figure 2.52), C33 (see Figure 2.52), C35, C40 (see Figure 2.52), C44, C47, C48, C49, C52 (see Figure 2.24), C53 (see Figure 2.16), C54 (see Figure 2.52), C55, C56, and probably C25, derive from the upper layer found in the various compartments. The original contextual affiliation of vessels C3 and C11, equally represented in both the lower and upper layers, are uncertain.

Vessel dispersal across the compartments attests to a general level of disturbance inside the cairn. Vessels C3, C5, C6 (see Figure 2.52), C11, C18, C32 (see Figure 2.52), C33 (see Figure 2.52), C38 (see Figure 2.23), and C40 (see Figure 2.52) are all represented in multiple contexts. Table 5.4. identifies the number of contexts, excluding indeterminate ones, in which each vessel is definitely

Table 5.4.: number of contexts in which each vessel is represented

vessel code	number of contexts	number of sherds
C1	1	3
C2	1	3
C9	1	1
C22	1	1
C33?	1	4
C34	1	1
C36	1	1
C31	1	13
C30	1	13
C29	1	2
C28	1	1
C27	1	3
C26	1	7
C23	1	1
C37	1	2
C21	1	1
C20	1	2
C19	1	3
C16	1	1
C15	1	1
C14	1	3
C13	1	1
C12	1	3
C10	1	1
C24	1	2
C48	1	1
C8	1	6
C7?	1	19
C7	1	31
C56	1	1
C55	1	1
C54	1	1

vessel code	number of contexts	number of sherds
C53	1	13
C52	1	35
C51	1	15
C50	1	21
C35	1	1
C49	1	1
C38?	1	1
C42	1	21
C39	1	28
C4	1	7
C41	1	2
C47	1	1
C43	1	42
C44	1	1
C45	1	19
C46	1	14
C32	2	76
C33	2	18
C3	2	4
C40	2	6
C6	2	40
C11	2	8
C38	2	18
C18	2	18
C5	3	33

represented. The number of sherds representing the vessel is also included, to facilitate a more effective assessment of sherd dispersal across contexts.

The degree of universal abrasion and reburning on sherds provides a general indication of post depositional disturbance. Table 5.5. summarises these features, with respect to sherds, according to context. Interestingly, expressed in terms of sherd quantity, the pottery from the upper layer is more abraded than the pottery in the lower layer. This circumstance alludes to a level of disturbance inevitable during successive uses of the various compartments, especially section I, for mortuary rituals.

Table 5.5.: quantification of abraded and reburnt sherds according to context

context	**level**	**number of sherds with universal abrasion**	**abraded sherds as % of all sherds in this context**	**number of sherds with reburning**	**reburnt sherds as % of all sherds in this context**
-	-	5	31.25	3	19
I	B	93	43	47	22
I	C	13	30	1	2
I?	B?	2	100	1	50
II	B	16	64	3	12
II	C	12	36	9	27
III	C	25	30	25	30
V	D	1	14	1	14

5.4.2.2. The pottery from Unival

The following analysis of the pottery focuses, firstly, on the nature of the assemblage, and secondly, on depositional practices at the chambered cairn.

The assemblage contains no fewer than nineteen, and no more than twenty six, vessels. Nineteen distinctive vessels are definitely represented (vessels U1-19);

four additional vessels are also possibly represented (vessels U20-U23); and three vessels, currently unlocated in the museum, were unavailable for analysis (vessels U24-U26). The assemblage contains nearly three hundred sherds, weighing some six and a half kilograms. The average sherd size is 50 millimetres (mm); the maximum and minimum sherd sizes are approximately 120 mm and 10 mm respectively. Over four fifths of the assemblage, expressed in terms of sherd quantity, and nine tenths of the assemblage, expressed in terms of sherd weight, are incorporated into reconstructions, many of which are substantial.

The interior of the chambered cairn, the structural area germane to an evaluation of depositional practices, encloses a short passage (or antechamber), accessed through an entrance in the facade, an oval chamber, and a cist in the south west corner of the chamber (see Scott 1948:7, Figure 4:8). Small finds are contextualised within the stratigraphy with respect to, frequently arbitrary, spatial areas and vertical levels. The interior of the chambered cairn is separated into four spatial areas, sometimes coincident with structural features, namely the passage (area B), the east half of the chamber (area A3), the west half of the chamber (area A1), and the cist within the chamber (area A2).

Table 5.6. provides a summary of the distribution of pottery according to context, as expressed by a combination of spatial area and absolute level. Unfortunately, as for the assemblage from Clettraval examined above, the absence of weight values for the majority of sherds precludes a sherd weight analysis. A quantitative evaluation of context is necessarily restricted to the number, rather than the weight, of sherds. Approximately a third of the assemblage, some 110 sherds, is unlabelled and therefore uncontextualised. Approximately two fifths of the assemblage, some 130 sherds, derives from the chamber. Approximately a tenth of the assemblage, some 30 sherds, derives from the cist within the chamber. A meagre proportion of the assemblage, precisely 8 sherds, derives from the entrance passage. The majority of contextualised material, some 130

Table 5.6.: quantity, weight and size of sherds from Unival by context

context	level	number of sherds	average sherd size	max. sherd size	min. sherd size
-	-	106	41	106	10
-	11	2	46	64	28
-	12	1	81	81	81
a	-	9	43	65	23
a	12	4	50	78	23
a1	-	3	35	44	28
a1	11	3	66	95	29
a1	12	86	56	123	20
a2	-	4	48	58	38
a2	11	19	50	97	22
a2	12	10	55	121	20
a2?	12	2	55	74	36
a3	-	6	39	64	31
a3	11	10	48	65	28
a3	12	22	54	117	24
b	11	2	33	38	28
b	12	4	35	46	22
b	13	2	30	32	27

sherds, derive from level 12, which coincides roughly with layer 4 in the stratigraphy (see Scott 1948:11, Figure 5:16).

A consideration of depositional practices is intended, firstly, to elucidate something of the manner in which pottery was discarded inside the monument, and secondly, to document the sequence of deposition of these vessels or vessel fragments. Table 5.7. provides a quantitative summary of the contextual derivation of each vessel. That fifteen vessels, namely U1 (see Figure 2.20), U2 (see Figure 2.25), U3 (see Figure 2.21), U6 (see Figure 2.29), U7 (see Figure 2.29), U8 (see Figure 2.20), U9 (see Figure 2.20), U10 (see Figure 2.21), U11 (see Figure 2.29), U12 (see Figure 2.25), U13 (see Figure 2.1), U18, U19 (see Figure 2.48), U20, and U21, are partially represented by sherds derived from unknown contexts lessens the integrity of any conclusions formulated in a consideration of depositional practices. A succinct depositional biography is provided for each vessel represented in the assemblage to elucidate fully an envisaged history of deposition and disturbance.

Vessel U1 (see Figure 2.20), represented by rim, body and base sherds, is largely complete (see Scott 1948:17). Equal proportions of the vessel were recovered from different locations and levels within the chamber. One half was deposited either within or upon the initial deposit on the chamber floor (location 1B), prior to the accumulation of dry stone debris, beside the north wall of the chamber; the remaining half was recovered from within the secondary deposit, the matrix in which the dry stone debris occurs, and was apparently associated with redeposited, certainly disarticulated, human skeletal remains (see Cave 1948:37, no. B1). It seems likely that the vessel, initially deposited either in the cist or beside the north wall of the chamber, was broken subsequently, and partly re-deposited elsewhere in the chamber (location 1A). That the latter half, although recovered as sherds, was originally deposited as a substantial fragment in association with skeletal remains, suggests that its removal and eventual redeposition, was a deliberate and carefully executed procedure. The good condition of the representative sherds of vessel U1 suggests minimal disturbance (see Figure 2.20). Possible reburning (Henshall 1972:531) presumably occurred during the mortuary ritual.

Vessel U2 (see Figure 2.25), represented by rim, neck, shoulder, body and base sherds, is largely complete (see Scott 1948:17). The majority of sherds from this vessel were recovered from the upper layer in the north east corner of the chamber, with the remaining sherds scattered elsewhere in the west area of the chamber (Scott 1948:17). This vessel, with all sherds much abraded and possibly reburnt after deposition, was probably deposited in the north east corner of the chamber originally, and partially scattered by a subsequent disturbance. The comprehensive reburning displayed by the vessel may have occurred both before

Table 5.7.: a quantitative summary of the contextual derivation of vessels represented in the assemblage from Unival

vessel code	context	level	number of sherds	number of sherds as % of sherds representing vessel	average sherd size	max. sherd size	min. sherd size
U1	-	-	5	56	64	78	48
U1	A1	11	2	22	85	95	75
U1	A1	12	2	22	92	123	60
U10	-	-	14	47	44	86	10
U10	-	11	1	3	64	64	64
U10	A2	-	2	7	57	58	56
U10	A2	11	7	23	56	97	35
U10	A2	12	4	13	58	83	42
U10	B	12	1	3	46	46	46
U10	B	13	1	3	32	32	32
U11	-	-	3	18	33	48	20
U11	A	-	1	6	65	65	65
U11	A2	-	2	12	40	41	38
U11	A2	11	10	59	52	91	26
U11	A2	12	1	6	35	35	35
U12	-	-	1	2	34	34	34
U12	A1	11	1	2	29	29	29

vessel code	context	level	number of sherds	number of sherds as % of sherds representing vessel	average sherd size	max. sherd size	min. sherd size
U12	A1	12	40	89	49	75	25
U12	A2	11	1	2	22	22	22
U12	A3	11	1	2	28	28	28
U12	A3	12	1	2	30	30	30
U12?	A1	12	3	60	36	57	20
U12?	A2	11	1	20	26	26	26
U12?	A2	12	1	20	20	20	20
U13	-	-	4	80	28.25	33	25
U13	B	11	1	20	28	28	28
U14	A1	12	4	100	81	92	56
U15	A1	12	5	100	49	65	27
U16	A2	12	3	100	47	69	31
U17	A3	11	1	17	59	59	59
U17	A3	12	5	83	51	68	39
U18	-	-	3	50	51	57	43
U18	A	12	1	17	62	62	62
U18	A1	12	2	33	37	44	29
U19	-	-	12	92	52	106	18
U19	A2	12	1	8	121	121	121

vessel code	context	level	number of sherds	number of sherds as % of sherds representing vessel	average sherd size	max. sherd size	min. sherd size
U2	-	-	23	59	35	99	15
U2	A	-	2	5	36	39	33
U2	A	12	2	5	57	78	36
U2	A1	12	12	31	55	76	33
U20	-	-	1	25	32	32	32
U20	B	12	2	50	35	41	29
U20	B	13	1	25	27	27	27
U21	-	-	1	100	17	17	17
U22	B	12	1	100	22	22	22
U23	A	12	1	100	23	23	23
U3	-	-	5	38	57	68	32
U3	A	-	2	15	58	62	54
U3	A1	-	1	8	44	44	44
U3	A1	12	4	31	75	122	36
U3	A2?	12	1	8	74	74	74
U4	-	12	1	25	81	81	81
U4	A1	12	3	75	104	112	93
U5	A1	12	1	100			
U6	-	-	5	21	38	48	30

vessel code	context	level	number of sherds	number of sherds as % of sherds representing vessel	average sherd size	max. sherd size	min. sherd size
U6	A3	-	2	8	51	64	37
U6	A3	11	4	17	47	57	42
U6	A3	12	13	54	59	117	24
U7	-	-	6	33	31	44	18
U7	A1	-	2	11	30	32	28
U7	A1	12	10	56	60	91	44
U8	-	-	13	68	38	85	22
U8	-	11	1	5	28	28	28
U8	A	-	3	16	28	31	23
U8	A3	11	1	5	53	53	53
U8	B	11	1	5	38	38	38
U9	-	-	10	45	32	52	21
U9	A	-	1	4	54	54	54
U9	A2?	12	1	4	36	36	36
U9	A3	-	4	18	33	39	31
U9	A3	11	3	14	51	65	34
U9	A3	12	3	14	43	52	37

breakage, during the mortuary ritual, and after breakage, during rearrangements of previously deposited vessels.

Vessel U3 (see Figure 2.21), represented by rim, shoulder, body and base sherds, is approximately half complete. The larger fragments of this vessel were deposited on the possible paving in the north east corner of the chamber (location 3A), the remaining fragments upon a cist slab (location 3B). Unfortunately, with the exception of a solitary sherd, the fragments derived from beside the cist remain unidentified. Sherds contiguous in the reconstruction frequently display radical differences in the degree of abrasion or reburning. Such evidence of differential post depositional processes suggests differing contexts, and certainly degrees of disturbance, for these various fragments. However, both the solitary identifiable sherd from beside the cist, and some sherds from the north east corner of the chamber, exhibit severe post depositional abrasion and reburning. Essentially, it is not possible to equate pottery from separate contexts with differing post depositional processes.

Vessel U4 (see Figure 2.20), exclusively represented by four large rim sherds forming the upper part of the vessel, is approximately half complete (Scott 1948:18). The constituent sherds, all recovered from the upper layer in the north east corner of the chamber, probably represent the remnants of a larger fragment deposited intact and broken subsequently in this same location (Scott 1948:18).

Vessel U5, wedged between the vertical slabs forming the wall of the north east corner of the chamber, was recovered intact (Scott 1948:17). The vessel was resting on a large paving slab, elevated above the original floor by supporting stone blocks (see Scott 1948:12), extending across the breadth of the chamber. This vessel, clearly a deliberate deposit, survived intact due to the protection afforded by the slabs between which it was placed. Scott, deferring judgement on the structural integrity of the paving slab, regarding which he declared: "...it may or may not be original" (Scott 1948:12), evidently interpreted vessel U5, effectively situated in the upper layer, as a later deposit (1948:13). If the paving slab is understood as an original feature, the interpretation followed here, vessel U5 is one of the earliest deposits surviving in the interior of the chamber.

Vessel U6 (see Figure 2.29), represented by rim, body and base sherds, is relatively complete (Scott 1948:18). The vessel was originally placed on a stone slab supported by underlying stones in the south east corner of the chamber; the vessel was probably broken subsequently, and the resultant fragments fallen down into the stonework below (Scott 1948:18). That the sherds fallen into the stonework are, on average, smaller than those remaining around the plinth, lends support to this hypothesis. There is no difference in the degree of abrasion suffered by sherds from different levels within the stratigraphy, although much of the original surfaces are effaced by laminar fracture (cf. Henshall 1972:532). The stones on which the vessel was placed are preferably interpreted as a deliberate accumulation rather than as collapsed corbelling.

Vessel U7 (see Figure 2.29), represented by rim, neck, body and base sherds, is almost complete (Scott 1948:17). The constituent sherds of this vessel, dispersed within the upper layers of the north half of the chamber, were concentrated in a recently disturbed deposit in its north west corner (Scott 1948:17). The differential degree of abrasion and reburning suffered by contiguous sherds, some of which probably occurred before comminution, and the extent of sherd dispersal across the chamber, indicates a considerable degree of post depositional disturbance. The vessel was probably placed against, or smashed beside, the north wall and subsequently trampled across the chamber floor during succeeding mortuary practices.

Vessel U8 (see Figure 2.20), represented by rim, neck, shoulder, body and base sherds, is relatively complete (Scott 1948:16-17). The constituent sherds derive largely from the lower layer in the north east corner of the chamber; other sherds derive from either the lower or upper layer in the east half of the chamber, and two rim sherds derive from above the paving in the passage (Scott 1948:16-17). Scott assigned this vessel to a second burial because its constituent sherds derived from above the paving in the passage, which he interpreted as the remnants of a blocking installed after the first burial, but dismantled subsequently, and also from the lower layer of the chamber (1948:16-17). Although differential abrasion is identifiable on contiguous sherds, suggesting post depositional disturbance and dispersal, no correlation between degree of abrasion and depositional context is discernible. It is reasonable to suppose that vessel U8 (see Figure 2.20) was deposited either within or upon the lower layer and subsequently disturbed. Sherds were scattered across the chamber floor in the immediate vicinity; this dispersal extended into the nearby passage.

Vessel U9 (see Figure 2.20), represented by rim, body and base sherds, is largely complete (Scott 1948:16). The constituent sherds derive largely from the floor beside the entrance in the east of the chamber; the remaining fragments derive from either the lower or upper layers, also in the east of the chamber, and the cist. The contextual diversity evinced by the constituent sherds requires comment. Unfortunately, it is not possible to distinguish between the sherds derived from these various contexts. The two sherds recovered from the cist remain elusive. No sherds are especially diminutive, reburnt or abraded. Scott argued that vessel U9 (see Figure 2.20) accompanied the first burial in the cist, firstly, because some sherds were recovered from this feature, and, secondly, because a substantial fragment discarded in the north east corner of the chamber, subsequently broken further after redeposition, was evidently an early deposit in the interior of the monument beyond the confines of the cist. The former context attested to the presence of vessel U9 (see Figure 2.20) in the cist; the latter context to its early removal and redeposition outside the cist. Yet it remains impossible to establish the two sherds that remained in the cist. These sherds, lying in the cist throughout its duration of use, were presumably subjected to the intense heat generated by the fires integral to the mortuary process on numerous occasions. That no sherds exhibit signs of reburning suggests that the fragments from the cist were deposited there during the final stages of use. It is preferable to interpret the allegedly redeposited fragment against the wall in the north east corner as the remnants of the original vessel, subsequently disturbed and scattered across the chamber and incorporated into the cist at a later date.

Vessel U10 (see Figure 2.21), represented by rim, neck, shoulder, body and base sherds, is approximately two thirds complete (cf. Henshall 1972:532-33, no. 13). The constituent sherds derive almost exclusively from the cist, with three sherds situated below the cist slabs in association with some indeterminate bone fragments, the remaining sherds lying on the cist slabs, and a further two sherds located above the paving in the passage. Unfortunately, it is impossible to establish which sherds were deposited above or beneath the cist slabs, nor identify all three sherds from the passage. Scott considered vessel U10 (see Figure 2.21) to relate to the final burial in the cist (1948:18). There are several reasons to dispute the late position in the burial sequence ascribed to this vessel. Firstly, the substantial size of at least one of the sherds beneath the cist slab suggests deliberate deposition as a foundation deposit during its initial construction, rather than, as Scott proposed, natural infiltration after its abandonment (1948:18). That these sherds were associated with fragmentary skeletal deposits (see Scott 1948:14, nos. B3(5), B3(6)),[10] reinforces such an interpretation. The remaining vessel fragments were perhaps deposited in the cist upon completion of this structural feature, and subsequently disturbed, resulting in the dispersal of some sherds elsewhere in the interior. Interestingly, the sherds in the passage are, on average, smaller than those remaining in the cist. That one of the sherds from the former location is severely abraded suggests differential degrees of disturbance of these sherds prior to their eventual discard in the passage. That contiguous sherds, unfortunately from indeterminate contexts, display differential evidence of reburning suggests differing degrees of post depositional disturbance. Secondly, the general absence of severe abrasion or reburning on sherds from the cist is difficult to reconcile with the prolonged period in which these fragments were considered to have lain there and the degree of disturbance they were obliged to endure during successive mortuary rituals. Finally, the nature of the stratigraphy precludes the interpretation of vessel U10 (see Figure 2.21) as a penultimate deposit in the ceramic sequence.

The fragments of this vessel lying upon the cist slabs are below the pervasive layers that seal the cist and extend across the interior of the chamber. These layers contain fragments of vessels U2 (see Figure 2.25), U4 (see Figure 2.20), U6 (see Figure 2.29), U7 (see Figure 2.29), U12 (see Figure 2.25) U14 (see Figure 2.48), U15 (see Figure 2.53), U16 (see Figure 2.48), U17 (see Figure 2.48), U18, U19 (see Figure 2.48), and U20. Although the nature of the stratigraphy remains ambiguous, due to inadequate recording during excavation, it is reasonable to suppose that vessel U10 (see Figure 2.21) predates the vessels apparently in the layer above.

Vessel U11 (see Figure 2.29), represented by rim, body and base sherds, is largely complete (Scott 1948:18). The constituent sherds all derive from the east end of the cist (Scott 1948:18). Scott interprets vessel U11 as contemporary with the final burial in the cist because its representative sherds derive exclusively from this location (1948:18). If the vessel belonged with an earlier burial then some of these sherds, removed during clearance of the cist, would presumably derive from elsewhere. The sherds are neither abraded nor reburnt by post depositional processes (*pace* Henshall 1972:532). That the deposit lies upon a cist slab, effectively on the floor of the structure, suggests that vessel U11 occurs early in the sequence.

Vessel U12 (see Figure 2.25), represented by rim, shoulder, body and base sherds, is half complete. The constituent sherds are predominantly scattered across the north part of the chamber within the upper layer. However, a solitary sherd derives from the cist, and two sherds derive from the east part of the chamber, all from either the lower or upper layers. A further five sherds, possibly from vessel U12 (see Figure 2.25), derive variously from either the cist or the eastern part of the chamber. Importantly, these outlying sherds are invariably smaller than those within the main concentration of sherds belonging to vessel U12. Differential abrasion or reburning of separate sherds suggests that these fragments were subjected to differing post depositional processes after breakage. Sherds from the eastern part of the chamber or the cist are neither more abraded nor likely to display reburning than those from the main concentration in the western part of the chamber. The vessel, probably deposited in the northern part of the chamber, was evidently much disturbed and fragmented subsequently.

Vessel U13 (see Figure 2.1), represented by conjoinable rim and body sherds, is relatively incomplete. The vessel was evidently deposited as a single, substantial rim fragment, subsequently broken into several fragments. That the constituent sherds derive exclusively from beneath the paving in the passage strongly suggests a deliberate foundation deposit at the entrance. The vessel represented, probably a plain, neutral bowl with a simple rim, is notable for its unremarkable style. It is, presumably, the intrinsic properties of this vessel *as ceramic*, rather than any superficial stylistic affinities, that are important in this particular instance.[11]

Vessel U14 (see Figure 2.48), represented by large sherds incorporating both the rim, body and base of the vessel, is largely intact. The constituent sherds were recovered from a recently disturbed part of the upper layers in the north west corner of the chamber (Scott 1948:16). The vessel, probably deposited intact or nearly complete, was, presumably, only broken by physical pressure from the overlying deposits.

Vessel U15 (see Figure 2.53), represented by four conjoinable base sherds and a solitary rim sherd,[12] is only partially complete. The base sherds, all associated in the upper layers in the north east corner of the chamber, were probably deposited intact and broken subsequently. The remaining rim sherd, curiously unabraded, was recovered, probably from the same layer, in the immediate vicinity. It is not implausible to envisage vessel U15 (see Figure 2.53) deposited intact, broken subsequently, and substantial fragments from the upper and middle parts of the vessel removed entirely from the chamber afterwards.

Vessel U16 (see Figure 2.48), represented by two conjoinable rim sherds and a solitary body sherd, is largely incomplete. The constituent sherds, situated above the cist after it had silted up and fallen into disuse, were found beneath a fallen roofing stone (Scott 1948:18). The rim fragment was presumably deposited as a single substantial piece, broken only subsequently. All sherds displayed signs of post depositional abrasion. It is possible that the entire vessel was deposited and the majority removed subsequently, or, alternatively, that only the rim fragment was deposited, and abraded and broken during later disturbances.

Vessel U17 (see Figure 2.48), represented by rim and body sherds, and possibly a base sherd, is largely incomplete. The constituent sherds all derive from the east part of the chamber. Many of these sherds display signs of severe abrasion, concretion and reburning. The presence of two conjoinable sherds, and constituent sherds from widely differing parts of the vessel, together suggest that larger fragments, possibly the entire vessel, were deposited originally, and that much of the vessel was removed subsequently. The poor condition of the majority of these sherds suggests that the chamber continued in use for some considerable period of time after the vessel they represent was deposited.

Vessel U18, represented exclusively by six body sherds, four of which are conjoinable, is largely incomplete. The constituent sherds were apparently scattered across the upper level in the north part of the chamber (see Scott 1948:17, no. 14). Presumably, a larger fragment, initially deposited intact, was broken and scattered subsequently during disturbance. All sherds display signs of post depositional abrasion, and, for the two non conjoinable sherds, reburning. The constituent sherds of vessel U18, despite considerable post depositional disturbance, are all confined to the upper layers in the northern part of the chamber, and enjoy a vague contextual coherence.

Vessel U19 (see Figure 2.48), represented by body and base sherds, is approximately half complete. The constituent sherds refit into two discrete fragments, one of which incorporates the base, to represent the lower part of the vessel. Its is, given the abundance of conjoinable sherds, reasonable to envisage the deposition of two sizeable vessel fragments. The basal part of vessel U19 was deposited over the silted up cist. The contextual derivation of the refitted body part, possibly in the upper layers above the paving in the passage, remains, strictly speaking, indeterminate. None of the conjoinable sherds, in either of the refitted fragments, display signs of post depositional disturbance. The argument for the discrete deposition of separate vessel fragments in different locations in the interior of the chamber is strengthened, if the body fragment, in marked contrast to the base portion, derives from the passage.

Vessel U20, represented exclusively by body sherds, is largely incomplete. The constituent sherds derive from the upper layers above the paving in the passage. These sherds display signs of post depositional abrasion. Vessels U19 (see Figure 2.48) and U20, manifest in the same fabric, and with a similar wall thickness, are perhaps the same vessel. If this is indeed the case, the argument developed for the deposition of separate parts of vessel U19 in different locations is not necessarily strengthened, because the fragments labelled vessel U20 are much abraded and non conjoinable, suggesting considerable post depositional disturbance. It is therefore unlikely that these sherds were deposited in the passage originally.

A number of diminutive, severely abraded and reburnt sherds are each, for the purposes of argument, afforded a unique vessel code. Vessels U21, U22 and U23, then, are each represented by an indeterminate sherd. The representative fragments of vessels U22 and U23 derive from the upper layers of the passage and chamber respectively. These vessel representations, if genuine, indicate considerable post depositional disturbance, and allude to the deposition, more specifically the *removal*, of certain vessels for redeposition elsewhere *outside* the chamber.

The above compilation of separate depositional biographies for each individual vessel requires synthesis. Vessels U5, U6 (see Figure 2.29), U7 (see Figure 2.29), U8 (see Figure 2.20), U9 (see Figure 2.20), U11 (see Figure 2.29), U14 (see Figure 2.48), U15 (see Figure 2.53), U17 (see Figure 2.48) were probably, in some cases certainly, deposited intact at various locations around the chamber.

The evidence for the deposition, or at least the removal, of parts of, rather than complete, vessels is persuasive. One half of vessel U1 was evidently removed from the floor of the chamber and redeposited subsequently (see Figure 2.20). Substantial parts of vessel U3 (see Figure 2.21) were deposited separately on the extremity of a cist slab and on the possible paving in the north east corner of the chamber. Vessel U19 (see Figure 2.48) was probably deposited as two distinct fragments in separate contexts. Only the upper half of vessel U4 (see Figure 2.20) was deposited in the north east corner of the chamber. Substantial fragments of vessel U10 (see Figure 2.21) were deposited above and below the cist slabs. The solitary rim fragment of vessel U13 (see Figure 2.1), lying below the paving in the passage, was definitely incomplete at deposition. Vessels U16 (see Figure 2.48), U18 and U19 were probably deposited as incomplete fragments, broken further subsequently. Large fragments of vessel U15 (see Figure 2.53) and U17 (see Figure 2.48) were probably removed from the chamber after deposition entire.

Vessel dispersal across the chamber attests to a general level of disturbance inside the cairn. Table 5.8. itemises the number of contexts in which each vessel is represented. Vessels U1 (see Figure 2.20), U2 (see Figure 2.25), U6 (see Figure 2.29), U8 (see Figure 2.20), U9 (see Figure 2.20), U10 (see Figure 2.21), U11 (see Figure 2.29), U12 (see Figure 2.25), U17 (see Figure 2.48), U18, and U20 are all represented in multiple contexts.

The degree of universal abrasion and reburning on sherds provides a general indication of post depositional disturbance. Table 5.9. summarises these features, with respect to sherds, according to context.

Table 5.8.: number of contexts in which each vessel is represented

vessel code	number of contexts	number of sherds
u1	2	9
u10	4	30
u11	2	17
u12	5	45
u12?	3	5
u13	1	5
u14	1	4
u15	1	5
u16	1	3
u17	2	6
u18	2	6
u19	1	13

vessel code	number of contexts	number of sherds
u2	2	39
u20	2	4
u22	1	1
u23	1	1
u3	1	13
u4	1	4
u5	1	1
u6	2	24
u7	1	18
u8	2	19
u9	2	22

Table 5.9.: quantification of abraded and reburnt sherds according to context

context	level	number of sherds with universal abrasion	abraded sherds as % of all sherds in context	number of sherds with reburning	reburnt sherds as % of all sherds in context
-	-	45	42	40	38
A	-	3	33	3	33
A	12	4	100	3	75
A1	-	2	67	3	100
A1	12	72	84	31	36
A2	-	1	25	1	25
A2	11	4	21	1	5
A2	12	4	40	1	10
A2?	12	1	50	1	50
A3	12	8	36	3	14
B	12	3	75	1	25

The majority of sherds in the cist are neither abraded nor, more significantly, reburnt. This results suggest that the vessels represented in the cist were not reburnt by the introduction of embers from ritual fires.[13] Either the intensity of the fires in the cist, or its duration of use, was greatly overestimated. Unsurprisingly, sherds in the upper levels of the chamber are more likely to display signs of post depositional disturbance than sherds in the lower levels. The presence of sherds in the upper levels is probably a consequence of disturbance and redeposition. Certainly, the orphan sherds representing vessels U21, U22 and U23, if genuine, further attest to post depositional disturbance in the chamber.

It is possible to propose a revised sequence of deposition. Vessel U10 (see Figure 2.21), with constituent fragments both under and above the cist slabs, and vessel U13 (see Figure 2.1), below the entrance paving in the passage, are probably the earliest vessel deposits identifiable. Vessel U11 (see Figure 2.29), lying on one of the cist slabs, vessels U1 (see Figure 2.20), U8 (see Figure 2.20) and U9 (see Figure 2.20), lying on the floor of the chamber, and vessels U3 (see Figure 2.21) and U5, both arguably lying on original paving slabs, were all probably deposited subsequently. Vessels U2 (see Figure 2.25), U4 (see Figure 2.20), U6 (see Figure 2.29), U7 (see Figure 2.29), U12 (see Figure 2.25), U14 (see Figure 2.48), U15 (see Figure 2.53), U16 (see Figure 2.48), U17 (see Figure 2.48), U18, U19 (see Figure 2.48), and U20, all predominantly situated in the upper layers of the stratigraphy, were evidently deposited at a later date. Vessel U15, stratified directly above all the other vessels in the north east corner of the chamber, namely vessels U1 (see Figure 2.20), U2 (see Figure 2.25), U3 (see Figure 2.21), U4 (see Figure 2.20), U5 and U8 (see Figure 2.20; also Scott 1948:18), was probably the final deposit.

5.4.2.3. A history of deposition at Unival and Clettraval

The refutation of the traditional interpretation of these ceramics as funerary furniture demands another explanation to justify their now apparently incongruous presence in chambered cairns. According to the arguments developed in section 5.3. above, these ceramics were incorporated into depositional practices integral to the mortuary rituals perpetuated and vindicated at these monuments. Evidence of both structured deposition, selective removal and general disturbance of artefactual deposits remaining in these chambered cairns lends some authority, if not complete approval, to this alternative interpretation.

Several persuasive arguments confirm the presence of structured depositional practices at both Clettraval and Unival. The distribution of material culture within these cairns relates directly to the internal architecture of the monuments. At Clettraval, the acme of depositional activity culminates in the cist in section I. This gradation of depositional intensity attests to the elevated significance of the innermost compartment. At Unival, the concentration of ceramics in the cist, in the south west corner, and on the paving slabs against the wall, in the north east corner, demonstrate an equivalent coherence of deposition in the interior of this cairn. Substantial fragments of vessels recovered from cavities beneath the floor in compartments III and V at Clettraval, and equally substantial fragments from beneath the cist and entrance paving at Unival, confirm deliberate depositional strategies, *apparently related to the construction of the monuments, rather than the interment of corpses*. These deposits were originally interpreted as an indication of phasing in the structural sequence at both sites (see Scott 1935:486-87; 1948:13). Yet it is preferable to interpret these particular ceramics, many of which were substantial fragments, as deliberate foundation deposits made during the initial construction of the chambered cairn (*contra* Henshall 1972:91). The deposition of these artefacts seemingly inaugurates and, more precisely, legitimates the use of the monument for mortuary rituals. Ceramic deposits contemporary with the construction of the chambered cairn are claimed elsewhere, at Monamore on Arran and Mid Gleniron II in Galloway (Henshall 1972:87).[14] The intractable relation between the architectural fabric of the cairn and the material culture deposited within its confines is indisputable. Indeed, the architecture of these chambered cairns encapsulates a formal structural demarcation of prescribed depositional locales. At both Clettraval and Unival, the presence of a cist, situated in the far left corner of the interior, farthest from the entrance, the pervasive extent of possible paved flooring in the interior, and the enclosed space of the chamber itself, coalesce into an architectural milieu appropriate to mortuary rituals in which the deliberate deposition of material culture was an essential prerequisite to understanding.

The internal architecture of the various chambered cairns under review influences the contextual characteristics of the ceramic assemblages. At Clettraval, the compartments segment the interior into a series of discrete, consecutive spaces. Unsurprisingly, there is relatively little disturbance of many of the vessels represented (*pace* Henshall 1972:87). Scott attributed the fragmentary condition of many vessels to the physical pressure of overlying deposits, and not to later disturbance and redeposition (1935:497).[15] Contrastingly, at Unival, the diffuse space of the chamber ensures a more general dispersal of constituent sherds from vessels represented.

That a considerable proportion of potential vessels are represented by a meagre number of sherds, particularly in the assemblage from Clettraval, insinuates an intensity of use, deposition and removal otherwise unseen in the archaeological record. Paradoxically, these orphan sherds, frequently undiagnostic and uninformative, are a tangible reminder of the negative evidence on which such an interpretation relies.

5.4.2.4. Evidence for previous uses of pottery from chambered cairns in the Western Isles

There is an abundance of evidence to suggest that many, if not all, of the vessels incorporated into mortuary practices and considered eligible for deposition within chambered cairns, were actively used prior to discard. Use related abrasion traces, sooting patterns and organic accretions are identifiable on numerous vessels amongst the assemblages from Clettraval and Unival. Vessels with evidence of such use wear were not deposited in chambered cairns immediately after manufacture. Instead, such vessels were probably used for a range of activities, not necessarily associated with mortuary practices, before they qualified for deposition. Eligibility for inclusion in mortuary rituals perhaps required vessels to exude a functional maturity, accrued from a diverse range of utilitarian tasks seemingly unrelated to mortuary rituals. At any rate, much of the pottery ultimately deposited in chambered cairns was discarded, not in pristine condition, but after prolonged use elsewhere. A functional assessment of the pottery from Clettraval and Unival is intended to demonstrate the veracity of the above argument, rather than develop a functional profile of these assemblages.

There are signs of possible sooting on the upper exterior surface and rim of vessels C37 (see Figure 2.48), C42 (see Figure 2.23) and C50 (see Figure 2.9). Vessel C23 has possible sooting on its exterior. Vessels C1 and C2 display signs of possible sooting or macroscopic food residues on both the interior and exterior surfaces. Traces of macroscopic food residues occur inside vessels C6 (see Figure 2.52), C11, C12, C31, and C40 (see Figure 2.52).

Abrasion is concentrated on the basal exterior surfaces of vessels C31 and C42 (see Figure 2.23). Vessel C43 (see Figure 2.21) is more severely abraded below than above the pinched out cordon on its exterior surface; abrasion inside the vessel is concentrated around the rim and neck. Vessel C39 (see Figure 2.24) is abraded on one side of the exterior, suggesting the vessel was stored prone, and around the base and the neck on the interior. Two discrete patches of abrasion, positioned on opposites sides of the exterior of vessel C52 (see Figure 2.24), may be use related. The post firing perforations on vessels C43 (see Figure 2.22) and C50 (see Figure 2.9) attest to modification, if not actual use, after an initial firing.

Possible sooting, extending onto the rim surface, is restricted to the upper part of vessel U1 (see Figure 2.20). The vestiges of possible sooting adhere to the interior of a solitary sherd from vessel U3 (see Figure 2.21). On vessel U12 (see Figure 2.25), potential sooting occurs on the exterior, and macroscopic food residues are discernible on the interior. Possible sooting occurs on the surviving exterior of the rim and body of vessel U13 (see Figure 2.1). Possible sooting occurs on both the interior and exterior surfaces of Vessel U15 (see Figure 2.53).

The surviving interior surfaces of vessels U18, U19 (see Figure 2.48) and U20 are covered in heavy sooting or macroscopic food residues. Probable sooting on the exterior of vessel U5 is exacerbated by the presence of definite heavy sooting at the shoulder on the exterior (cf. Henshall 1972:532).

On vessel U1 (see Figure 2.20), differential abrasion on the interior, where one side is markedly more abraded than the other, is arguably a use related attrition pattern, but may derive from differential post depositional abrasion after the initial breakage of the vessel. On vessel U1, the differential burnishing of the exterior, where the neck is less polished than the remaining exterior (cf. Henshall 1972:531, no. 4), may be a functional feature. On vessel U3 (see Figure 2.21), abrasion is concentrated on the exterior around the base, and on the interior around the neck and base. On vessel U4 (see Figure 2.20), abrasion is concentrated at the constriction of the neck on the interior, and below the carination on the exterior (cf. Henshall 1972:532, no. 10). This abrasion pattern, with attrition concentrated on the more exposed areas of vessel morphology, is probably use related. On vessel U5, possible use related abrasion is concentrated around the edge of the rim and the interior of the constricted neck. On vessel U7 (see Figure 2.29), abrasion is concentrated on both the interior and exterior of the base, forming a familiar use related attrition pattern. On vessel U8 (see Figure 2.20), abrasion is concentrated at the base in the interior. On vessel U10 (see Figure 2.21), abrasion occurs on the exterior around the base, and around the constricted neck on the interior. Interestingly, two post firing perforations occur on adjacent sides of a crack. immediately below the rim (Henshall 1972:532-33). These perforations presumably indicate a successful attempt to repair a vessel actively used and made ready for further service. On vessel U11 (see Figure 2.29), abrasion is concentrated around the rim and the base on both the interior and exterior of the vessel. On vessel U13, the interior is either roughened or abraded sufficiently to produce a pedestalled temper (see Figure 2.1). On vessel U14 (see Figure 2.48), the marks on the exterior of the base are tentatively interpreted as a consequence of abrasion. On vessel U19, abrasion is concentrated at the juncture between the wall and the base on the exterior. This attrition pattern suggests that the lower body of the vessel was held steady as it was rotated during use.

Incidental mention is frequently made of assemblages from elsewhere containing vessels displaying use wear traces. Henshall reported similar use wear traces on vessels from, for example, Cairnholy I in Galloway, Beacharra in Kintyre, Sliddery Water on Arran, Glecknabae and Glenvoidean on Bute, and Quanterness in Orkney (1972:86; 1979:77). Similarly, reburning is acknowledged on sherds from, for example, Beacharra in Kintyre, and Torlin and Tormore on Arran, suggesting selective reuse of vessel fragments during mortuary rituals, or differential post depositional disturbance (see Henshall 1972:86).

That many of the vessels in these assemblages were used, not necessarily before incorporation in mortuary practices, but certainly before eventual deposition in the chambered cairns, is indubitable. The interpretive implications of this realisation are considerable. The traditional differences elicited between the ceramics from settlements and chambered cairns, the former conceptualised as pottery for the living, the latter as pottery for the dead, are not dependent on the intrinsic properties of this material culture.

5.4.2.5. The archaeological significance of the assemblages from the chambered cairns

The vessels from the chambered cairns are all broadly recognisable as neolithic and early bronze age styles. A comprehensive description of the vessels represented in these assemblages is eschewed, because adequate descriptions and illustrations are available elsewhere (see Henshall 1972:508-11, 531-33; Scott 1935:500-14; 1948: figs. 6-7:20, 21, plates IV- IX: following page 24). The following résumé of ceramic styles represented in the assemblages under review anticipates a consideration of the relation between vessel type and eligibility for inclusion in the depositional strategies perpetrated at chambered cairns.

5.4.2.5.1. Ceramic styles represented in the assemblage from Clettraval

The assemblage from Clettraval includes a plain bowl, an open bowl, two bipartite bowls related to a beacharra tradition, three deep, necked bowls, four necked jars, several beakers (Henshall 1972:152-7), and, possibly, an unstan bowl.

Vessel C41 is probably a cup (see Figure 2.1). The vessel has a neutral profile; the rim combines a simple form with a convex rim surface.

Vessel C7 (see Figure 2.22) is a necked, bag shaped jar, with a round base; the rim, characterised by a substantial internal bevel, is everted. Vessel C43 (see Figure 2.21) is a necked, bag shaped jar with a round base; the rim combines a thickened form, slightly everted, with an external bevel. Vessel C52 (see Figure 2.24) is a jar with a round base and a neutral profile; the rim combines a simple form with an internal bevel. Vessel C50 is a bag shaped jar with a round base. Two lugs, positioned immediately below the rim, are situated adjacent to each other on opposite sides of the vessel (see Figure 2.9). Two post firing perforations, one of which remains unfinished, are positioned some 30 mm below the rim, on opposite sides of the vessel. The rim combines a simple form with a convex rim surface. Vessel C46 (see Figure 2.24) is a necked jar with a neutral profile. The rim form is variously everted or rolled. Vessel C48, represented by a body sherd with a cordon and a post-firing perforation, is probably from a collared jar (cf. Henshall 1972:510, no. 23).

Vessel C37 (see Figure 2.48) is probably an open bowl; the rim form variously embodying an external (rim type 3) or triangular expansion (rim type 13). Vessel C27 is probably a bowl with an open profile at the orifice; the rim is variously everted (rim type 2A) or externally expanded (rim type 5). Vessel C38 (see Figure 2.23) is a deep, necked bowl, with an everted rim, and, presumably, a round base. Vessel C39 (see Figure 2.24) is a deep, necked bowl; the angle of the rim surface varies between the horizontal and the near vertical; the effect is to create a rim variously incorporating an external expansion or an everted form with an internal bevel. Vessel C42 (see Figure 2.23) is a deep, necked bowl, with a round base; the rim form is thickened with an internal bevel. Vessel C51 is a bipartite necked bowl with an everted rim form and a neutral profile (see Figure 2.14). Vessel C53 is a carinated bowl, with a neutral profile; the rim combines a T-shaped form. with a convex rim surface. Three lugs, two of which are characterised by a vertical pre-firing perforation, embellish the carination (see Figure 2.16). Vessel C55 is probably an open bowl; the thickened rim is slightly inturned, with a horizontal rim surface (rim type 11). Vessel C45 is a fine carinated bowl with a neutral profile (see Figure 2.14). The rim combines a simple form with a convex rim surface.

Vessel C32 (see Figure 2.52) is a beaker; the rim combines a simple form with a flattened rim surface; the base is flat. Vessel, represented by a solitary, flat base sherd, is probably a beaker. Similarly, vessels C6 (see Figure 2.52), C9 (see Figure 2.52), C30, C35, C47, C54 (see Figure 2.52), and C56 are probably beakers.

Vessels C1, C2, C4, C5, C8, C9, C10, C11, C12, C13, C14, C15, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C28, C31, C33 (see Figure 2.52), C40 (see Figure 2.52), C44, C29, and C3 are of indeterminate form and type. However, it is possible to provide some partial details of some of these arcane ceramics. Vessels C5 and C31 were moderately sized vessels with a flat and round base respectively. Vessel C24 probably has a collared or externally bevelled rim form (rim type 7 or 12). Vessel C33 (see Figure 2.52) was probably neutral shaped, and had a simple rim with an internal bevel. Vessel C34 is represented by a solitary everted rim. Vessel C40 probably had a neutral profile (see Figure 2.52). Vessel C44 was probably a moderately sized vessel, with a simple rim and an internal bevel.

Interestingly, Vessel C16, represented by a diminutive and abraded carinated sherd, is possibly an unstan bowl. This orphan sherd, broken at the carination, is the only candidate in the entire assemblage for such a vessel. Indeed, the absence of unstan vessels from chambered cairns in the Western Isles, remarked upon elsewhere (Armit 1993:372; Brown nd.; Gibson 1995:110; see section 9.4.4.3.), is presumably an indication of original depositional proscription.

5.4.2.5.2. Ceramic styles represented in the assemblage from Unival

The assemblage from Unival includes a plain bowl, three open bowls similar to achnacree bowls or flanged bowls, at least two vessels related to beacharra bowls, at least four collared jars, many recalling the form of beacharra bowls, of varying size, a grooved ware vessel, a vessel within a beaker tradition, and two cremation urns (Henshall 1972:152-56, 531-33).

Vessels U1 (see Figure 2.20), U5, U9 (see Figure 2.20) and U13 (see Figure 2.1) are generally identifiable as cups or small bowls. Vessel U1 is a deep, rounded based, necked cup. The rim form, with an irregular external expansion and undulating circumference, varying between rim types 5 and 10, is impossible to classify adequately. Vessel U5 is a deep, rounded based, necked cup or small bowl. The rim form is everted. Vessel U9 (see Figure 2.20) is a deep, round based, necked cup. The rim, slightly everted, combines a simple form with a convex rim surface. Vessel U13 is a plain, neutral cup or small bowl, with a subtle neck and, presumably, a round base. The rim combines a simple form with a convex rim surface (see Figure 2.1).

Vessels U2 (see Figure 2.25), U4 (see Figure 2.20) and U12 (see Figure 2.25) are necked or collared jars. On vessel U2, the rim form, with an irregular external expansion and thickening rim, varying between rim types 5, 10 and 13, is impossible to classify adequately. On vessel U4 (see Figure 2.20) the rim form is everted (rim type 2A). On vessel U12, the rim incorporates an external expansion (rim type 3) with an internal bevel (see Figure 2.25).

Vessels U3 (see Figure 2.21), U6 (see Figure 2.29), U7 (see Figure 2.29), U8 (see Figure 2.20) are generally identifiable as bowls. Vessel U3 (see Figure 2.21) is a closed, round based, bipartite bowl. The rim form is simple with a convex rim surface. Similarly, vessel U10 (see Figure 2.21) is a necked, bipartite closed bowl, with a round base. The rim embodies a modest external expansion (rim type 4) and a horizontal rim surface. Vessel U6 (see Figure 2.29) is a flanged open bowl. The rim form combines an exaggerated external expansion with a concave rim surface some 15 mm wide. Similarly, vessel U11 (see Figure 2.29) is an open, gently carinated, round based bowl. The rim incorporates an external expansion (rim type 3) with an internal bevel. Vessel U7 (see Figure 2.29) is a round based neutral bowl. The rim, variously thickened or expanded, incorporates rim types 5 and 10. Similarly, vessel U8 is a round based neutral bowl. The neck and shoulder are distinguished by a ridge and gentle carination. The rim is predominantly everted.

Vessels U14 (see Figure 2.48), U15 (see Figure 2.53), and U19 (see Figure 2.48) embody ceramic styles not otherwise represented in the assemblage. Vessel U14 (see Figure 2.48) is an open, flat based grooved ware bowl. The rim form is simple with a convex rim surface. Vessel U15 is a beaker. The rim is everted. Vessel U19 is possibly a cremation urn (Henshall 1972:533). The rim morphology and overall vessel profile remain indeterminate.

The form and type of vessels U16 (see Figure 2.48), U17 (see Figure 2.48), U18, U20, U21, U22 and U23 from Unival remain indeterminate. However, vessel U16 is possibly an open vessel. The rim combines a simple rim with an internal bevel. Vessel U17 (see Figure 2.48) is a necked vessel, possibly with a neutral shape and a round base. The rim is probably everted.

A bewildering variety of ceramic styles are represented in the assemblages from chambered cairns. The eclectic array of cups, bowls, and jars seemingly confounds any attempt to clarify the ceramic types eligible for inclusion in the depositional strategies integral to mortuary rituals. Indeed, the styles apparently excluded from these assemblages are more readily identifiable. There is, then, no evidence for hebridean jars, unstan bowls or flanged bowls in the assemblages from chambered cairns. These typological omissions are presumably the consequence of an original proscription on the deposition, if not the inclusion, of these ceramic types in the mortuary rituals conducted at chambered cairns. The presence of a minuscule fragment from vessel C16, charitably interpreted as an orphan sherd from an unstan bowl, provides a tantalising, and admittedly dubious, glimpse of a whole array of vessels removed from the interior of these cairns, and excised from the archaeological record.

5.5. Conclusion

If the interpretation adopted here is acceptable, in which numerous artefacts were actively employed in the performance of successive mortuary rituals, then the elaborate depositional activities taking place at these sites unwittingly create an illegible depositional palimpsest. The envisaged intricacies of mortuary rituals generate an archaeological residue effectively unable to recapture fully the complexity of germane depositional practices taking place at chambered cairns. The intensity of such deposition, in which material culture was variously discarded, smashed, stored, forgotten, retrieved, removed, redeposited, and replaced, conspire to produce a haphazard selection of artefactual remains. It is the responsibility of archaeological interpretation to elucidate a plausible narrative, able to *incorporate* and *explain* the accumulation of material residues and structural remains in a meaningful way. The above interpretation offers an alternative understanding of chambered cairns and the material culture they contain. This evaluation, one amongst many, is predicated on an analysis of depositional practices rather than stylistic comparison, in an attempt to elucidate something of the mortuary practices evidently conducted at these remarkable monuments.

[1] A miscellany of some twenty sherds, not attributable to any specific vessel, were interpreted as sherds derived from pots already identified (Scott 1948:15).

[2] Two of these vessels, U16 and U19, are actually derived from a solitary vessel, labelled pot number 53, in Scott's terminology (1948:18). Essentially, Scott identifies only two, rather than three, vessels in this regard.

[3] Many of these omissions and additions are adequately explained as a consequence of material being improperly stored or misplaced. Unfortunately, it was not always possible to rectify any identifiable discrepancy between previous descriptions and the current empirical status of the assemblages. An inevitable ambiguity therefore clouds the interpretation of depositional practices in the re-evaluation of each assemblage.

[4] There are two reasons why reconstructions are inimical to further research.. Firstly, it is frequently impossible, for vessels with a sherd family derived from multiple contexts, to ascertain which sherd originates in which context. This problem is particularly acute for reconstructions, because the vessel surfaces, and especially the interior surfaces, on which the context labels are written, are invariably obscured by the plaster of paris used to rebuild the vessels. Secondly, it is impossible to ascertain sherd weights, more informative than a simple sherd count, for sherds within these reconstructions.

[5] At Clettraval, the initial deposit in the interior was a gooey black, charcoal rich layer (stratum C), overlain by a similar, if less unctuous, deposit, containing less charcoal but several fallen stones (stratum B), sealed by an entirely different layer formed during later reuse of the cairn in the iron age (stratum A) (Scott 1935:494-95). Scott recognised that the rate of accumulation of these same deposits in each compartment probably differed (1935:497). The septal slabs placed laterally across the chamber effectively divide apparently identical deposits in each compartment into separate contexts. There is no stratigraphic relation between deposits sundered entirely by septal slabs. At Unival, the initial deposits in the cist (layer 3) and elsewhere in the chamber (layer 2), the former a: "...dark brown sticky material..." (Scott 1948:11), and the latter a: "...charcoal stained earth..." (Scott 1948:11), were markedly different. Both of these deposits are sealed by a substantial deposit of dark brown silt (layer 4), blackened in places by charcoal, and containing occasional bones (Scott 1948:11). Another deposit (layer 5), containing innumerable fallen slabs, but devoid of charcoal or bone, overlies this deposit. There is no stratigraphic relation between the initial deposits in the cist and chamber.

[6] Unfortunately, the sections in the excavation reports for Clettraval and Unival illustrate only the locations of small finds with respect to absolute levels or structural cross sections rather than actual stratigraphy (see Scott 1935: plate II: facing page 536; 1948: fig. 5:16). It is seldom possible, with respect to either Clettraval and Unival, to correlate exactly stratigraphic contexts with arbitrary levels. At Clettraval, the contexts and levels are treated as synonymous, with stratum A, B, and C apparently coinciding with the imperial dimensions of the arbitrary levels (see Scott 1935:494-95). At Unival, these arbitrary levels fail to differentiate the actual stratigraphy. Level 11 incorporates deposits 2, 3 and 4; level 12 incorporates deposits 4 and 5 (see Scott 1948:11; fig. 5:16). The vertical levels are measured to the nearest foot, approximately 0.3 metres (m), and sherds are effectively assigned to one of three levels, encompassing entirely the stratigraphy of the deposits, at both Clettraval (see Scott 1935:494-5) and Unival (see Scott 1948:15, 16: fig.5:16).

[7] That many sherds are effectively embedded within reconstructions precludes any possibility of ascertaining their individual weight. This circumstance explains the absence of weight values for many table entries in this and subsequent chapters.

[8] Henshall records a base sherd, now missing, from this vessel in her catalogue (1972:511, no. 30)

[9] The discontinuous nature of the stratigraphy in the interior, punctuated by the lateral septal slabs that defined the compartments, allegedly precluded a comparison of depositional practices between compartments (Scott 1935:497). Yet both the description of the deposits, in which the layers in each compartment were effectively treated as identical, and the development of a ceramic sequence, which presupposed the contemporaneity of pottery from the same (sic) layers in the separate compartments, indicates that these reservations regarding stratigraphy were, from a practical perspective, absorbed into the resultant interpretation.

[10] Scott argued that these skeletal fragments were, like the remnants of vessel U10 beneath the cist slabs, intrusive into this context (1948:14).

[11] Admittedly, the assumption that both original social practices, in the neolithic and early bronze age, and contemporary archaeological practices fortuitously endorse a similar appreciation of ceramic stylistic complexity is implicit in such an argument.

[12] A rim and body sherd, mentioned by both Scott (1948:18) and Henshall (1972:533), are missing.

[13] It was the lack of reburning on the vessels represented predominantly in the cist that persuaded Scott to interpret this pottery as late deposits.

[14] The deliberate deposition of complete vessels at Eilean an Tighe and Eilean Domhnuill a Spionnaidh is dealt with fully in section 6.4.4.1. in chapter six.

[15] The worn condition of many sherds, frequently derived solely from a single context, and usually refitting to form substantial parts of the original vessel, is more appropriately interpreted as a consequence of degradation, due to an inimical taphonomy, rather than abrasion, precipitated by later disturbance.

Chapter six
Tasks of deposition:
the pottery from Eilean an Tighe

6.1. Introduction

Eilean an Tighe, one of numerous islets situated within Loch nan Geireann in North Uist, lies some 60 metres off the east side of the larger island of Aird Reamhar (see Figure 6.1). At least one causeway, now submerged, connected Eilean an Tighe to Aird Reamhar in the neolithic (Scott 1951a:2,3; cf. Armit 1996:52).

Beveridge, after visiting the site and collecting numerous ceramic and lithic artefacts, remarked:

> "Considering its limited area, this island proved remarkably fruitful in relics of its former occupation" (Beveridge 1911:222).

These comments presaged the discovery of a wealth of archaeology on the island during Sir Lindsay Scott's excavations there in the 1930s (see Scott 1951a). The remains of considerable neolithic activity lie below a rocky boss, in a hollow facing south south-west, at the north-west end of the islet (Scott 1951a:1). This rocky outcrop, forming a near vertical face approximately one metre high, forms a natural revetment to delineate the northern extent of neolithic activity identifiable at the site (see Scott 1951a: figure 3:6; figure 10: facing page 22; plates 1 and 2: facing page 36). The site extends southwards for approximately 15 metres to the shoreline, and possibly beyond. It is impossible to ascertain whether the site continued beneath the modern water level of the loch:

> "Whether the site originally extended further in this direction we do not know, since this area had been under three feet of water, and subjected to the scour of the loch for at least a century" (Scott 1951a:5).

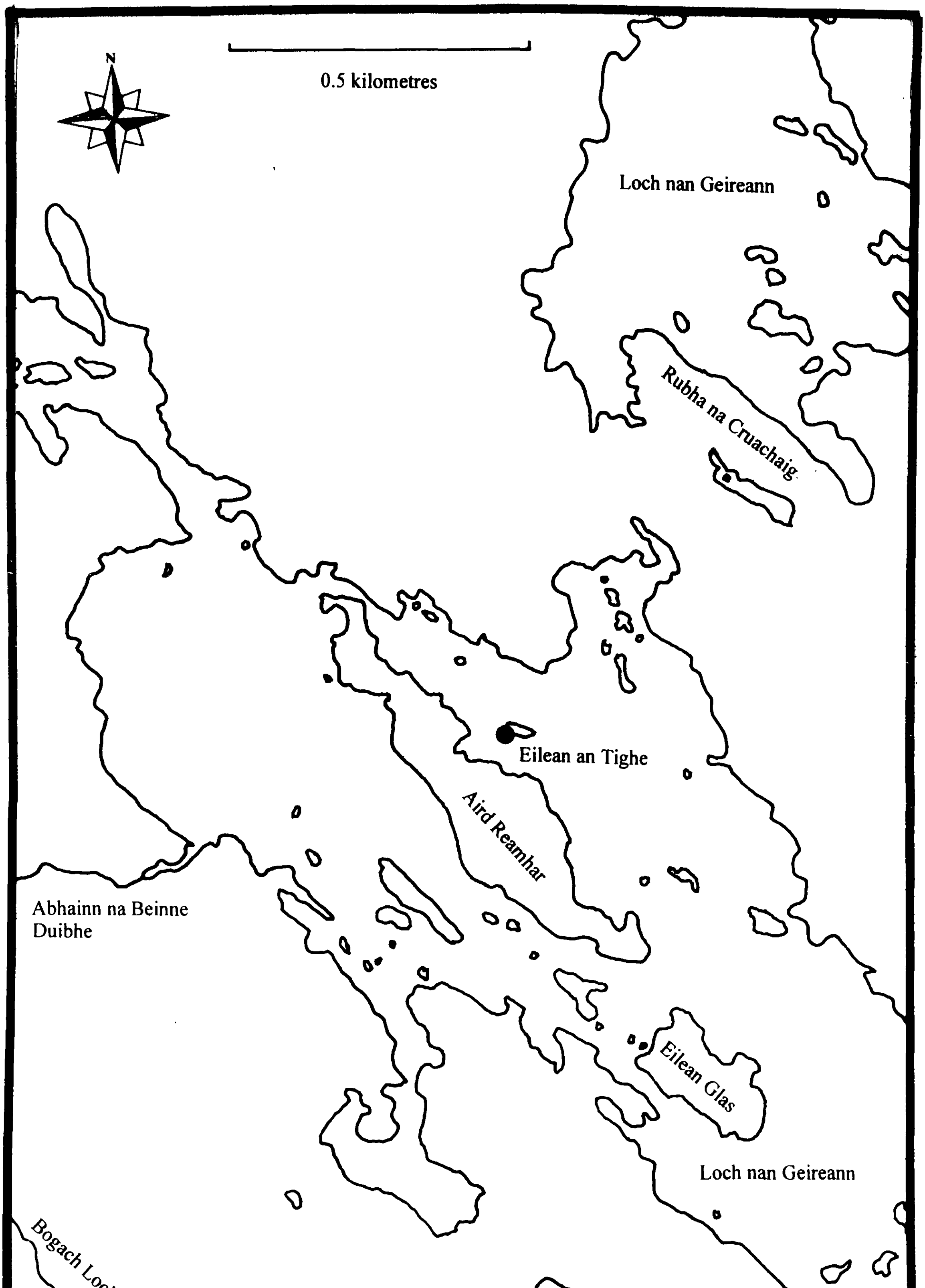


Figure 6.1.: Location of Eilean an Tighe within Loch nan Geireann

There remains the possibility that the site was not excavated in its entirety. That the distribution of small finds became more sparse close to the waters edge argues against this possibility (Scott 1951a:5). This does not preclude the presence of other, as yet undetected, traces of neolithic habitation on Eilean an Tighe.

An amalgam of arcane stone structures and features, and a substantial assemblage of neolithic pottery were recovered during excavation. The stone structures were originally interpreted as collapsed kilns, the associated pottery as production wasters (see Scott 1951a:24). A re-evaluation of the structures and features, as evinced in the original excavation report, and a re-assessment of the ceramic assemblage, based on an empirical examination, are pursued below, in an attempt to develop an alternative interpretation of the site, and to identify the original significance of the pottery assemblage.

This reinterpretation of the pottery relies exclusively on a perusal of the excavation report and scrutiny of the artefactual material. The elusive site archive, mentioned in the text (see Scott 1951a:25), remains unlocated, and is effectively lost. It was neither possible, nor considered profitable, to visit the actual site on Eilean an Tighe. This dependency on the original publication of the excavations entails an acceptance of its occasional limitations. Particularly, the variable, and often inadequate, level of detail provided in this excavation report means that it is seldom possible either to verify or disprove Scott's preferred hypotheses and explanations. Ambiguity pervades the five schematic sections which provide different profiles through various parts of the site. Each section contains various omissions: section I omits details of stratigraphy; sections II and III omit entirely the archaeology at the southern end of the section lines; and sections III, IV and V omit stratigraphy and depict only the remnants of the arcane stone structures (see Scott 1951a: Figure 11:23). These omissions, presumably designed to clarify otherwise confused and misleading sections, also impede the development of alternative interpretations. Similarly, the manner of presentation of the two plans of the site complement the original interpretation, but discourage alternative speculations. Every phase of activity identified in excavation is superimposed on the illustration that comprises the only comprehensive, and detailed, plan of the site: the effect is to portray these phases as a transparent palimpsest of successive episodes of activity in spatial form (see Figure 6.2). The other available plan, a schematic representation of alleged kilns II and III, encapsulates the original interpretation of the site, but itself derives from the site plan proper (see Figure 6.3).

6.2. The archaeology of Eilean an Tighe

The amalgam of structures excavated at Eilean an Tighe were originally interpreted as the disturbed remnants of two or three pottery kilns (see Scott 1951a:5-11), probably because the structural evidence was so ambiguous (Armit 1996:56). This interpretation is now considered unlikely because the alleged kiln complex is so extensive, and the architecture of the kilns so elaborate, incorporating hearths, ovens and flues, that such an investment in production technology during the neolithic was both unnecessary and undesirable. The adequacy of open firing for the production of serviceable pottery is now recognised (see Gibson and Woods 1990:52). Indeed, the assemblage from Eilean an Tighe contains ceramics exhibiting features diagnostic, or at least symptomatic, of an open firing.

Despite the abundance of archaeology, both artefactual and architectural, at Eilean an Tighe, the significance of the evidence remains overlooked in current neolithic studies in Scotland. This disregard is probably a consequence of the confusing nature of both the artefactual and structural evidence, effectively a bewildering variety of ceramic styles and a mystifying jumble of buildings, which conspire to discourage a close engagement with the archaeology. Yet the inadequacy of the original interpretation of Eilean an Tighe as a kiln complex is sufficiently marked to provoke comment. Consequently, Eilean an Tighe, apparently no longer a pottery production centre, is, by default, casually labelled

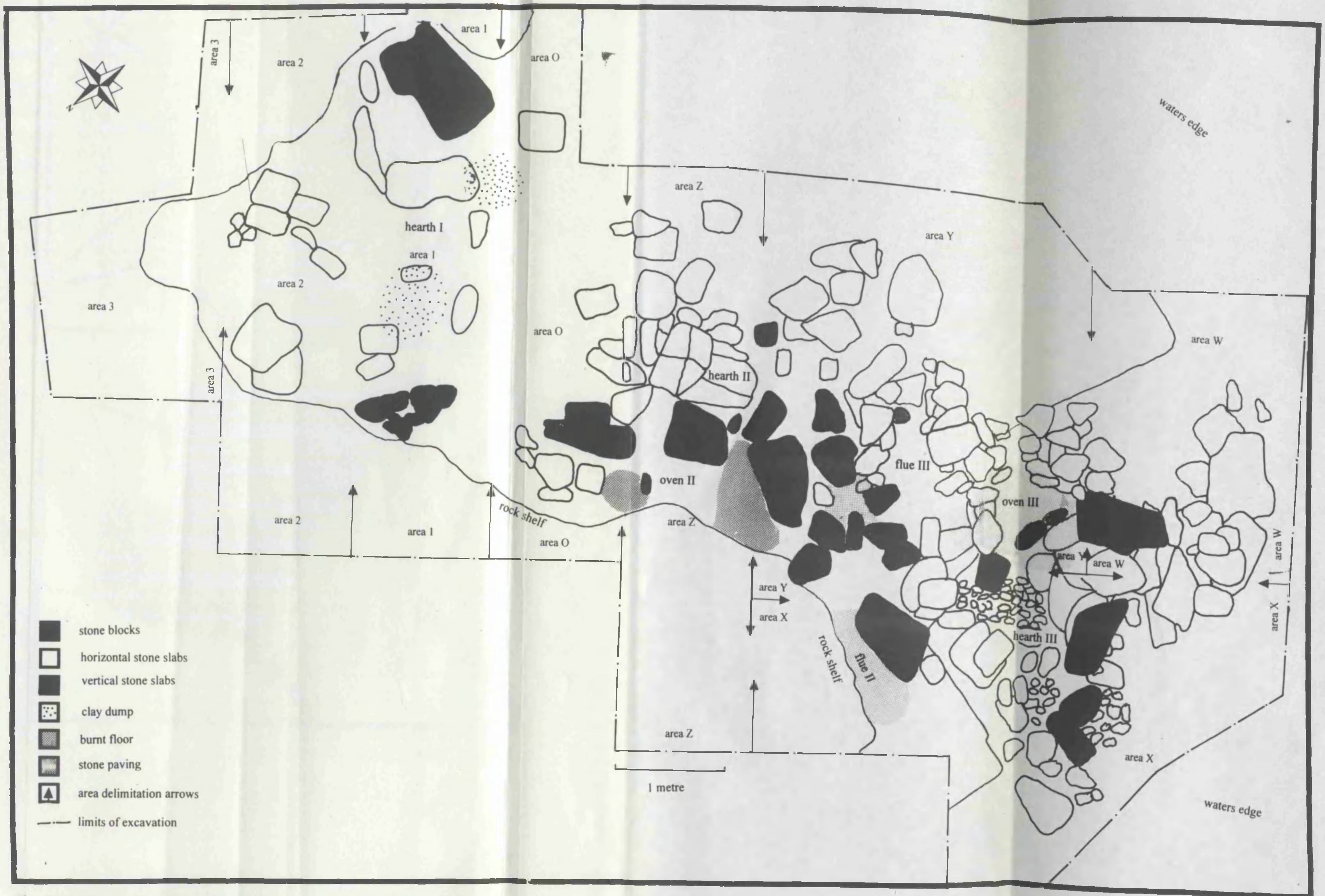


Figure 6.2.: The original interpretation of the archaeology at Eilean an Tighe
(after Scott 1951a, Figure 10: facing page 22)

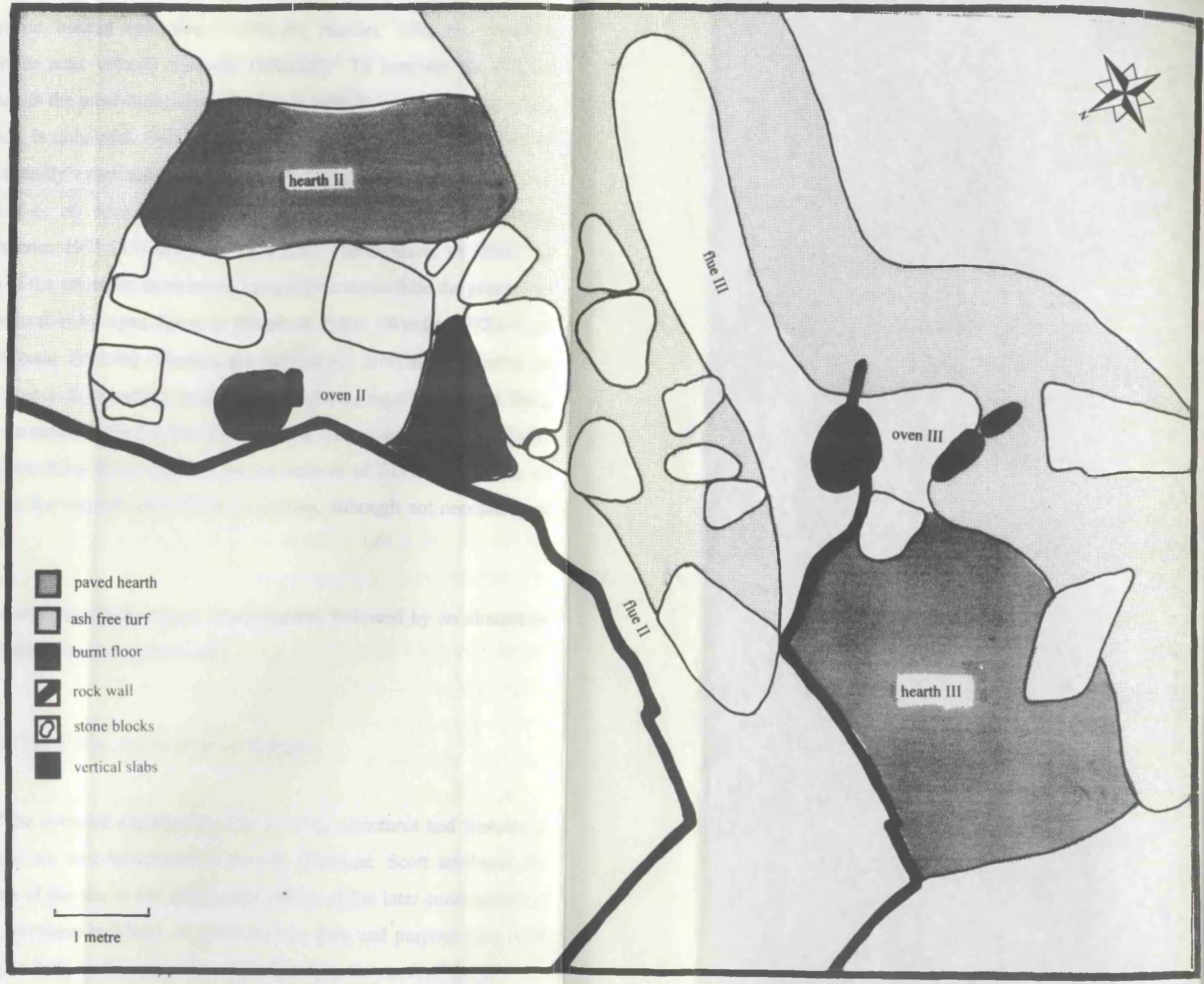


Figure 6.3.: A schematic representation of Kilns II and III at Eilean an Tighe
(after Scott 1951a, Figure 3:6)

a settlement site instead (eg. Armit 1996:56; Barclay 1996:70; Henshall 1972:153; Saville pers. comm.; Simpson 1976:222).[1] To supplant the original interpretation with the most convenient alternative, without proper scrutiny of the actual evidence, is unhelpful. Only Woods, declaring the assemblage devoid of wasters, has actually examined the pottery from Eilean an Tighe (Gibson and Woods 1990:45-6; cf. Armit 1996:52; Brown nd.; Crone 1993:378; Gibson 1995:100; McInnes 1971:115; Simpson 1976:222). Furthermore, to refute the interpretation of the structural evidence as kilns does not preclude the possibility of pottery production by open firing at Eilean an Tighe (Wardle 1992:64; cf. Gibson and Woods 1990:46). Wasters are notoriously difficult to identify in assemblages of open fired pottery, because the diagnostic signs of a failed firing seldom occur on ceramics fired at low temperatures, and, at any rate, are unlikely to be revealed on every sherd. Spalling on the exterior of E112 from Eilean an Tighe alludes to the vagaries of ceramic production, although not necessarily at the site itself.

A critical examination of the original interpretation, followed by an alternative explanation of the evidence, is given below.

6.2.1. Eilean an Tighe as a pottery production centre

Regardless of the eventual explanation, the surviving structures and features at Eilean an Tighe are best interpreted as heavily disturbed. Scott attributed the confused nature of the site to the detrimental effects of the later construction of Huts 1 and 2, drystone buildings of indeterminate date and purpose (see Scott 1951a:3-5; figure 2:4), on the rocky boss immediately to the north of the site:

> "The digging of turf and the heaving out of stones for the walls and roofs of these buildings had naturally disturbed the stratification of the site in their vicinity" (Scott 1951a:4).

The construction of these later buildings destroyed all traces of any neolithic activity that may have occurred on the rocky boss itself (see Scott 1951a:4). This difficulty is compounded by a poverty of stratigraphy on a site where protrusions of bedrock frequently interrupt any inchoate stratigraphic continuity. Scott emphasised this paucity of deposits in his continuing commentary:

> "Further south, and beyond the influence of this disturbance, there was in general too little depth of soil for records of strata to be of much value" (Scott 1951a:4).

Given the disturbed archaeology and meagre stratigraphy, it is all the more remarkable that Scott managed to develop a plausible interpretation of the surviving structures and identify a coherent ceramic sequence. To suggest that the evidence represented the vestiges of a kiln complex, an explanation well able: "...to disentangle the confusion of slabs, stone blocks and rock walls..." (Scott 1951a:5), attests to an enviable degree of interpretive ingenuity and archaeological perspicacity.

Scott identified two enclosed horizontal kilns, namely Kilns II and III, and one probable open kiln, namely Kiln I, on the basis of stone structures and associated ash free turf deposits, at Eilean an Tighe. These kilns were excavated in differential states of preservation. Kiln II was complete, with a hearth, oven and flue present; Kiln III, allegedly partially overlain by Kiln II, was incomplete, with only a hearth and part of the oven intact; Kiln I, effectively an open firing site, comprised only a hearth, and may be regarded as complete (see Scott 1951a:5). A resume of the architecture and operation of the closed kilns, as conceptualised by Scott, is given below.

The kilns were composite constructions of stone and turf. The design and positions of the kilns were adapted to include the regular outcrops of bedrock that characterise the topography of the site. Sections of bedrock incorporated into the kiln architecture were hewn to a roughly vertical face and levelled by additional stones (Scott 1951a:7). Natural variations of contour in the floors were compensated for by the judicious positioning of stone slabs to create either level or stepped surfaces as circumstances required (see Scott 1951a:8, 9). Artificial walls were composed of alternate layers of stone and turf. Scott envisaged a stone roof, presumably corbelled, and rendered gastight by a turf overlay (1951a:7).

The elaborate architecture of these horizontal kilns was interpreted from a functional perspective. The hearth was enclosed to enhance the efficacy of the draught from the blazing fire. Large stone blocks between the hearth and the oven supported the roof lintels and directed heat from the hearth into the oven. Upright stone slabs in the oven perhaps operated as baffles to protect the pottery from direct contact with the flames during firing. The oven constricted into a flue, a narrow horizontal conduit, which diverted gaseous emissions into the atmosphere. The topography of floor surfaces within the kilns were often altered to regulate draughts and therefore improve firing conditions (Scott 1951a:8, 9). Access to the interiors of the horizontal kilns, to remove fired pots from the oven, or ash from the flue, was achieved by partial removal of the roof (Scott 1951a:6-7,10-11).

The meagre stratigraphy, presumably interrupted by sporadic outcrops of bedrock, consisted of three distinct layers. The depositional sequence of these layers, described in reverse order of formation, is implicit in the following commentary:

> "First, in certain hollow parts of the structures there was loose earth which had blown and washed in; second, there was a compact dark soil free of burned matter; third, there was a highly compacted soil, varying in colour from black to red-brown, and full of burnt material. Specimens of this last... ...were reported to be composed of mixed earth, ash and charcoal, the red-brown specimens containing less charcoal and the black specimens more" (Scott 1951a:5).

The distribution of this latter layer, pervasive across much of the site, represented the inevitable accumulation of burnt materials in the kilns during firing, and therefore defined the interior confines of these kilns (Scott 1951a:5-6). The ash rich deposits in the oven and flue of Kiln III, for example, deposited there after its abandonment, were considered by Scott to derive from the hearth of the later Kiln II (1951a:9). Deposits of burnt matter on the hearths of Kiln I (Scott 1951a:10) and Kiln II (Scott 1951a:7; section II: figure 11:23) were evidently taken to indicate the locations of repeated firings. Burnt deposits, extending down to the natural, were discernible in various parts of the oven floor in Kiln II (Scott 1951a:7). Similarly, a discrete patch of burnt undisturbed clay was identifiable in a northern part of the oven floor in Kiln III (Scott 1951a:9). These areas of burning were perhaps interpreted as consistent with the intense heat appropriate to the oven of a pottery kiln.

The summary of the main structural components of the closed kilns given above obviates the necessity of another review of this evidence here. An extremely detailed description of the architecture of both Kilns II and III is available elsewhere (Scott 1951a:7-10). To reiterate this information would serve no meaningful interpretive purpose. Various structures and features from the different kilns are mentioned throughout the discussion that follows as appropriate. It is, however, necessary to emphasise that the original interpretation relies considerably on the presence and extent of evidently substantial deposits of ash free turf situated in various locations around the site. These deposits appear only in the schematic illustration (Scott 1951a, fig. 6:3), and are not recorded in any detail, appearing in neither site plan nor section, where they are omitted for clarity. The ash free turfs and the various stone structures are interpreted as integral components of the kiln complex. The crucial role of these turf deposits becomes clear in a discussion of kilns II and III:

> "To some extent however the outlines of both structures can be traced, even when the stone is missing, by the banks of unburned earth... ...which are the remains of the turf packing of their walls..." (Scott 1951a:5).

The disparate concentrations of stone slabs to the south of the oven and flue of Kiln III, for example, interpreted as the vestiges of stone and turf walls destroyed during the construction of Kiln II, coincide with such a deposit of ash free turf (Scott 1951a:9). Some reservations regarding the chronological relation between these stone and turf walls and the contexts containing the pottery are addressed elsewhere below.

In artefactual terms, it is generally assumed that Scott, believing the pottery inferior, mistakenly interpreted the entire assemblage as production wasters (eg. Woods 1990:46). This assumption is certainly justified, given that Scott declared the entire assemblage the incidental residue of unsuccessful firings:

> "All the vessels are wasters, broken or deformed in firing..." (Scott 1951a:24).

Yet the nature of sherd fracture profiles, and the quality of much of the pottery, each belie the interpretation of the assemblage as manufacturing debris. It is inconceivable that Scott failed to notice the superior manufacture and appearance of the pottery, especially since he gave elements of the assemblage a close scrutiny to establish a typological sequence, and elsewhere remarked upon the superior manufacture of such neolithic pottery from the Western Isles (see Scott 1948: *passim*). That Scott identified the pottery as wasters *despite* its technological quality suggests that the interpretation of the structural evidence as kilns was seemingly indubitable. It is entirely likely that he identified the pottery as production wasters on the basis of quantity and context, rather than on the basis of quality. Essentially, the amount of pottery recovered was almost *too* prodigious for a neolithic domestic assemblage, and the depositional contexts from which these copious ceramics were recovered included the charcoal rich deposits that, firstly, defined the interior confines of the kilns, and, secondly, attested to their supposed function (see Scott 1951a:5). It is unsurprising that Scott interpreted this inordinate amount of pottery, recovered from the inside of a kiln, as the broken remnants of failed firings.

The confusion that characterises the structural evidence at Eilean an Tighe is attributable not simply to the innate complexity of the putative kiln architecture, but also to the disturbances caused by the partial superimposition of successive kilns in the same location. Scott argued that Kiln II succeeded, and partially destroyed, Kiln III, and remained in use after Kiln I had fallen into disuse (1951a:13). Typological scrutiny of the pottery enabled this structural sequence to be further refined. Scott finalised the definitive structural sequence, beginning with Kiln III, which was succeeded by Kilns I and II, with Kiln II continuing after Kiln I was discontinued (Scott 1951a:13). The crucial structural evidence to suggest a phasing of kilns lies in Kiln III. Scott considered the northern half of this kiln to have been effaced during the later construction of Kiln II. The southern parts of Kiln III, lying to the south of the rock shelf on which Kiln II was built, were disturbed but not destroyed by the construction of this later kiln (Scott 1951a:8). The south walls of the oven and flue in Kiln III, now a disparate amalgam of stone slabs and ash free turfs, were heavily robbed to provide building stone for Kiln II. The north walls of the oven and flue of Kiln III, no longer discernible, were refurbished to become the south walls of Kiln II (Scott 1951a:9). Two artificial clay dumps within the hypothetical confines of Kiln I confirmed that this structure had latterly fallen into disuse, and became instead a storage area for the raw materials of pottery manufacture (Scott 1951a:11).

The above commentary has attempted to follow, rather than simply dismiss, the reasoning that compelled Scott to interpret Eilean an Tighe as a pottery production centre. Yet the reasons to pursue an alternative explanation of the archaeology at the site are both numerous and persuasive. These reasons are discussed more fully in the critique of the original interpretation attempted below.

6.2.2. A critique Eilean an Tighe as a pottery production centre

Scott organised the jumble of structures and features at Eilean an Tighe into two horizontal kilns and one probable open firing site. The three essential structural components of a horizontal kiln, the internal arrangement of the hearth, oven, and flue in the kiln design assume a crucial interpretive significance. A review of these separate components in Kilns II and III reveals the inadequacies of the original interpretation. The efficacy of this review is hampered by the robbed and disturbed nature of the surviving archaeology. It is difficult either to verify or refute the original explanation because much of this argument relies on negative evidence. The alleged hearths, ovens and flues in Kilns II and III are all heavily denuded.

With respect to Kiln II, allegedly the best preserved of the two closed kilns, the structural evidence is unconvincing for four reasons. Firstly, the stone walls presumed to enclose the hearth on the north and south sides, the oven on the north side, and the flue on the south side, are all either extensively robbed or simply missing. Admittedly, the construction of Hut 2 destroyed the hypothetical stone walls of the hearth and oven on the north side of the kiln. Secondly, the south wall of the oven, presumed to continue westwards to form the south wall of the flue, appears to terminate at the natural rock facade that defines the northern extent of the site. Neither the alignment nor length of the wall fulfil the requirements of the envisaged flue. Thirdly, it is surprising, given the intense heat generated in such an enclosed space by firing, that the burning on the floor of the oven is sporadic rather than ubiquitous. Similarly, there was no ash or evidence of burning in the flue. Fourthly, the only evidence of roofing for Kiln II is restricted to two concentrations of putative lintels. The first set lie discarded on the floor of the flue corridor in Kiln II, and the second set, evidently thrown further aside, lie dumped to the south east of the hearth in Kiln III (see Scott 1951a:7-8).

With respect to Kiln III, supposedly damaged by the later construction of Kiln II, the structural evidence is similarly disagreeable for three reasons. Firstly, the necessary stone walls of the oven and the flue on the south side are heavily disturbed, and on the north site have presumably been incorporated into the south walls of the oven and flue of Kiln II (Scott 1951a:9). Secondly, much of the floor in the oven exhibits evidence of burning only in its northern half, a curious anomaly for such a structure. Thirdly, the design of the kiln encompasses, or rather ignores, a distinctive rock ledge that cuts across the interior of the kiln. This ledge, identifiable in section V (Scott 1951a, figure 11:23), creates an abrupt change of contour that presumably interfered with the efficiency of the putative flameway between the hearth and the oven on the north side of the kiln.

Admittedly, Scott considered this natural feature a functional advantage, arguing that the elevation in contour from the hearth to the oven would further improve the draught (1951a:6, 9). No evidence of the roof of Kiln III remains extant (see Scott 1951a:8-10).

The controversy aroused by the identification of the structures labelled Kilns II and III as closed kilns need not extend to the original interpretation of the open hearth labelled Kiln I as a pottery firing site. The only evidence to suggest that Kiln I was a closed kiln relates, firstly, to the large stone block to the east of the hearth, and, secondly, to the comparable position of this hearth with that of the hearth in Kiln III. Scott argued that the substantial stone boulder may have represented the vestiges of an enclosed kiln, but conceded that his suggestion was entirely speculative (1951a:10). The structural similarity between the positioning of the hearths in Kilns I and III, in both cases immediately to the south of a natural rock facade, contains the implicit suggestion of functional equivalence. Scott concluded that Kiln I was an open firing site due to the presence of a substantial hearth (1951a:10) and its intimate proximity with Kilns II and III.

The structural evidence invoked to support the original explanation is inconclusive. Yet the few photographs that accompany the excavation report suggest that the site plan fails to convey fully the nature of the surviving structures. A photograph of the south wall of the flue in Kiln II, and of the southern half of the oven in Kiln III, depicts a coherence of structural evidence made obscure by draughtsmanship in the site plan (see Scott 1951a, plate 2.1: after page 36; figure 10: facing page 22). It is impossible to interpret further such admittedly indeterminate structures from tantalising glimpses in photographs intended to visualise only the excavator's opinion.

The substantial deposits of ash free turf recurrent around the site (see Scott 1951a, figure 3:6) play a formative role in the identification of kilns amongst the confusion of disturbed stones (see Scott 1951a, figure 10: facing page 22). The authenticity of these turf deposits, and, by implication, that of many of the associated stone structures, as a neolithic architecture, therefore requires close scrutiny. There are two persuasive reasons for ascribing the ash free turf deposits a neolithic date. Firstly, they appear to precede definite neolithic deposits in the stratigraphic sequence. Scott, in a discussion of Hearth II in Kiln II, argues persuasively to this effect:

> "These banks of soil were compact, and the fact that they contained no burnt matter seems to show that they were in their present position when the kiln was first used, for otherwise they must have been mixed with, or underlain by, the ash which was so plentifully strewn around the hearth" (Scott 1951a:8).

Instances where the turf deposits do overlie the burnt floor material, in, for example, Oven III of Kiln III, are readily explained as collapse induced by later disturbances (see Scott 1951a:9). Secondly, if the turf deposits are a later construction, it is reasonable to expect them to contain residual neolithic pottery. That they do not, in marked contrast to the turf and stone walling of Huts 1 and 2, suggests that they represent neolithic activity.

Conversely, there are at least five good reasons for ascribing these ash free turf deposits a later date. Firstly, the technique of construction for these lengths of walling, the putative kiln linings, is the same as that employed in the building of Huts 1 and 2, located on the rocky boss immediately to the north of the neolithic site (see Scott 1951a:3-4, figure 2:4). Secondly, the reasonable condition of many of these lengths of stone and turf walling is remarkable, given the probable disturbance of the site during the building of Huts 1 and 2 (see Scott 1951a:4). Thirdly, judging from appearances in both available site plans, the contexts from which the neolithic pottery was recovered seem to *underlie* some of the ash free turf deposits (see Scott 1951a, figure 3:6, figure 10: facing page 22). Collapse of the stone and turf walling is unable to explain adequately this stratigraphy. The segment of stone and turf walling that forms the south side of the oven and flue of Kiln II, for example, overlies the compacted and burnt deposit that contained an abundance of neolithic pottery. Fourthly, the absence of ash or neolithic pottery from these turf deposits, taken by Scott as confirmation that the latter preceded the former, assumes that the source of this turf was on the site itself.

Yet there is nothing to prevent the importation of turf for construction purposes from an alternative location. Fifthly, the presence of ash free turf immediately to the north of the hearth and oven of Kiln II, in an area badly disturbed by the construction of Hut 1 (Scott 1951a:4, figure 3:6), suggests that the turf deposit relates to this later activity.

In conclusion, it is perhaps imprudent to assign a construction technique employing stone with turf a chronological or cultural significance, in an environment where these resources occur in abundance. These materials were probably employed constantly for construction purposes in antiquity. There is, given the evidence for successive reuse of the same location, no reason to suppose that the various stone and turf walls at Eilean an Tighe represent a solitary episode of construction or occupation. The reinterpretation given in section 6.2.3. below necessarily ascribes these various turf deposits different dates to maintain the integrity of the argument.

To reject the interpretation of the structures at Eilean an Tighe as kilns is to relinquish the concomitant structural sequence. The only certain evidence of kiln phasing occurred at the juncture of Kilns II and III, where the former appeared to absorb or efface parts of the latter. There is, however, no reason to suppose that the building of the conglomeration of structures collated as Kiln II forced the demolition of the hypothetical northern half of the various structures identified as the vestiges of Kiln III. Essentially, Kiln II can only have disturbed the southern areas, and destroyed the northern areas, of Kiln III, if these structures were indeed kilns. In exclusively structural terms, ignoring the supplementary evidence taken from the clay deposits by the hearth and the pottery typology, it is impossible to allocate Kiln I a meaningful position in this developmental sequence. The structural sequence at Eilean an Tighe therefore relies more on careful supposition than empirical evidence.

A general issue germane to this critique focuses on the design of the roofing presumed to have sealed these enclosed kilns. The only evidence for roofing consists of various disparate stone slabs, interpreted as lintels, lying in various locations across the site. Scott, attempting to explain these residual dumps of roofing lintels, does so with respect to function:

> "...over the oven, the roofing must have been removed after each firing in order to take out the pots; while, over the flue, partial removal must have been necessary in order to clean the flue of the ash carried into it, and perhaps also for the lighting in it of a fire to start the draught at the commencement of the next firing" (Scott 1951a:7).

The main concentration of these sizeable slabs, allegedly from Kiln II, seems an implausible location for lintels, if only because they lie some two metres away, discarded to the south of the defunct hearth of the abandoned Kiln III. Scott attributes this remote location to the lintels:

> "...having been thrown aside when it [Kiln II] was opened up to get out the fired pots and to clean the flue before a fresh firing" (Scott 1951a:10).

The exertion demanded by this strenuous method of production was no obstacle for the enthusiastic potters.

Although the original interpretation alludes to the use of raw materials other than stone at Eilean an Tighe, no attempt is made to consider the potential of, for example, wood or clay as a building material. This is perhaps unsurprising given the necessity of using inflammable materials in the construction of pottery kilns. Certainly, Scott considered the lochside location of the site ideal for the importation of timber (1951a:2,3), presumably for use in firing to fuel the kilns (ibid:3). However, if the function of these structures is disputed, it is probable that they were of composite construction, built using a variety of raw materials. It is probable that wood and other types of organic raw materials were employed to roof these structures, if indeed they were roofed at all. Judging from the site plan (see Scott 1951a, figure 10: facing page 22), there is no evidence of post holes amongst the structures at Eilean an Tighe. This is unsurprising given the ubiquity of bedrock, either exposed on the surface, or lurking immediately beneath a slight stratigraphy, across the site. The only feature that is a vague candidate for a post hole, a discrete, circular patch of burning, defined on its southern side by an upright slab, occurs on the floor of the northern half of the oven of Kiln II. That the natural beneath this potential feature is a sandy clay does not preclude a negative feature in this location (see Scott 1951a, figure 11: section III:10). Any roofing technique is more likely to utilise the rock shelf that flanks the northern edge of the site. It is not unreasonable to suppose that roof supports extended from this rock plateau and from sleeper beams laid on the bedrock of the site itself.

Wardle stands alone in his refusal to interpret the structural evidence as the dilapidated remnants of a domestic architecture (1992:64). Yet none of the five arguments he offers to support his reservations are convincing. Firstly, Wardle contends that the absence of buildings around the putative kiln complex makes the site an unlikely location for settlement (1992:64). The splendid circularity of argument endorsed in this statement is immediately apparent. If the kiln complex itself was a domestic, rather than industrial, architecture, the need for additional buildings around the periphery of the site would be superfluous. That there are no contemporary buildings in the immediate vicinity of the site argues for, not against, the structural evidence as settlement remains. Secondly, Wardle argues that the accumulation of burnt deposits within the structural complex may derive from industrial activities (1992:64). However, these burnt deposits, described by Scott as extremely compact, with variable red, brown and black coloration, and containing charcoal (1951a:5), are more likely to be the actual floor levels than deposits overlying them. Thirdly, Wardle intimates that the flue of Kiln III is difficult to interpret as an interior fitment within a building. Yet it is unclear why the location of this feature, whether inside or outside a building, should influence the interpretation of the structural evidence as a domestic architecture. The flue of Kiln III, demarcated by paving slabs and the extent of an ash filled deposit, and circumscribed by a further deposit of ash free turf (see Scott 1951a: fig. 3:6, fig. 10:facing page 22), is preferably interpreted as the remnants of a collapsed, possibly robbed, turf and stone wall, overlying some probable paving slabs (see Scott 1951a: fig. 10: facing page 22). It is possible to interpret the flue of Kiln III as a facet of a domestic architecture. Fourthly, Wardle asserts that the absence of domestic debris, specifically flint tools, bone or shell, makes domestic occupation unlikely. However, the absence of flint, bone or shell from the site is readily explained with reference to the highly acidic nature of the soils, particularly peat, predominant in the region. The bones preserved in the later buildings, accompanied also by three iron objects, are an inappropriate source for comparison, because these deposits were almost certainly relatively recent,[2] rather than even roughly contemporary, with the artefacts embedded in the neolithic layers immediately to the south. Fifthly, Wardle states that the ceramic assemblage is devoid of wasters. To remark that there are no wasters identifiable in the assemblage, once more argues for, not against, the structural evidence as domestic buildings, because it reduces the likelihood of these structures being the vestiges of an industrial complex.

If the original interpretation of the archaeology at Eilean an Tighe is no longer tenable then the evidence mentioned in the original excavation report appears confused. An alternative interpretation of the structures and features at Eilean an Tighe is developed below.

6.2.3. An alternative interpretation of Eilean an Tighe

Many of the original interpretations of *specific features*, rather than *composite structures*, made by Scott remain eminently plausible. A reinterpretation of the putative kilns at Eilean an Tighe involves an assessment of the manner in which Scott *combined* the different facets of the structural evidence to construct and validate his overall interpretation. There are, for example, convincing reasons to suppose that some of the specific features identified as hearths are indeed hearths, but no persuasive reasons to accept these probable hearths as integral components of a composite kiln structure. The suggestions promulgated below, derived entirely from a perusal of the excavation report, and particularly the site plan (see Scott 1951a, figure 10: facing page 22), are intended as a positive contribution to the continuing debate on the archaeological significance of the structures and artefactual assemblages known from Eilean an Tighe.

Topography exercises a formative influence on the nature of the site, which, lying on a rocky slope facing south south-west, is divided into two separate areas by a transformation in the natural, from bedrock to sandy clay, which manifests itself as an abrupt change of contour running across the interior of Kiln III. Certainly, the internal features within this putative kiln respect this change of contour, for the alleged hearth slabs stop short of this, and the southern half of the supposed oven is raised level with the higher ground to the north (Scott 1951a:8-9). It will become apparent in the discussion below that other discernible structural components also respect the advantages and limitations of the immediate topography.

Evidence of phasing is difficult to elucidate once the structural sequence posited by Scott, based largely on supposition, is discredited. However, the superimposition of various discrete features suggests the presence of phasing. The hearth in Kiln II, for example, displays some such evidence:

> "The hearth was composed of flat slabs fitting closely together and laid upon other layers of slabs. Many of those in the top layer were cracked by heat, and those in lower layers were partly disintegrated into grit. Evidently successive layers were laid as the previous ones became destroyed" (Scott 1951a:7).

Similarly, the supposed hearth slabs in Kiln III underlie a series of substantial stone blocks, probably in their original positions, on the west side of the kiln (see Scott 1951a, figure 10: facing page 22). The burnt trampled floor deposits are pervasive across the site, and presumably overlie the various discrete patches of paved floor, originally interpreted as either stone paving or hearth slabs, but underlie the numerous stone blocks and lengths of walling strewn across the site. Neither the veracity nor the significance of these possible instances of phasing are calculable.

The disparate array of structures and features at Eilean an Tighe probably represent the vestigial remains of a house, or habitation structure of some unspecified nature. The remnants of an entrance, hearths, trampled floors, stone paving, stone walls, and stone and turf walls, not necessarily contemporary, are all in evidence. These components of the site architecture, illustrated in Figure 6.4, are discussed separately, in accordance with the discernible phasing, below.

The original interpretation of the hearths in Kiln II, and probably Kiln I, *as* hearths remains valid (see Scott 1951a:7, 10). The coherent stone setting and central position of the hearth in Kiln II, in relation to the other structures in evidence, lends support to this interpretation. Many of the hearthstones in Kiln I were severely weathered and excluded from the site plan as a consequence. There is reason to suppose that this stone setting was similar to that of the better preserved hearth in Kiln II (see Scott 1951a, figure 10: facing page 22). Alternatively, it is possible to interpret the paving in the area previously identified as Kiln I as the vestiges of a stone floor.

Discrete areas of *paved or burnt flooring* occur sporadically across the site. It is difficult to ascertain whether these features are earlier, contemporary, or later, than the isolated stone blocks and lengths of walling against which they are frequently juxtaposed. Stone cobbling on the west side of the site, previously interpreted as Hearth III (Scott 1951a:8-9), appears to precede the vestiges of an exterior wall of the proposed habitation structure. Similarly, a small area of stone paving appears to lie within, and therefore presumably under, the length of walling originally considered to define the southern extent of Kiln II (Scott 1951a, figure 10: facing page 22). Stone paving beside the rock face on the north side of the site, originally interpreted as levelling to eradicate eddies and control airflow in Flue II (Scott 1951a:8), and further stone paving within the entrance, originally interpreted as Oven III (Scott 1951a:9), are possibly coeval with the large stone blocks located beside them.

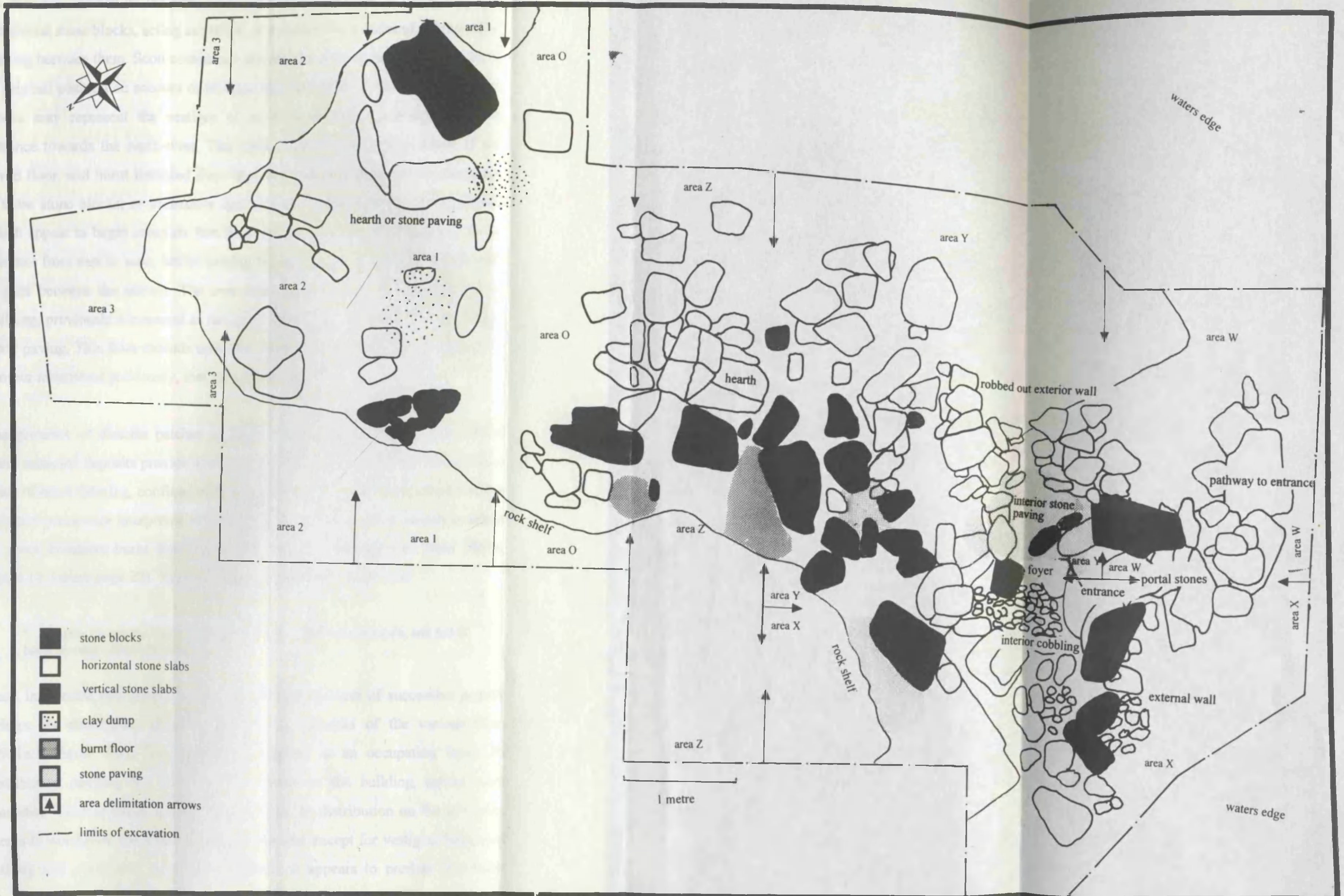


Figure 6.4.: A re-interpretation of the archaeology at Eilean an Tighe

An *entrance*, located on the south west side of the structure, is defined by two substantial stone blocks, acting as portals, and marked by a series of paving slabs, running between them. Scott considered at least one of these stone blocks to be in its original position on account of its large size (1951a:9). Two contiguous stone blocks may represent the vestiges of an exterior wall extending from this entrance towards the north-west. That these stone blocks overlie much of the paved floor, and burnt trampled floor deposits, suggests either the displacement of these stone blocks, or successive episodes of construction. The paving slabs, which appear to begin some six feet from the entrance, run perpendicular to the entrance from east to west, before turning through a right angle to the north east, to pass between the portals. The area immediately inside the entrance of the building, previously interpreted as the oven and hearth of Kiln III, is floored with stone paving. This floor extends up to the small rock ledge, the abrupt change of contour mentioned previously, that runs across the site.

The presence of discrete patches of burnt flooring and pervasive expanses of burnt trampled deposits provide some evidence for successive floor levels. Finite areas of burnt flooring, confined to the north side of the site in the interior of the structure previously interpreted as Oven II (Scott 1951a:7), are evidently overlain by more extensive burnt deposits, re-interpreted as flooring (see Scott 1951a, figure 10: facing page 22). This latter floor, to reiterate, comprised:

> "…a highly compacted soil, varying in colour from black to red-brown, and full of burnt material" (Scott 1951a:5).

Scott interpreted this deposit as the accumulated residues of successive pottery firings; its distribution therefore marked the interiors of the various kilns (1951a:5, figure 3:6). To interpret this deposit as an occupation layer, its distribution marking the extent of the interior of the building, seems more plausible. Yet this putative floor, judging from its distribution on the site plan, seems to overlie all the other features on the site, except for vestigial lengths of walling and substantial stone blocks, which it appears to predate (see Scott

1951a, figure 10: facing page 22). To explain the presence of stone overlying these floor deposits with recourse to stone collapse is inadequate.

Many lengths of stone walling, considered to belong to the various kilns, were identified by Scott in his original interpretation. The most complete length of walling, previously labelled the south side of the oven and flue in Kiln II, runs for at least six feet, from east to west, across the site. It is probable that this limited section of intact walling represents a mere segment of a much more extensive wall that formed the exterior of the structure on its northern side. The vestiges of this wall, still discernible outwith the better preserved section of walling, suggest that its path mirrored that of the rock face immediately to the north. At its eastern extremity, the wall alters course to the north, to follow a change in direction of the rock face, and at its western end, continues to the west, to run parallel with this same rock face. The discrete concentration of stones lying against the rock face in the north east of the site, sundered from the rest of the wall by the construction of Hut 2 (see Scott 1951a:8), marks the termination of this wall (see Scott 1951a, figure 10: facing page 22). Amorphous collections of stone slabs on the southern extremity of the site were originally interpreted as the disturbed stone walls of the oven and flue of Kiln III (see Scott 1951a:9). This disturbance of stones, enclosing the paving stones in the interior of the envisaged habitation, and extending to the north east of the newly identified entrance, is best interpreted as the vestiges of the robbed out exterior wall, previously the flue of Kiln III, on the south side of this structure, possibly overlying more paving slabs situated immediately to the south of the wall that was originally interpreted as the oven of Kiln III.

Some of the more substantial stone blocks that litter the site probably occupy their original positions. The entrance portals, the disjointed blocks that extend to the north west of the entrance, the large isolated boulders that occur variously in the north west and eastern corners of the site, and the discrete concentration of stones against the rock facade that defines its northern extent, are all likely to be in their primary locations. The various blocks to the north west of the entrance perhaps delineate the exterior wall on the western side; the isolated block at the eastern extremity of the site, nestling into a corner of the natural rock face, probably represents the original extent of the building on its eastern side.

The above reinterpretation of the archaeology at Eilean an Tighe involves a detailed engagement with often contradictory aspects of the structural evidence. The structural sequence postulated here, intended to clarify the confusing nature of this evidence, unavoidably involves a considerable degree of supposition. The stone paving or cobbling (Hearth III) at the eastern and western extremities of the site, originally Hearths I and III respectively, the stone paving beneath the wall that defines the south side of Kiln II, and perhaps the central stone setting, namely Hearth II, are the earliest structures discernible. The construction of the entrance on the western side of the site, and the instalment of further stone paving, initially Oven III, immediately inside this entrance, occurred subsequently. Areas of burnt floor and paved floor further to the north, originally the interiors of Oven II and Flue II respectively, indicate ongoing activity elsewhere on the site. The burnt trampled floor deposit, pervasive across much of the site, and enclosed by stone and turf walls on the south side, formed subsequently. If the spatial extent of this putative floor represents the interior confines of a dwelling, then the structural evidence is confined to the displaced blocks and collapsed walls on the western and southern edges of the site respectively. Discrete deposits of clay were then dumped on the stone paving, formally Hearth I, at the eastern edge of the site (see Scott 1951a, section I: figure 11:23). Finally, the stone and turf wall extending from east to west across the site, previously the southern extent of Kiln II, was built. Admittedly, the interpretation of the surviving archaeology at Eilean an Tighe as a house is complicated by the phasing evidence. However, this critique attempts to intimate alternative possibilities, new scenarios, and debatable conclusions, instead of reiterating the original interpretation, now untenable, or dismissing casually the evidence as a jumbled domestic architecture. The importance of alternative interpretations of the archaeology at Eilean an Tighe relate to the integral connection between the structural and ceramic sequences.

The interpretive repercussions of the abandonment of the original structural history proposed for Eilean an Tighe are considerable, because this phasing was employed to establish a plausible ceramic sequence (Scott 1951a:13). A corollary of any refutation of the structural sequence is a rejection of the adjunct ceramic typology. The reliability of this latter sequence depends entirely on the veracity of the interpretation and phasing of these structures as kilns:

> "...the pottery sequence established... ...depends on the evidence to be given as to the sequence of construction of the three kilns, and on the position of sherds in relation to the three kilns" (Scott 1951a:4-5).

This almost total dependence on structural sequence and spatial distribution is a consequence of the negligible stratigraphy at the site (see Scott 1951a:4).

6.3. The original ceramic sequence at Eilean an Tighe

Scott, counting the number of rim sherds remaining in the assemblage, estimated that between four and eight hundred vessels were represented at Eilean an Tighe (1951a:13). A qualitative distinction was made by Scott between pottery found amongst the actual structures on the site, and pottery recovered from the sandy spit at the southern edge of the site. Both concentrations of pottery were interpreted as rubbish, the former inadvertently trampled into the working floor (Scott 1951a:24), the latter dumped in a peripheral location beyond the kilns complex (Scott 1951a:5, 13). However, only the former material was sufficiently contextualised to merit a detailed examination; the latter material, disturbed by submergence in Loch nan Geireann, occupied a residual context. Amongst the former collection of pottery some 365 vessels were identified from distinctive rim sherds (Scott 1951a:24). Indeed, the ceramic sequence developed subsequently depended entirely on a consideration of these same rim sherds (Scott 1951a:25), which represent approximately 10 percent of the number, and 20 percent of the weight, of sherds in the entire assemblage.[3] The majority of the assemblage was effectively ignored using this methodology.

The negligible amount of stratigraphy, and successive disturbances of the surviving levels, frustrated all attempts to develop a stratified ceramic sequence (Scott 1951a: 25). Scott compiled a ceramic classification with respect to stratigraphy, but considered the results too ineffectual to merit publication (1951a:25). This classification, mentioned as available for consultation in the original report, is currently unlocated.[4] Scott subsequently constructed a ceramic sequence predicated on the proportions of distinctive rim sherds found in various locations around the site:

> "The most effective analysis of the material is accordingly a horizontal one relating rim-sherds to the areas in which wasters from the several kilns were scattered" (Scott 1951a:25).

The interpretive priority afforded to the spatial, rather than stratigraphic, distribution of the pottery, ensured that details of the actual depositional contexts from which this material was derived remained obscure. Scott implied that the pottery was excavated from the various layers, together interpreted as the 'working floor' of the kiln complex, that extended haphazardly across the entire site:

> "The surface underlying the working floor was composed of rock, or of clay and sand filling hollows in the rock. On this surface were the kilns.. *..and a deposit of soil containing some four thousand sherds*, as well as stone, pumice and flint implements" (Scott 1951a:5; emphasis added).

The contextual provenancing of the pottery, discussed in more detail in section 6.4.1. below, refers therefore to the spatial location from which it was recovered.

The original ceramic sequence focused on the stylistic development of different facets of morphology or decoration, for example, rim forms or decorative motifs, rather than that of actual vessels (Scott 1951a:13-20, 24-34). Presumably, this strategy was devised to compensate for the bewildering array of vessel styles manifest within the assemblage. This eclecticism of style readily confounded any attempt to establish a typological structure able to unravel the stylistic confusion pervading the assemblage. A focus on vessel parts, rather than vessel profiles, allowed a more flexible engagement with the evidence.

Scott employed traditional stylistic criteria to construct a ceramic sequence at Eilean an Tighe. The 365 distinctive rim sherds on which the sequence was devised were categorised, in morphological terms, as either simple, thickened/everted, flat, in-bevelled or out-bevelled rim forms; and, in decorative terms, as either undecorated, decorated only on the rim, or decorated on both the rim and body (Scott 1951a, Table 1: facing page 34). The provisional structural sequence, with successive episodes of pottery production focusing, firstly, on Kiln III, then Kiln I, and, finally, Kiln II, provided a ready means by which to date the pottery excavated from within the interiors of these separate kilns. Scott, comparing the concentrations of pottery found in each of these three locations, devised a ceramic sequence from the stylistic and, crucially, the proportional differences discernible between them. Essentially, the proportion of vessels represented within the confines of each of the three putative kilns was calculated for the different ceramic styles identified using the above criteria of classification. Scott, equating numerical frequency with chronological currency, postulated a ceramic sequence consonant with these figures (1951a:25-34).

There are three reasons to distrust the conclusions of Scott's typology. Firstly, vessel frequencies, calculated using solitary rim sherds which were assumed to represent each vessel, effectively ignored the completeness and brokenness of the pottery. Secondly, an intuitive reliance on frequency seriation assumed the casual discard, and representative recovery, of pottery across the site. Certainly, for Scott, the validity of this assumption was indubitable, given that the pottery was nothing more than manufacturing debris. If depositional practices were intentional, rather than casual, then the utility and veracity of frequency seriation becomes questionable. Thirdly, the stratigraphy, because it was meagre and, moreover, apparently indecipherable, was effectively ignored, and the assemblage treated as one contemporary morass of pottery. However, *that there was stratigraphy* is indubitable, and one is tempted to venture that Scott dispensed with such complications because a ceramic sequence calibrated primarily according to depositional context, rather than intrinsic style, failed to establish a meaningful typological progression.

The resultant ceramic sequence conformed to contemporary expectations of stylistic development of neolithic pottery in Ireland and Britain:

> "The development.. ..is one of *increasing differentiation* of production and increasing elaboration in ornament" (Scott 1951a:16; emphasis added).

The increasing functional, stylistic, and decorative diversity that characterises the assemblage was only achievable as the pottery centre became more established, and the potters more wealthy:

> "It was only as wealth accumulated that they could afford a multiplicity of vessels specialised to particular uses, and of vessels on which the decoration represented a considerable addition to the cost" (Scott 1951a:16).

The inspirations for the increasing repertoire of styles at the potters' command were supplied by the endless train of neolithic immigrants from the south, conversant with newfangled shapes and designs (Scott 1951a:16). The acme of ceramic elan, attained in the final phases of development of the assemblage, are embodied in the intricate decoration and exquisite manufacture of hebridean jars and unstan bowls (see Scott 1951a:16).

The main stylistic movements within the original ceramic sequence are summarised in Table 6.1. below. The frequency information tabulated by Scott is not reiterated, because the assumptions that motivated the original analysis, and directed the entire methodology behind his assessment, are invalid. The inclusion of this redundant data would not contribute to a greater understanding of the actual assemblage or the depositional practices responsible for its presence in the archaeological record.

That Eilean an Tighe was a production centre, and that the pottery there deposited was, for Scott anyway, almost exclusively wasters, enhanced the chronological accuracy and interpretive efficacy of the envisaged typology. Essentially, this classification, predicated on pottery broken during production, related to the introduction, *and therefore the currency*, rather than the abandonment, of these various ceramics styles. Scott, interpreting the entire assemblage as manufacturing debris, evidently assumed that pottery was made, but never used, at Eilean an Tighe. Writing before the advent of chronometric dating techniques, at a time when a short chronology for the neolithic held favour, the promise of an inordinate typological accuracy was especially welcome (see Scott 1951a:13). The importance of this typology, employed to organise the ceramic styles in evidence at other sites in the vicinity, clearly transcended the assemblage on which its was based, at Eilean an Tighe.

6.4. A reassessment of the pottery from Eilean an Tighe

The following evaluation of the pottery from Eilean an Tighe addresses the inadequacy of the contextual record, and summarises the archaeological condition of the assemblage. The variety of vessel styles manifest in the assemblage, the envisaged function of these ceramic types, and the nature of depositional practices and post depositional processes are analysed subsequently. Unfortunately, given the especial importance of depositional practices to the interpretation of Eilean an Tighe, an investigation of ceramic decoration is excluded from this chapter.

Table 6.1.: a summary of the main stylistic developments recognised by Scott (1951a:13-16)

stylistic properties	rim form	vessel form	base form	decoration	additional features
earlier phase (Kiln III)	simple and developed rims predominate	uncarinated predominantly neutral vessels supplemented by some open vessels approximately a quarter of the vessels are simple cups	exclusively round based	the majority of vessels are undecorated a minority of vessels have decorated rims	horizontal cordons are rare horizontal lugs are rare
middle phase (Kiln I)	simple, developed and externally expanded rims predominate flattened rims replaced by in-bevelled rims out-bevelled rims are rare	uncarinated although inchoate carination discernible distinctive flanged bowls develop approximately a quarter of the vessels continue as simple cups	exclusively round based	approximately half of the vessels represented are decorated	horizontal cordons are an occasional feature on undecorated vessels distinctive lugs with perforation develop on some vessels
later phase (Kiln II)	in bevelled rims characterise undecorated vessels out bevelled rims characterise decorated vessels	both uncarinated and carinated vessels present carination is rare outwith unstan ware hebridean and unstan ware develop approximately a quarter of the vessels remain as simple cups	exclusively round based	approximately two thirds of the vessels are decorated decoration confined to the rim discontinued	horizontal cordons remain rare on undecorated vessels and are an occasional feature on decorated vessels horizontal lugs remain rare

6.4.1. The ambiguity of context

The contexts discussed and illustrated in the original report are spatial, rather than stratigraphic, sub-divisions of the excavation trench (see Scott 1951a, figure 10: facing page 22). These various contexts are itemised in Table 6.2. below.

Table 6.2.: spatial contexts recognised in the original excavation report

context	description
W	area to the south of Oven III, and the south-eastern part of the trench
X	Flue II, Hearth III, and the south-western part of the trench
XI	Hearth III
Y	Flue III, Oven III, and the area between Kilns II and III
YI	Oven III
Z	Hearth II and Oven II
0	area to the south of Hearth I, and to the north of Hearth II and Oven II
1	central area of Hearth I
2	northern area of Hearth I
3	area to the north of Hearth I
VI	the turf walls of Huts I and II to the north of the trench

The uncertainty of context hampers a re-evaluation of the pottery from Eilean an Tighe for three reasons. Firstly, the correspondence between context and structure is fairly loose, because contextual areas were demarcated prior to deturfing, and seldom adapted to accommodate the structural evidence encountered upon excavation (Scott 1951a:24-5). Consequently, many contexts relate to several structures, for example contexts X, Y, and 0, and invest contextual affinity with an inherent ambiguity. Secondly, to reiterate, these spatial contexts ignore stratigraphy. Thirdly, many sherds derive from contexts unmentioned by Scott (1951a). Presumably, the majority of depositional contexts identified during excavation were not deemed worthy of mention in the final publication. Many of these obscure contexts represent further sub-divisions of the existing spatial zones, the significance of which remains obscure.[5]

6.4.2. The archaeological nature of the assemblage

The fragmentary and abraded condition of much of the pottery from Eilean an Tighe limits the interpretive potential of the assemblage.

6.4.2.1. A quantitative summary of the assemblage

The assemblage comprises some 4500 sherds, weighing approximately 50 kilograms.[6] There are 96 partial or complete vessel reconstructions, refitted after the initial post-excavation analysis, in the assemblage. The minimum number of vessels (MinNV) represented in the assemblage is 632, a figure equivalent to the number of distinctive, unreconstructed rim sherds, definitely from different vessels, and the aforementioned reconstructions. The maximum number of vessels (MaxNV) represented in the assemblage is 3691, a figure equivalent to the number of vessel refit labels assigned. The absurdly high value of this MaxNV is readily explained with reference to the conditions under which the pottery was analysed. The constraints of space prevented an examination of large quantities of pottery simultaneously, and, therefore, precluded pursuit of a systematic refitting policy. Unfortunately, as a corollary, very few refitting groups were identifiable, and the vast majority of sherds, interpreted as orphan sherds by default, were each assigned a unique vessel refit number.

The MinNV is also probably a rather generous estimate given the above limitations. Many of the distinctive, but unreconstructed rim sherds exhibit the same rim morphology, increasing the possibility that many represent the same vessel, but, because they were not analysed simultaneously, are assumed to represent separate vessels. Many vessels are effectively represented by one or two sherds, with other constituent fragments unwittingly allocated to other vessels, thereby inflating the number of vessels apparently represented in the assemblage. Distinctive surface treatments and decoration, for example, were employed, where possible, to elucidate or clarify further the number of vessels represented amongst this material.

There are, then, over 3500 orphan sherds, each the solitary representative of a different vessel, in the assemblage. Another seventy vessels, of which around sixty are reconstructed, are represented by two sherds, and a further twenty five vessels, of which approximately fifteen are reconstructed, are represented by three sherds. Only eleven vessels are represented by more than ten constituent sherds. The constituent sherds of vessel refits consisting of more than one sherd comprise less than 15 percent of all sherds in the assemblage. As a consequence, no statistical significance is attached to any of the quantitative evaluations of vessel refits, and much caution is exercised when making qualitative statements based on vessel reconstructions. Table 6.3. below itemises the types of sherd identifiable in the assemblage.

Table 6.3.: the sherd composition of the assemblage

feature sherd	weight of sherds	number of sherds	number of sherds as % of assem.	weight of sherds as % of assem.	average sherd weight	average sherd size
indeterminate	191	222	5	<1	24	37
body	1268	85	2	3	79	59
probable body	22	2	<1	<1	11	36
neck	38	14	<1	<1	8	47
ceramic object	190	12	<1	<1	16	38
rim	10856	684	15	22	18	48
probable rim	51	5	<1	<1	13	43
shoulder	1793	185	4	4	10	37
body	33750	3258	73	67	11	39
probable body	32	2	<1	<1	16	45
body-base	41	4	<1	<1	14	39

Unsurprisingly, the vast majority of sherds, approximately seventy percent, are body sherds. This figure is probably inflated by the tendency to identify diminutive, undiagnostic fragments as unremarkable body sherds. Interestingly, rim sherds, the most readily identifiable vessel fragments, comprise over a fifth of the assemblage. The negligible proportion of neck, shoulder and base sherds remaining is partly attributable to a failure to identify these often subtle elements of vessel morphology in a fragmentary assemblage. Base sherds from round based vessels, for example, are only distinguishable from body sherds if sufficiently large and thick to reveal their distinctive curvature and inordinate thickness. The sherd composition at Eilean an Tighe suggests a representative assemblage, with no particular type of sherd specially selected and removed for use or discard elsewhere. Admittedly, the vicissitudes of sherd classification, and the poverty of vessel refits, ensure that all such statements remain provisional.

6.4.2.2. Style and diversity in the pottery from Eilean an Tighe

Scott placed the pottery from Eilean an Tighe within a western neolithic tradition (Scott 1951a:1). Several distinctive vessel types were recognisable in the cumulative ceramic sequence: the primary phase included cups, open bowls, necked bowls (Scott 1951a:13-14), and jars (Scott 1951a:16); the secondary phase contained a similar range of styles, but also carinated bowls and flanged bowls (Scott 1951a:14); the final phase, in addition to the previous vessel types, incorporated hebridean jars and unstan bowls (Scott 1951a:14). Decorated vessels, in the early stages of the ceramic sequence, were almost exclusively grooved (Scott 1951a:16), but, in the later stages, sometimes incised or impressed instead (Scott 1951a:18). Scott, firmly entrenched in culture historicism, offered various continental sources as stylistic antecedents for the styles manifest in the assemblage (Scott 1951a:18, 20). The brevity of this search for comparable material indicated, firstly, the then poverty of comparable material, and, secondly, the idiosyncratic nature of much neolithic pottery from the Western Isles. The diversity of vessel style in the assemblage confounded any attempt to describe the majority of the pottery using a conventional typological vocabulary. Admittedly, vessel styles such as cups, hebridean vessels, unstan bowls, and flanged bowls, the latter effectively open bowls with a pronounced external expansion, were sufficiently distinctive to enjoy an inordinate typological salience. The following summary of styles in the assemblage, dealing successively with rim form, vessel form and vessel type, introduces the functional analysis pursued in section 6.4.3..

6.4.2.2.1. Rim morphology in the assemblage from Eilean an Tighe

The diversity of rim forms, and variety of vessel types on which they occur, suggests that the vessel orifice was of considerable importance. Simple (rim form 1; E554, E573, E574), everted (rim form 2A; E74, E100; E102; see Figures 2.2, 2.44), rolled (rim form 2B; E86, E3731; see Figures 2.3, 2.44), externally expanded (rim forms 3, 4, 5; E196, E406, E517; see Figure 2.3), collared (rim form 7A; E430, E682; see Figure 2.44), inturned (rim forms 8, 9; E10, E321, E403, E405; see Figures 2.2, 2.3, 2.43), thickened (rim form 10; E310, E484, E528; see Figure 2.2), and externally bevelled (rim form 12A; E565, E3734) rims embellish numerous necked or closed vessels. Similarly, simple (E22, E24, E26, E84, E85; see Figures 2.4, 2.5), rolled (E469, E491), externally expanded (E9, E453, E463), T shaped (rim form 6; E4, E57, E93; see Figures 2.2, 2.34), collared (E432, E435), inturned (E5, E303, E751; see Figures 2.2, 2.45), thickened (E208, E305, E460), internally expanded (E79, E178; see Figure 2.44), and triangular expanded (E314, E354, E556; see Figures 2.4, 2.45) rim forms accentuate indeterminate neutral vessels. Everted (E512), externally expanded (E45, E55, E67, E207), collared (rim forms 7A, 7B; E420, E423), thickened (E46, E459; see Figure 2.45), internally expanded (E189, E320; see Figure 2.4), and triangular expanded (E508) rims aggrandise indeterminate open vessels.

The rim morphology, varying in terms of form, orientation or width, is irregular on many vessels in the assemblage. On E3, the rim varies between a short and a thickened, truncated external expansion; on E314 (see Figure 2.4), the rim varies between a short and a triangular external expansion; on E3741, the form of the inturned rim varies considerably (see Figure 2.32); on E383, the rim is sufficiently irregular to appear inturned and externally expanded at different locations on the rim circumference; on E398, the external expansion of the rim becomes thickened in places; on E402 (see Figure 2.33), the rim embodies both a long and triangular external expansion; on E496 (see Figure 2.3), the simple rim is rolled in places; on E514, the simple rim becomes thickened elsewhere on the rim circumference; on E58 (see Figure 2.42), the thick, truncated external expansion effectively transforms into an internal expansion in places; on E716, the external expansion varies in length and thickness. Similarly, with respect to rim surface, on E19 (see Figure 2.5), E105, E514 and E3736, for example, the rim surface is variously convex or horizontal; on E496 and E3739, the rim surface varies between an internal bevel and a convex surface (see Figure 2.3), and, finally, on E383, the rim surface varies between an external bevel and a convex surface. The width of the rim surface is also inconsistent on many vessels, varying, on E12 (see Figure 2.34), E536 (see Figure 2.40), or E716, for example, by a margin of some 5mm. The severity of these morphological irregularities, inevitable in pottery manufactured by coiling and lateral joining, is exacerbated by an archaeological analysis that attempts to encapsulate vessel form by classification of vessel profiles.

The rim surface is effectively a vehicle for decoration to embellish the circumference and accentuate the significance of the mouth of the vessel. The inordinate width of the rim surface on many vessels is an inevitable corollary of the elaborate rim forms that characterise the pottery. Unsurprisingly, the vast majority of these rim surfaces are decorated. E393, notable for its overhanging collared rim, has a rim width of some 35 mm; conversely, E19, with a simple rim, has a rim width of less than 5 mm (see Figure 2.5). The average rim width is approximately 15mm.

6.4.2.2.2. Vessel morphology in the assemblage from Eilean an Tighe

The following list of the vessel forms and types definitely present at Eilean an Tighe is a necessary prelude to the development of a functional interpretation of the assemblage. The assemblage contains an eclectic array of vessel forms and vessel types, in which open, closed and neutral vessels, variously manifest as cups, open bowls, necked bowls, carinated bowls, jars, and closed bipartite vessels are all represented. The assemblage includes sixty one open vessels, five of which are reconstructions, including 3 plates (E232, E319, E547; see Figure 2.43), seventeen open bowls (E7, E20, E33, E35, E36, E37, E38, E47, E78, E88, E92, E210, E224, E331; see Figures 2.2, 2.3; 2.4, 2.42), and twenty five unstan bowls (E101, E434, E575, E576, E581, E586, E589, E590, E664, E900, E901, E902, E903, E905, E908, E909, E910, E911, E913, E914, E977, E1450, E1548, E3739, E5138; see Figure 2.46); fifty one closed vessels, six of which are reconstructions, including one bipartite closed bowl (E389) and a probable closed cup (E219); and one hundred and twenty one neutral vessels, twenty seven of which are reconstructions, including nine cups (E17, E18, E19, E83, E205, E213, E217, E3735, E3736; see Figures 2.5, 2.38), two bowls (E115, E3737; see Figures 2.6, 2.45), and seven jars (E16, E32, E387, E734, E3740, E3741, E3742; see Figures 2.26, 2.31, 2.32, 2.35).

Unfortunately, the vast majority of open, closed and neutral vessel forms are of indeterminate type. It is therefore seldom possible to ascertain the rim forms commonly associated with specific vessel types. However, open bowls have simple rims (E20), externally expanded rims (E36, E92, E36, E78, E88), thickened rims (E10, E33, E210, E224; see Figure 2.3), internally expanded rims (E7, E37; see Figure 2.42), and triangular expanded rims (E38, E47); unstan vessels all have simple rims (E576, E586, E590, E575; see Figure 2.46), and plates all have a simple edge (E232, E319, E547; see Figure 2.43). With respect to neutral vessels, cups (E17, E19; see Figures 2.5, 2.38) and necked cups (E18) have simple rims only; necked bowls have simple rims (E3737; see Figure 2.45) and thickened rims (E115), and, possibly, externally expanded rims (E301; see

Figure 2.2), T shaped rims (E296), and triangular expanded rims (E111, E112; see Figure 2.4). With regard to jars, one definite, and another probable, bag shaped jar have externally expanded rims (E32, E449; see Figure 2.33); hebridean jars embody externally expanded (E387), collared (E734), and inturned (E16; see Figure 2.35) rims; and a probable barrel shaped jar has a thickened rim (E198). With reference to closed vessels, a solitary closed, bipartite bowl has an inturned rim (E389), and two probable carinated bowls, E72 and E383, have simple and inturned rims respectively.

It is impossible to ascertain vessel size or volume, normally a useful indication of function, with any degree of certainty, due to the fragmentary nature of the assemblage. Only twenty four vessels are sufficiently intact to allow an estimation of vessel size or volume, from a critical evaluation of rim diameter, wall thickness, and vessel form and type. Although firm conclusions are impossible to generate on such a meagre sample, the available measurements confirm general impressions, previously formulated, regarding the size and scale of the various vessel forms and types recognisable in the assemblage. Cups have a small rim diameter of around 100mm and thin walls approximately 6 mm thick (E18, E205, E3736). A neutral bowl (E3737; see Figure 2.45) and a closed bowl (E389) have similar rim diameters of approximately 150mm and, in the case of the former vessel, thin walls some 6mm thick. One, or possibly two, hebridean jars have rim diameters of approximately 250mm and walls some 10mm thick (E32, E449; see Figure 2.33). That a probable barrel shaped jar (E390) has a rim diameter less than 200mm, and walls less than 10mm thick, suggests that these two types of jar had differing functions. Predictably, two open bowls (E20, E88), with walls approximately 10mm thick, and an unstan vessel (E3739), with walls 5mm thick, have similar rim diameters of over 200mm. The differing wall thickness of open bowls and unstan vessels suggests a differing function for each of these vessel types despite a similar overall profile.

Regrettably, the vast majority of these vessels, with the obvious exception of the original reconstructions, are represented by a solitary sherd. Yet the difficulty of identifying vessel type, even for vessels with a discernible form, is as much a confirmation of the unsatisfactory nature of these traditional categories of vessel style, as an indication of the incomplete condition of the vessel reconstructions.

6.4.3. A functional profile of the assemblage

Scott ascribed various speculative functions to the different pottery styles in the assemblage, identifying cups as porringers, undecorated jars and bowls as cooking wares, hebridean jars as storage vessels, and unstan bowls as potential curd or cheese making equipment (1951a:16). This admirable sensitivity to function was unfortunately restricted to a cursory examination of vessel style. Such a fleeting concern was hardly surprising because Scott's interpretation of the pottery, as pristine vessels discarded immediately after an unsuccessful manufacture, precluded the possibility of an assemblage containing used vessels.

The incomplete condition of many vessel refits frustrates an investigation into vessel function, because it is seldom possible to ascertain the vessel profile or establish the nature of attrition and residue patterns. Post depositional abrasion and fragmentation further efface or confuse these often delicate indications of use. Nonetheless, there is an abundance of evidence to indicate that much of the pottery from Eilean an Tighe was actively used before deposition. Approximately, thirty percent of sherds in the assemblage, measured in terms of weight, exhibit signs of use related attrition, and around forty percent of sherds, similarly quantified, exhibit traces of use related residues. If sherds assailed by post depositional abrasion are excluded from these calculations, the proportion of sherds with evidence of attrition and residues escalates to approximately seventy percent and fifty percent of sherds in the assemblage, respectively.

An assessment of vessel profile, with respect to vessel form and vessel type, informs upon the functional characteristics of the assemblage. The classification of vessel type, introduced in section 4.3.3.7. in chapter four, and employed in section 6.4.2.2.2. above, can be condensed, for functional analysis, from thirteen vessel forms to seven. This revised classification, ignoring subtle stylistic variation, emphasises instead the functional implications of overall vessel profile. It comprises cups (vessel types 1A, 1B), open bowls (vessel types 2A, 2B), necked bowls (vessel type 3), jars (vessel types 4, 5, 6), carinated bowls (vessel types 7, 8, 9), bipartite closed bowls (vessel type 9), beakers (vessel type 11), and, finally, lids and shallow dishes (vessel type 10).

6.4.3.1. Attrition patterns and vessel form

Approximately 270 vessels, of which some thirty five are reconstructions, exhibit signs of finite, and therefore possibly use related, abrasion. These abrasion patterns become meaningful only if related to vessel morphology. The vessel lists incorporated into this commentary are intended as exemplary rather than exhaustive. Finite abrasion confined to the rim suggests a storage function on approximately sixty vessels (eg. E11, E12, E17, E36, E71, E76, E81, E93, E105, E115, E174, E187, E217, E309, E384, E448, E449, E495, E3734; see Figures 2.2, 2.28, 2.33, 2.34, 2.38, 2.43, 2.44, 2.49). Abrasion around the rim and within the vessel interior probably relates to more regular handling and disturbance of the contents on some fifteen vessels (eg E45, E75, E113, E205, E332, E392; see Figure 2.38).

Vessels with part of the base surviving frequently exhibit a specific abrasion pattern. Unsurprisingly, on five vessels, abrasion on the exterior of the base is invariably concentrated at the centre of the basal surface, acquired through the repeated positioning of the vessel in an upright position; the interior is usually abraded to varying degrees (eg E39, E41, E697, E698, E2000). Two vessels with abrasion confined to the interior of the base (eg E42, E43) were probably suspended.

Discrete patches of abrasion on the vessel exterior around the body (eg E1213, E2252), and particularly around the shoulder (eg E2166, E3193), are presumably accrued from repeated handling of these various vessels in specific ways. The interiors of some seventy vessels with such abrasion patterns, whether on the body (eg E237, E238, E241, E277, E289, E501; see Figure 2.27, 2.40) or, more specifically, on the shoulder (eg E3070), are also invariably abraded to varying degrees.

Abrasion is confined to various parts of the interior of approximately 250 vessels. The absence of any recognisable interior surface treatment, leaving frequent gritty inclusions to protrude as pedestalled temper, is either an original feature, designed to facilitate food preparation, or, more probably, a direct result of use wear attrition (eg. E14, E512, E693, E696, E712, E713). By contrast, abrasion is confined to the exterior on over a hundred vessels (eg. E239, E350, E398, E422, E637, E3405), supplemented, in two instances, by finite patches of abrasion around the interior of the rim (E99, E108; see Figure 2.43) or, in some twenty instances, the body (eg. E170, E171, E378, E379, E734).

The relations between use related abrasion patterns and other functional variables, for example vessel form and residue traces, further refine an understanding of vessel function. Vessels displaying abrasion restricted to the rim include approximately twenty neutral vessels (E11, E17, E32, E54, E57, E69, E76, E93, E112, E115, E217, E229, E314, E390, E402, E449, E469, E487, E734; see Figures 2.2, 2.4, 2.33, 2.34, 2.38, 2.44), twelve closed vessels (E10, E12, E31, E37, E58, E105, E389, E403, E3734; see Figures 2.3, 2.34, 2.42), and six open vessels (E36, E88, E173, E446, E575, E3732; see Figure 2.46). Vessels with abrasion around the rim, but also within the vessel interior, include two open vessels (E45, E512), four closed vessels (E62, E219, E405, E687; see Figure 2.2), and two neutral vessels (E113, E205). Use related abrasion in the interior occurs on at least five open vessels (E20, E905, E908, E909, E910, E911) and two neutral vessels (E3735, E3742; see Figure 2.31). Discrete abrasion patterns, presumably relating to use, occur on the exterior of an open vessel (E910) and a closed vessel (E383). Regrettably, the forms of vessels with basal abrasion patterns remain indeterminate.

The significance of vessel form with respect to abrasion patterns remains largely obscure. Abrasion around the rim, acquired gaining access to the vessel contents; abrasion inside the vessel, accrued by stirring or scraping of the vessel contents; occur on open, closed and neutral vessel forms. Interestingly, however, vessels with extensive use related abrasion across the interior have a predominantly open profile.

6.4.3.2. Sooting residues, macroscopic food remains, and vessel form

Over sixty vessel reconstructions and thirty vessel refits, the latter comprising at least two sherds, display some form of residue, either sooting marks or macroscopic food remains, across varying parts of their interior or exterior surfaces. Over a thousand presumed orphan sherds also exhibit traces of sooting. Heavy sooting or macroscopic food residues adhere to the exterior of over one hundred vessels (eg. E11, E20, E26, E32, E75, E81, E88, E116, E270, E383, E448, E457, E480, E602, E946; see Figures 2.28, 2.38, 2.49), and, extending onto the rim of at least a further seven vessels (E37, E40, E94, E458, E477, E537, E567,), are occasionally restricted to the rim only (E36, E87, E173, E185, E497, E541, E560; see Figure 2.42). Sooting around a shoulder occurs on a few vessels (E241, E601, E610). For nearly thirty vessels, macroscopic food residues in the interior are invariably accompanied by sooting or food residues on the exterior (E234, E282, E293, E321, E392, E734, E777, E894, E1053, E1185, E1276; see Figures 2.39, 2.43). Yet some sixty vessels have food residues in the interior, but apparently no traces of similar residues or sooting on the exterior (E164, E169, E379, E506, E1394, E1630; see Figures 2.27, 2.49). For vessels represented by, or incorporating, base sherds, macroscopic food residues, confined to the basal interior of three vessels (E43, E692, E698), are accompanied by sooting on the exterior on a further three vessels (E39, E40, E41). Another vessel, which exhibits only sooting on its exterior (vessel 42, 711), contains no discernible traces of its original contents.

Vessels with heavy sooting or macroscopic food residues on the exterior, and sometimes the rim, include open bowls (E7, E36, E88, E173, and probably E20; see Figure 2.42), unstan vessels (E575 (see Figure 2.46), E914, E3739, and probably E1861), jars (E16, E32; see Figure 2.35), and various neutral vessels (E11, E32, E75, E111, E458, E480, and probably E457; see Figures 2.5, 2.38) and closed vessels (E383) of indeterminate type. Vessels with glossy sooting on the exterior include cups (E19, E205, E217), unstan vessels (E581, E590, E908; see Figure 2.46), open bowls (E36, E35, E38, E78, E92, and probably E446, E501, E505, and E733; see Figures 2.27, 2.28), necked bowls (E115), jars (E387, E734), plates (E547), and various neutral vessels (E50, E54, E112, E296, E402, E453; see Figures 2.33, 2.34) and closed vessels (E12, E72, E219, E321, E403; see Figures 2.3, 2.34) of indeterminate type. Vessels with macroscopic food residues in the interior as well as exterior include cups (E217), unstan vessels (E581, E900, E913; see Figure 2.46), and open (E320) and closed (E321; see Figure 2.43) vessels of indeterminate type.

A bewildering variety of residue patterns occur on each vessel form, whether open, closed or neutral, and for every vessel type, whether cups, open bowls, necked bowls, jars, carinated bowls, closed bowls and plates. Approximately fourteen open vessels, including three open bowls, six unstan vessels, and five vessels of indeterminate type; some twenty five neutral vessels, comprising two, possibly three cups, at least one necked bowl, a minimum of three jars, and around thirteen vessels of indeterminate type; and some ten closed vessels, all of indeterminate type, with the exception of a solitary bipartite bowl, exhibit some form of residue pattern. Unfortunately, no especial or distinctive correlations between vessel form and residue traces are discernible.

The distribution of a sooting pattern across the ceramic surface frequently coincides with changes in the vessel morphology. These differential sooting patterns indicate that vessels were manipulated in different ways with respect to the heat source. Sooting on a necked bowl (E115), for example, occurs only below the cordon, which presumably shielded the upper surface from sooty deposits. Sooting confined to the upper portion of an indeterminate neutral vessel (E3738) suggests that its lower half was protected from the heat source. Plausible explanations of the functional activities responsible for these residue patterns remain elusive. A failure to elucidate a systematic relation between form, evinced by vessel morphology, and function, encapsulated in residue patterns, is not simply a consequence of the unsatisfactory nature of the sample, but equally an indication of the diversity and complexity of vessel function.

Despite these difficulties, some interesting aspects of vessel function are noticeable. The presence of macroscopic food residues within vessels that have no residue on exterior surfaces, occurring on both open (E55, E320, E506; see Figure 2.27) and closed (E100, E573) vessels, all of indeterminate type, suggests a serving and storage, rather than cooking, function, respectively. However, open vessels, including conventional bowls (E20, E88, E92) and unstan bowls (E575, E581, E590, E900, E913; see Figure 2.46), display traces of sooting and charred food remains on both surfaces, frequently accumulating, where applicable, about the carination. Neutral vessels, frequently of indeterminate type, but including necked bowls (E115), jars (E32, E387), and, notably, at least one cup (E217, and probably E17; see Figure 2.38) display traces of a glossy sooting on the exterior, suggesting prolonged culinary service. The temperature of an open fire is sufficient to prevent the deposition of sooty deposits around the exterior basal surface of various indeterminate round based vessels (eg. E692, E698). That sooty deposits form discrete patches on the outside of other bases (eg. E711), suggests that such vessels were suspended over, rather than placed within, open fires. The substances smeared across the interior surfaces of a bag shaped jar (E32) and an indeterminate neutral vessel (E458), are presumably organic sealants intended to render these containers impermeable.

6.4.4. Depositional practices and post depositional disturbances

An analysis of the dimensions, quantity, weight, context, and degree of abrasion of the constituent sherds in each vessel refit facilitates an investigation into some of the depositional practices and post depositional processes that have contributed towards site formation.

Table 6.4. below provides a quantitative resume of the contextual distribution of pottery across the site.[7] Again, it is preferable, and more meaningful, to discuss the assemblage with respect to weight rather than quantity when dealing with sherds.

Table 6.4.: a quantitative summary of the assemblage by context

context	weight of sherds	number of sherds	average sherd weight	average sherd size	weight of sherds as % of assem.	number of sherds as % of assem.	max. sherd size	max. sherd weight
-	11974	1344	13	41	24	30	119	122
0	4981	522	10	39	10	12	116	76
1	3561	459	9	39	7	10	116	65
2	2922	309	11	41	6	7	154	69
3	180	18	11	38	<1	<1	54	31
R	13	1	13	39	<1	<1	39	13
SH	139	5	35	60	<1	<1	76	71
VI	1209	129	10	37	2	3	81	35
W	1510	145	12	39	3	3	97	65
X	2849	252	12	40	6	6	105	78
X1	2811	229	13	40	6	5	91	91
Y	6580	640	11	40	13	14	150	69
Y1	647	64	11	37	1	1	94	66
Z	3511	356	12	40	7	8	126	120

Approximately a quarter of the assemblage derives from the north east end of the building (Areas 0, 1, 2; Hearth I); around 15 percent derives from the east half of the building (Areas Y, YI; Flue III, Oven III) with the paved porch immediately inside the entrance relatively free of pottery (Area YI; Oven III); about a tenth derives from the area to the west of the entrance inside the building (Areas X, XI; Flue II, Hearth III), of which around half is from the cobbling beside the entrance (Area XI, Hearth III); less than a tenth derives from the central hearth and adjacent area of burnt flooring (Area Z; Hearth II, Oven II); and, finally, a modicum of pottery occurs around the path of paving slabs located outside the building, leading to the entrance on its south east side (Area W).

With regard to overtly disturbed and unknown contexts, about a quarter of the assemblage derives from indeterminate contexts and is effectively uncontextualised. The amount of material from contexts R and SH, the significance of which remains unknown, is negligible. Similarly small amounts of pottery derive from contexts VI and 3, the former definitely residual (Scott 1951a:4), the latter probably so, given the poverty of stratigraphy on the rocky boss to the north of the site, and its position with respect to the later buildings Huts 1 and 2 (see Scott 1951a, figure 2:4).

Almost half of the entire assemblage, then, derives from the interior of the building, particularly from the area farthest from the entrance, at its north east end (Areas 0, 1, 2), the area around the central hearth (Area Z), and the area towards its south west end (Areas X, Y). With the notable exception of the ceramics dumped by the lochside (Scott 1951a:5), the amount of pottery recovered from locations either outside or on the periphery of the building, for example, the entrance pathway (Area W) and the rocky boss (Area 3), is negligible.

6.4.4.1. Reconstructing a depositional history for the site

The evidence for deliberate depositional practices at Eilean an Tighe is persuasive. Many vessels were deposited as either complete pots or as substantial fragments. Interestingly, there is some evidence to suggest the deliberate deposition of portions of the same vessel in different locations around the site.

Certain vessels, including E116, E402 (see Figure 2.33), E3735, E3736, E3737 (see Figure 2.45), E3738, and E3742 (see Figure 2.31), were each deposited largely intact, probably in single locations or contiguous contexts, in various places across the site. Numerous vessels, represented by specific parts of the original vessel, *invariably the rim*, including E32, E45, E50 (see Figure 2.34), E54, E71 (see Figure 2.43), E75, E81 (see Figure 2.49), E88, E383, E384, E387, E389, E390, E403 (see Figures 2.3; 2.38), E404, E442, E448 (see Figure 2.28), E449 (see Figure 2.33), E457, E462, E465, E466, E469, E512, E647, E715, E716, E780, E3725, but also the base, including E39 and E40, E41, E42, E43, E692, E697, E698, E711, E712 and E777, or the body, including E713, E714, E749 and E776, were probably deposited as large fragments, again in singular locations across the site. Many of these fragments, particularly E716 and E734, each comprising the upper half of the vessel, were of considerable size.

The original excavation report describes contextual circumstance readily attributable to deliberate deposition of pottery. Several large fragments from the rim of E115 were discovered *beneath the flagstones of the central hearth*, previously identified as Hearth II (Scott 1951a:7). This vessel was evidently incomplete when deliberately deposited. A substantial portion of E3739 was deposited in the enclave beside the rock shelf to the west of the central hearth (Oven II), and, another, smaller fragment was possibly deposited to the north of the central hearth (Scott 1951a:7). A large fragment of an unidentified undecorated vessel, possibly E466, was deposited on the flagstones within the interior of the building, midway between the entrance and the central hearth, beside the wall previously interpreted as the south wall of Flue II (Scott 1951a:9). Another vessel, E3739, its constituent fragments largely from Area Z, but also Area 0, may have been deliberately broken to allow its deposition in two separate locations (see Scott 1951a:7).[8] At least one sherd, and possibly many more, from E3740 (see Figure 2.26), were derived from Area 0, in addition to numerous sherds definitely from Area 2. Similarly, at least one sherd, and possibly many more, from E3741 (see Figure 2.32), recovered almost complete, were derived from Area 0, in addition to numerous sherds from Area 1. Vessels embodying sherd dispersal across contexts, frequently from admittedly contiguous contexts, include E58 (see Figure 2.42), E74 (see Figure 2.2), E422, E446, and E458.

The focus of deposition was within the interior of the building (Areas 0, 1, 2, Z, X, Y). The paved and cobbled areas inside and outside the entrance (Areas XI, YI, W), which yielded a minimal amount of ceramic, were evidently kept relatively clean, with broken vessels taken elsewhere. Presumably, some fragments were removed, specially selected from vessels previously broken upon deposition within the building, and deliberately deposited beyond the confines of this structure in the ceramic dump to the south of the site (see Scott 1951a:5). Importantly, the pottery from this latter location, disturbed by the rising level of the loch, was largely uncontextualised, and effectively residual (Scott 1951a:24). An assessment of vessels which contain sherds that derive from both definite contexts within the building and indeterminate contexts elsewhere on the site may identify vessels broken within the former, but discarded subsequently in the latter. There is, of course, no guarantee that sherds from indeterminate contexts derive from the rubbish dump, but the profuse quantity of pottery with no contextual affinity recalls the similar quantity of pottery, mentioned by Scott (1951a:5), from this location. Forty nine vessels incorporate sherds from both the interior of the building and, possibly, the ceramic rubbish dump. Many of these vessels, for example, E11, E40, E41, E404, E1012, E1042, E1128, E1262, and E1285, are largely incomplete, and are represented by a meagre number of sherds in these separate contexts. A significant proportion of many vessels, including, for example, E116, E716, E3725, E3735, E3738, E3739, E3740 (see Figure 2.26), and E3741 (see Figure 2.32), derive from indeterminate contexts, and, as a consequence, possibly from the pottery dump.

A more general evaluation of vessel dispersal across contexts provides an insight into the treatment of sherds after vessel breakage. Certainly, the diversity of contexts from which refittable sherds, that is sherds from the same original vessel, are frequently derived requires explanation. It suggests either the reuse of sherds after breakage, or the disturbance of sherds after deposition, either scenarios able to explain adequately the dispersal of sherds across contexts.

There are thirty vessels embodying sherds from multiple contexts.[9] Admittedly, many of these, for example E32, E58 (see Figure 2.42), E105, E116, E232, E277, E398, E480, E699 (see Figure 2.39), E734, E3737 (see Figure 2.45), E3741 (see Figure 2.32), and E3739, comprise sherds derived from contiguous contexts. The arbitrary nature of the divisions between the spatial areas that serve as contextual parameters means that no especial significance is attached to the derivation of such vessels from juxtaposed contexts, because the constituent sherds are not necessarily dispersed. Similarly, with the exception of vessels partially represented in the ceramic rubbish dump, no significance is attached to vessels represented in one original, and many definitely residual, contexts. E555, for example, is represented within the interior of the building (Area 1), but also within either Hut 1 or 2 (Area VI).

E74, E238, E270, E446, E458, E615, E717, E722, E723, E880, E950, E988, E1042, and E3740 (see Figure 2.26) embody sherds derived from multiple contexts. The majority of these pots, for example E74, E238, E270, E446, E458, E615, E717, E722, E723, E950, E988, and E1042, are represented by a meagre number of sherds, with only a few fragments originating in each individual context. Vessels represented largely in a solitary context, but with occasional sherds derived from elsewhere, essentially E880 and E3740 (see Figure 2.26), provide further evidence of disturbance. The incompleteness of every vessel, and, particularly, the wide dispersal of E717, E722 and E1042 across the entire site, with each represented throughout the interior of the building, suggests both the *disturbance* and the *removal* of the much of the pottery deposited within this structure for discard elsewhere.

Table 6.5. enumerates vessel dispersal across contexts. This quantitative evaluation includes indeterminate contexts in an attempt to establish the number of vessels deposited around the environs of the building, but at least partially retrieved for eventual discard in the ceramic dump. The vast majority of vessels are confined to a solitary context, more an indication of the number of orphan sherds allegedly in the assemblage, than a confirmation of actual, and seemingly negligible, post depositional disturbance. Indeed, if vessels represented by orphan sherds are excluded from this calculation, only 68 vessels, rather than 3622, derive from a single context. The remaining results itemised in Table 6.5. are more convincing because they refer to vessel refits comprising multiple sherds. Essentially, there is a moderate rather than profuse dispersal of vessel fragments across contexts.

Despite the difficulties encountered in refitting, and the dubious nature of the assumptions involved in the interpretation of the resultant reconstructions, it is reasonable to venture a provisional commentary on the significance of these refits. The analysis of vessel dispersal across contexts confirms the interpretation advanced above as plausible. The interior of the building provided the original focus of deposition. As ceramic debris accumulated, a consequence of the intensity of deposition, fragments of vessels previously broken were removed for disposal elsewhere, frequently the rubbish dump on the periphery of the site. That many vessels are represented in contexts from both the building and, presumably, the ceramic dump, argues against two separate depositional locales designed to accommodate different vessels, and used for different purposes.

Table 6.5.: quantification of vessel dispersal across contexts

number of vessels	number of contexts in which vessel is represented
3622	1
53	2
12	3
1	4
2	5

6.4.4.2. Post depositional disturbance across the site

That much of the assemblage is fragmentary, abraded and concreted, suggests a history of considerable post depositional disturbance. Some elementary frequencies convey adequately these characteristics of the pottery.

The average sherd size and weight are 40mm and 12g respectively; the maximum sherd size and weight are 154mm and 122g respectively. Table 6.4. in section 6.4.4. above confirms that there is no meaningful variation in either the average sherd size or weight across contexts. Essentially, in contextual terms, the assemblage is uniformly fragmentary.

Approximately ten percent of the quantity, and fifteen percent of the weight, of sherds in the assemblage are effectively deformed by severe post depositional abrasion. The majority of these undiagnostic sherds are from indeterminate contexts, and, as such, probably derive from the ceramic dump at the edge of the site. More generally, some 70 percent of sherds in the assemblage, expressed in terms of both quantity and weight, show signs of post depositional abrasion. Approximately 20 percent of sherds in the assemblage, measured in terms of both quantity and weight, have varying kinds of post depositional concretions. Many of these concretions, which extend across sherd fracture profiles, are apparently the product of chemical taphonomy.

The confused nature of the architectural remains at Eilean an Tighe, possibly attributable to refurbishment during use, or robbing after abandonment, and the fragmentary nature of the assemblage, lends support to the notion that much of this pottery was broken further, if inadvertently, after its initial deposition or discard. This scenario conforms with the interpretation of the site as a focus for deposition.

6.4.5. The mysterious ceramic blobs of Eilean an Tighe

Several strange lumps of ceramic from Eilean an Tighe form a suitable coda for this chapter. Scott (1951a:12) interpreted five pieces of misshapen fired clay (EOA 409) as production debris. These indeterminate pieces of ceramic were considered to have been used to separate and support vessels during firing (Scott 1951a:12). If Eilean an Tighe is no longer interpreted as a pottery production site, the presence, and purpose, of these ceramic blobs becomes more intriguing. That all derive from different contexts does little to clarify their original functions. There is nothing, other than their indeterminate nature, to suggest a common or singular function for these items. These pieces are all complete, with the exception of EOA 409/1, and roughly comparable in size and weight; they are all abraded, but not burnt or overfired, with the exception of EOA 409/4. The raised areas on EOA 409/5 appear to have a rudimentary polish. It is conceivable that this represents a polish acquired through use, during contact with a soft surface, less abrasive than the ceramic itself. Four of these objects, namely EOA 409/2, 409/3, 409/4, 409/5, have fingermarks and other indeterminate impressions on them. Analysis of the fingermarks in a forensic laboratory, intended to ascertain the sex of the people responsible for such impressions, and, by implication, the sex of the potters, were abandoned as impractical (Scott 1951a:12). Another ceramic object, probably not derived from a conventional container, but with a more coherent shape, is EOA 398/154. The purpose of this object, curved, but with two parallel, and original, edges, remains an enigma.

Table 6.6.: contextual and quantitative information for indeterminate ceramic objects

NMS catalogue number	context	maximum dimensions	weight
EOA 409/1	X1	62	68
EOA 409/2	-	55	30
EOA 409/3	Z	52	27
EOA 409/4	R	39	13
EOA 409/5	ZF	60	33
EOA 398/154	Z	29	6

Despite their amorphous shapes, it is conceivable that at least some of these various articles, as *ceramic* objects, enjoyed some unspecified ritual significance. Indeed, some of the more elongated examples (see Scott 1951a: plate IV, following page 36) are perhaps more abstract versions of the ceramic phalli known from Eilean Domhnuill (see Armit 1996:59, 61, fig. 4.8:60).

6.5. Conclusion

The substantial assemblage from Eilean an Tighe contains innumerable vessels, many of which are highly stylised, finely burnished and profusely decorated. The aggrandisement of morphology and ostentation of design encapsulated by these vessels demands interpretation. The ostensible function of this pottery, as utilitarian containers within a domestic assemblage, is an unconvincing explanation. The pottery is preferably interpreted as a vehicle for display, to facilitate the preparation and consumption of food, perhaps within the context of feasting, and readily amenable to irreversible destruction by deliberate deposition within specific contextual locales.

The above case study offers an alternative interpretation of an assemblage otherwise dismissed as domestic rubbish. The nature of the pottery, and the characteristics of the assemblage, challenge the traditional assumption that such material is the cumulative product of accidental breakage and casual discard, accrued during a prolonged residency in the same locale by successive generations of neolithic inhabitants. The prodigious amount of pottery is preferably interpreted as a consequence of deliberate deposition precipitated by ideological concerns. These ideas are explored more fully in section 9.4. in chapter nine.

[1] Scott suggested that the settlement affiliated to the Eilean an Tighe pottery was nearby, possibly submerged in Loch nan Geireann (1951a:3).

[2] Scott evidently favours a post medieval date for the deposits in the later buildings, Huts 1 and 2, some time prior to the construction of the Geireann Mill, at the entrance to Loch nan Geireann, in the late 18th Century (Scott 1951a:1, 3).

[3] These percentages, based on the heaviest 365 rim sherds in the assemblage, overestimate their total weight, as a percentage of the total weight of the assemblage, because some of the weight values derive from reconstructions, and therefore inadvertently incorporate the weight of some 72 additional sherds, none of which are rim fragments, which are part of these reconstructions. The frequency mentioned in the text is therefore, if anything, an overestimate of the proportion of the assemblage on which Scott based his original interpretations.

[4] Exhaustive, if ultimately unsuccessful, attempts to retrieve the excavation archive included extensive enquiries at the Royal Commission of Ancient and Historic Monuments Scotland (RCAHMS), at the National Museums of Scotland (NMAS), and at the library of the Society of Antiquaries of Scotland (SAS), all in Edinburgh.

[5] Contexts 0, 1, 2, and 3, further categorised by the addition of an alphabetical suffix, become, for example, 0B, 0E, 1A, 1BC, 2D, and 3B. Contexts W, X, Y and Z are further partitioned with the addition of either a numerical or alphabetical suffix, to become, for instance, W(3), WZ, X2, XH, XI XL, Y(22), YE, YF, YG, ZE and ZF. Context VI, to which a numerical suffix is often appended, becomes VI1 or VI2. Contexts entirely unfamiliar, and known only from an empirical examination of the pottery, include R and SH. If the addition of a numerical suffix represents a *spatial* sub-division of any given area, where area X1 represents a particular locale within area X for example, it is not unreasonable to suppose that an alphabetical suffix represents a *stratigraphic* sub-division. Presumably, the enhanced contextual control these sub-divisions represent enabled Scott to pursue the initial ceramic typology, subsequently unpublished, to which he alluded (1951a:25). Yet the significance of these spatial or stratigraphic sub-divisions remain obscure. Indeed, the allure of contextual accuracy, promising only to clarify things unknown, is devoid of interpretive clarity, and quite misleading. As a consequence, the pottery is analysed below only in accordance with the contextual divisions recognised in the original publication. The myriad contextual sub-divisions identified during study of the assemblage, ignored because of their arcane interpretive utility, are simplified to the explicitly recognised contexts tabulated in table 6.2. above. Contexts 1BC, WZ, and Y(22), for example, become 1, W and Y respectively.

[6] A hand written note found amongst the largest box of sherds (EOA 408) describes them as 'sherds worth keeping', suggesting that an indeterminate amount of material, considered redundant in interpretive terms, was discarded after the original post-excavation analysis was completed. It is possible that the pottery recovered from beyond the immediate confines of the alleged kiln structures, all considered to occupy residual contexts by Scott, was discarded as worthless (see Scott 1951a:5, 24). That the size of the assemblage today corroborates the figure mentioned by Scott suggests otherwise (1951a:5). The weight of the pottery is an underestimate because it was neither possible to weigh either sherds incorporated into reconstructed vessels, nor, in many cases, the reconstructions themselves.

[7] The weight values are an underestimate of the archaeological reality because it was not always possible to weigh the reconstructions. However, the error incurred by such circumstance is negligible.

[8] Admittedly, areas Z and 0 are juxtaposed, and both extend into the aforementioned enclave (Oven II).

9 The analysis of vessel dispersal across contexts focuses only on sherds from definite contexts, and excludes sherds from unknown, uncertain and indeterminate contexts.

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Chapter seven
A continuity of style:
the pottery from Northton

7.1. Introduction

An analysis of the supposed domestic beaker assemblage at Northton, on the south coast of Harris, overlooking the Sound of Harris, is designed to clarify the relation between the initial neolithic ceramics, and the succeeding beaker pottery, found at this site (see Figure 7.1). An inquiry focusing solely on the variability within a single assemblage is a more profitable approach to interpretation, than any of the numerous attempts at typological enquiry discussed previously in chapter 2.

7.2. The settlement site at Northton

Two seasons of excavation subsequently, during the 1960s (see Simpson 1965:22), exposed considerable settlement remains (see Figure 7.2), and recovered a substantial assemblage of neolithic and beaker pottery (see Figures 2.55-2.59). There is occasional mention of midden deposits, both before and after these excavations, containing a rich repertoire of artefactual material at Northton (NMS 1993:109; Small 1964:32). Unfortunately, the excavations remain unpublished, although two interim reports are available (Simpson 1966; 1976). Despite, or perhaps because of, the absence of a definitive publication, the site has acquired an enviable, though unjustifiable, notoriety as an exemplary beaker settlement (eg. Bamford 1982:48; Boast 1990:69; Case 1977:82; 1993:256; Harrison 1980:99-102; McInnes 1971:128; Megaw and Simpson 1979:194). Northton is, then, given the esteem it attracts, a suitable example of a beaker settlement site on which to focus attention.

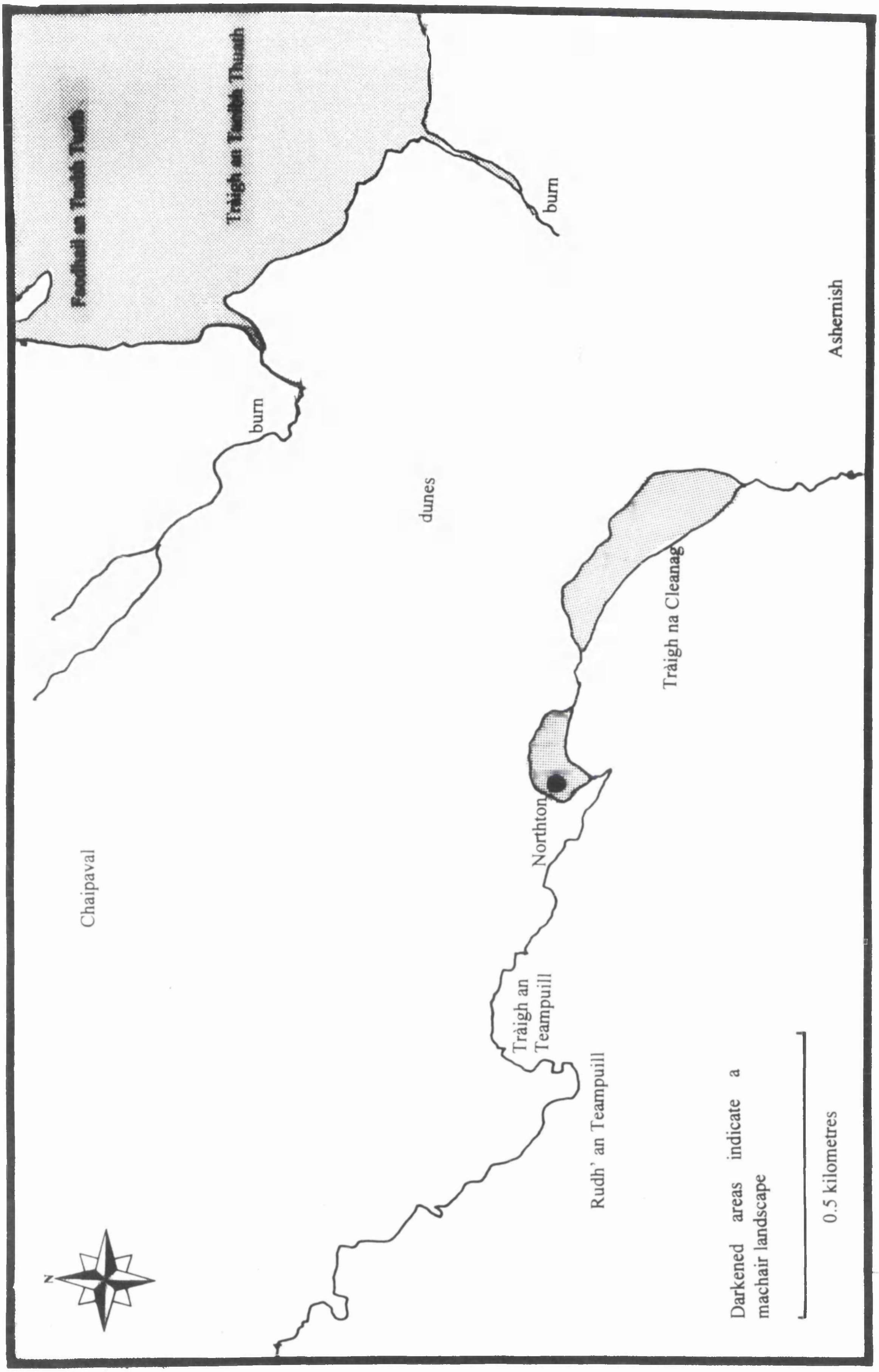


Figure 7.1.: Location map of Northton within the local landscape

7.2.1. The excavations at Northton

A succinct description of the structural and artefactual remains that comprise the site are given below, to situate the subsequent consideration of the pottery in a familiar archaeological context.

7.2.1.1. The structural evidence

The various structural features at Northton are built into substantial midden deposits (Simpson 1966:137; 1976:222). A substantial artefactual assemblage was recovered, both from within these structures and from elsewhere in the midden deposits (see Simpson 1976). A general review of the structural and artefactual evidence is appropriate because each contributes towards the interpretation of Northton as a settlement site with a domestic material culture and architecture.

In the neolithic phases, structural evidence was absent in the lower (neolithic I), and inconclusive in the upper (neolithic II), levels (Simpson 1976:221). The neolithic I contexts, devoid of structural evidence, contained only artefacts. Neolithic II contexts encompassed a determinate stretch of dry-stone wall, a random scatter of stones and boulders, in which no spatial pattern was discernible, and a crouched inhumation enclosed in an artificial arrangement of boulders (Simpson 1966:137; 1976:221). The structural evidence attributed to the beaker levels was more substantial. Two sizeable dry-stone structures, only one of which achieves any prominence in the available literature, occurred in the lower beaker level (beaker I). Structure I, seldom mentioned by Simpson (1966; 1976), comprised two discrete, but dilapidated, dry-stone formations of ambiguous design (cf. Simpson 1976, Figure 12.1:223). The more intact construction, structure II, was oval in plan, orientated north east to south west, with dimensions of 8.5 m by 4.3 m (Simpson 1966:138; 1976:222). This

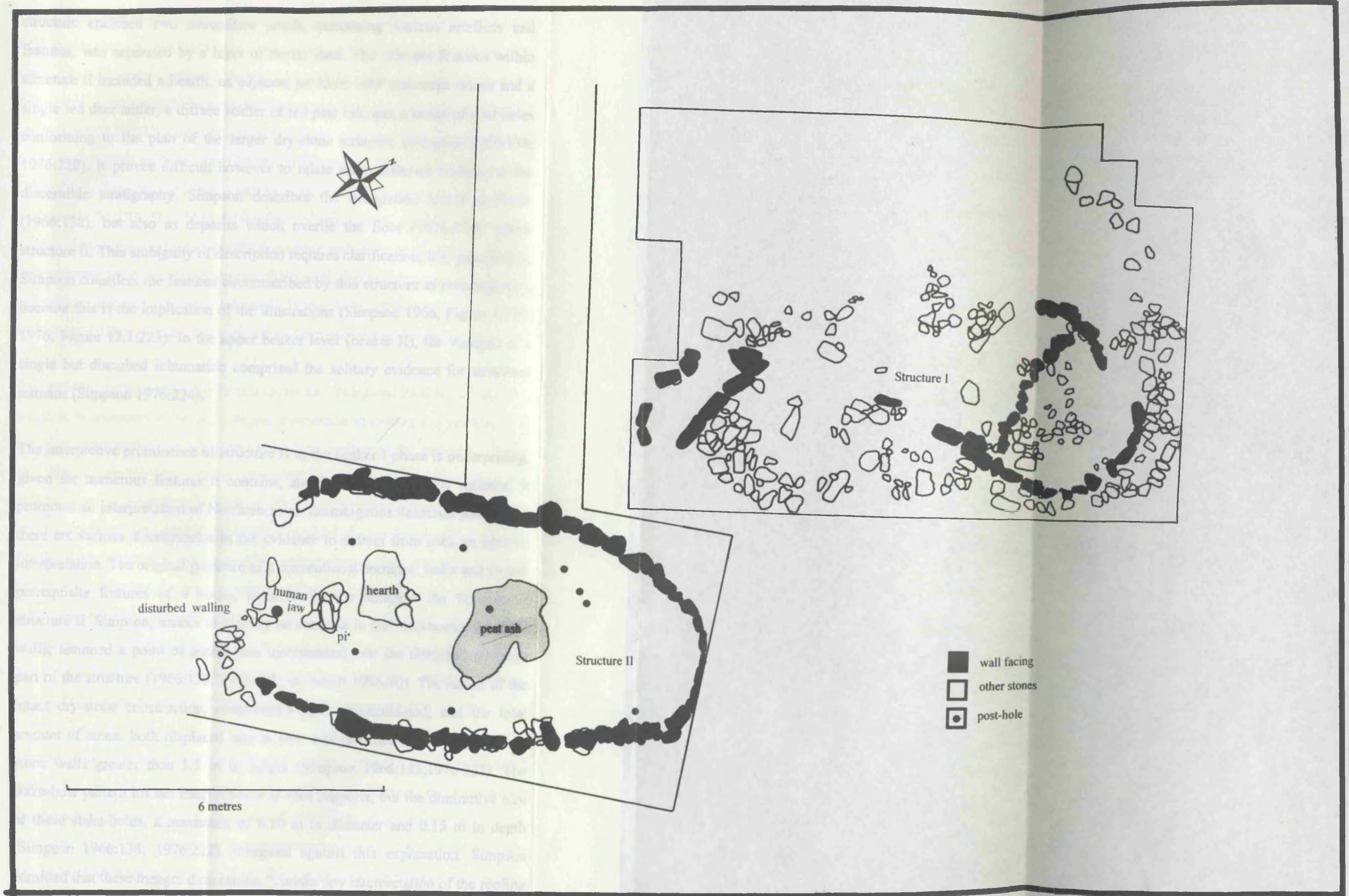


Figure 7.2: The structural remains at Northton, Harris
(after Simpson 1966, Figure 1:138; 1976, Figure 12.1:223)

structure enclosed two occupation levels, containing various artefacts and features, was separated by a layer of sterile sand. The relevant features within structure II included a hearth, an adjacent pit filled with numerous stones and a single red deer antler, a diffuse scatter of red peat ash, and a series of post holes conforming to the plan of the larger dry-stone structure (Simpson 1966:138; 1976:222). It proves difficult however to relate these different features to the discernible stratigraphy. Simpson describes the occupation levels as floors (1966:138), but also as deposits which overlie the floor (1976:222), within structure II. This ambiguity of description requires clarification, but, presumably, Simpson considers the features circumscribed by this structure as contemporary, because this is the implication of the illustrations (Simpson 1966, Figure 1:138; 1976, Figure 12.1:223). In the upper beaker level (beaker II), the vestiges of a single but disturbed inhumation comprised the solitary evidence for structural remains (Simpson 1976:224).

The interpretive prominence of structure II in the beaker I phase is unsurprising, given the numerous features it contains, and its overall structural salience. It promotes an interpretation of Northton as an unambiguous domestic locale. Yet there are various discrepancies in the evidence to detract from such an assured interpretation. The original presence of a conventional entrance, walls and a roof, prerequisite features of a house, remains obscure amongst the vestiges of structure II. Simpson, unable to identify an entrance in the continuous dry-stone walls, assumed a point of access was incorporated into the disturbed southern part of the structure (1966:138; 1976:222; cf. Armit 1996:90). The nature of the intact dry-stone construction, rudimentary and unconsolidated, and the total amount of stone, both displaced and in situ, was insufficient to construct dry-stone walls greater than 1.5 m in height (Simpson 1966:138;1976:222). The stake-hole pattern invites interpretation as roof supports, but the diminutive size of these stake-holes, a maximum of 0.10 m in diameter and 0.15 m in depth (Simpson 1966:138; 1976:222), mitigated against this explanation. Simpson admitted that these meagre dimensions: "...make any interpretation of the roofing structure difficult" (1966:138), and conceded that this made: "...it unlikely that they could have supported any substantial form of roofing structure to have bridged the area defined by the dry stone walling..." (1976:222). Instead the dry-stone wall formed a robust perimeter to define domestic space. Simpson considered structure II as: "...a semi-subterranean structure, the wall serving as a revetment to a hollow scooped in the sand" (1966:138), and regarded the interior as: "...a pit dug to provide a semi-subterranean shelter for a light hut or tent..." (1976:224). Bamford, offering a variation on this theme, favoured: "...a light timber hut..." (1982:52) within the confines of structure II. Armit, anticipating a construction technique known locally from later periods, speculated that the roof simply rested upon the upper courses of the wall, further supported by the sand and midden deposits into which structure II was built (1996:90). Certainly, this latter interpretation is more persuasive than the preceding explanations.

The archaeological evidence fails to support the traditional imagery of an ideal house. It is necessary to resort to negative evidence to sustain the viability of a domestic interpretation, in which the stake-hole represents the vestigial remains of a fragile shelter that fulfils archaeological expectations of a domestic architecture. The use of such terms as pit, hut, tent, and hollow, allude to the rather distasteful simplicity, if not squalor, in which the inhabitants chose to live. Yet the stratigraphic relation between the stake-holes and the dry-stone walls of structure II, in which the former feature underlies the lower floor level of the latter structure (Simpson 1966:138; 1976:222), suggests a successive rather than simultaneous use of these different constructions. If this is indeed the case, the dry-stone wall of structure II emulates the spatial pattern of the earlier stake-hole feature, and contemporaneity of these features is no longer tenable.

Similarly, the presence of extensive artefact scatters across the interior floor of structure II, are difficult to reconcile with notions of domestic hygiene. These deposits are explained as a consequence of abandonment (Simpson 1966:138), a rapid departure which left such residual material culture in contextual disarray. An alternative explanation involves the intentional deposition of specific categories of artefactual material within a discrete space, delimited and controlled by a definite architecture. Certainly, the presence of disarticulated human skeletal remains within the interior of structure II, and of various interments in the different midden levels that elsewhere comprise the site (Simpson 1966 Figure 1:138; 1976:224), suggest a deviation from essential domestic practices.

7.2.1.2. The non-ceramic artefactual evidence

A sizeable artefactual assemblage, in addition to the neolithic and beaker pottery, was recovered at Northton. The ceramic component of the artefactual assemblage is considered in more detail in section 7.3. below. The non-ceramic material culture included innumerable lithics, a solitary bronze fragment, various bone implements and a substantial amount of faunal remains (Simpson 1966:137; 1976:221, 222, 224-26). To situate the ubiquitous ceramic evidence, present in each of the different layers mentioned here, within a suitable context of interpretation, a succinct review of these non-ceramic artefacts is appropriate.

No mention is made of lithic evidence in neolithic I and neolithic II contexts with the exception of: "...a general scatter of stones and boulders... ...which must have been brought to the site" (Simpson 1976:221) in the latter level. The lithic material in beaker I and beaker II contexts, which includes diminutive scrapers, abraded pumice lumps and fragments of quartz, is of local derivation, and constitutes an impoverished industry (Simpson 1976:224) recalling the earlier lithics from the neolithic layers (Armit 1996:90). However, bone combs and a perforated antler sleeve are reported from neolithic II contexts (Simpson 1966:137). The bone artefacts in the neolithic levels are largely uninformative, with: "...only small fragments of bone..." (Simpson 1976:221) in neolithic I, and a prevalence of undiagnostic points and rubbers in neolithic II (Simpson 1976:222). An exception is a crown antler macehead, similar to items from the later neolithic in Orkney, in the neolithic II phase (Simpson 1976:222). The bone and antler artefacts from unspecified beaker levels include a prevalence of points, a series of split mammal long bones, abraded slivers of antler, and four bone combs each with serrated edge (Simpson 1976:224, Figure 12.5:229, Figure

12.6:230). A small bone disc is elsewhere attributed to beaker I, and a bone pin to beaker II (Burleigh 1973:63; Simpson 1976, Figure 12.7:231). The diversity and quantity of faunal remains at Northton is attributed to favourable conditions of preservation and a benign taphonomy by Simpson (1976:221). The paucity of indeterminate bone fragments, in lower neolithic contexts, contrasts with the abundant remains of shellfish, crab, lobster, seal, cetacean, seabird, sheep, cattle and deer, in upper neolithic and beaker levels (Simpson 1966:137; 1976:222). A fragment of arsenical bronze, perhaps the earliest known occurrence of metal in the Western Isles (Armit 1996:86), was recovered from an unspecified context in the beaker levels (Simpson 1976:224).

7.3. The pottery assemblage from Northton

7.3.1. Previous research on the ceramic assemblage from Northton

Any previous post-excavation analysis of the Northton pottery is difficult to assess due to the non-publication of the excavations. The various assessments made of the pottery are partial or descriptive, and seldom extend to interpretation. Simpson provided only the cursory descriptions and selective illustrations appropriate to the format of an interim report (1966:137, 138; 1976:221, 222, 224, Figures 12.2-4:225, 227-28). Langley, in his detailed evaluation of the ceramics from the beaker I layer, concentrated on a quantification of decoration (1978). The succinct description provided by Gibson, heavily dependent upon the earlier analysis of Langley (1978), is restricted to material from beaker I contexts (Gibson 1982:214-17).[1] This meagre compendium of extant research completes the record of primary information available on the Northton pottery.

An unspecified amount of post excavation work has evidently been carried out on the assemblage. A general sorting of sherds into sherd families, to identify original types and frequencies of vessels represented in the assemblage, has, judging from the storage order of the pottery, already been completed. The pottery has been classified in accordance with the traditional ceramic styles of, for example, unstan ware and hebridean ware.

Only a small proportion of the assemblage was refitted during the original post excavation work. In terms of quantity, less than five percent, and in terms of weight, less than ten percent, of the available pottery was recognised as conjoinable or to have originated from the same vessel, due to the fragmentary nature of the assemblage. Any attempt to calculate the number of vessels represented, in an assemblage where the more fragmentary sherds comprise the bulk of the pottery, is doomed to failure. Such a survey of vessels represented would effectively calculate inaccurate estimates of either the minimum (MinNV) or the maximum (MaxNV) number of vessels represented. The MinNV is 40 vessels and the MaxNV is 6403 vessels. Neither of these figures, each representing extreme values, is particularly informative. No concerted effort was made to estimate the number of vessels represented in the assemblage as a consequence.[2]

The fragmentary condition of the Northton assemblage means that an assessment of pottery decoration, based on complete vessels, firstly, underestimates the number of vessels represented, and, secondly, excludes the majority of pottery that survives as unattributable orphan sherds. An alternative approach, involving an evaluation of all sherds, rather than select sherds from identifiable vessels, is pursued below. Any investigation that uses sherd counts to make statements about the original characteristics of an assemblage makes a number of assumptions that require careful consideration. Of these caveats, all dealt with at length in chapter three, the most important is the assumption of equal brokenness and uniform completeness throughout the entire assemblage, when sherd counts are employed as a comparative measure. Effectively, it is necessary to assume the irrelevance of both brokenness and completeness in this study. This strategy, dictated by methodological necessity, is unavoidable, given the fragmentary condition of the pottery.

The research strategy employed, supplementary to, and compatible with, earlier investigations into the pottery from Northton, did not duplicate previous research, but rather further characterised the assemblage, with especial reference to decoration. A comprehensive decorative analysis, unavoidably based on sherds, was undertaken, with the intention of comparing the results of this study with the conclusions of the conventional pottery report, the outcome of earlier post excavation assessments, based on complete or reconstructed vessels.[3]

7.3.2. The dual nature of the assemblage

A fundamental characteristic of the pottery sequence at Northton is the apparent replacement of the indigenous neolithic wares with intrusive beaker wares (Simpson 1976; Gibson 1982:214-17). This seems to provide incontrovertible evidence for the succession from a familiar neolithic to a foreign beaker cultural context (eg. Gibson 1982:50). The clarity and completeness of this succession is sufficient inducement to interpret the transformation as the surprise usurpation, and merciless obliteration, of the placid neolithic occupants by the aggressive beaker intruders. The original neolithic presence is extirpated, and replaced, in its entirety, by an unrelated beaker occupation. Northton, incorporating a fundamental cultural schism, and forming a notable exception to the general lacuna of pure and unadulterated beaker settlement sites in Britain (Gibson 1982:74; 1984:91), is therefore the *paragon* of beaker settlement, and the acme of beaker ceramic development:

> "Sites such as Northton... ...must then represent the extreme floruit of Beaker existence in Britain, when it was enjoying its full role as a domestic pot as well as still having a ritual / prestige / sepulchral value" (Gibson 1982:76).

Northton, *the* superlative beaker settlement, unique in Britain and without parallel on the continent, is in effect exceptional (Gibson 1982:60). Gibson claimed to discern a modified version of the entire functional repertoire of Clarke (1976) amongst the Northton ceramics (1982:74; 1984:92). It is difficult, given the fragmentary nature of the assemblage, to assess the veracity of this claim (cf.

Gibson 1982:74; 1984:92). Yet the supposedly vestal condition of the assemblage provides an opportunity to peruse a catalogue of arcane ceramic styles, which in less certain contexts would exude an ambiguous categorical affinity, with the assurance that such material is indeed of beaker derivation. The manner in which the beaker occupation at Northton overwhelmed the existing neolithic residency at the site ensures that there are no residual traces of a repugnant neolithic influence on these pristine ceramics. Northton becomes exempt from the usual analytical caveats that plague the interpretation of domestic assemblages, because its status as a virgin beaker site, with exclusively beaker pottery, is guaranteed.

The emphasis on Northton as a pure beaker settlement, with impeccable cultural pedigree, ensures the continued obfuscation of the ceramics in the neolithic I and II layers. The marginal significance of the neolithic, but fundamental importance of the beaker, pottery encourages the comparison of the former on a regional, and the latter on a national, basis respectively. It is acceptable to relate the neolithic wares to local styles (eg. McInnes 1971:115; Simpson 1966:137; 1976:222), but customary to situate the beakers in a national categorical context (eg. Gibson 1982:214-17; 1984: *passim*; Langley 1978:35; Simpson 1976:224). By contrast, decorative analyses focusing on the beaker designs (see Langley 1978), betray a desire to extrapolate the beakers from a local depositional context, and insert them into one of the current typologies which define categorical identity on the basis of decoration. The intrinsic typological qualities of these ceramics acquire a national pertinence in classification schemes which claim such an extensive geographical relevance. The categorical chastity of the beaker pottery from Northton conveniently translates into a typological conformity with the stylistic ideals of any of the established beaker classification schemes. The beakers from Northton, as necked vessels (Simpson 1966:138), are, in a conventional categorical vocabulary, evidently compatible with Clarke's (1970) northern series (Burleigh *et al.* 1973:61; Simpson 1976:224) or Lanting and van der Waal's (1972) steps 4 and 5 (Langley 1978:35; Simpson 1976:224; Gibson 1982:215).

7.3.3. The ambiguity of context

Little information is known about the way in which the stratigraphy, or the contexts from which the pottery was recovered, relate to the features and structures in evidence at Northton.[4] No specific contexts are explicated or particular sections illustrated in the relevant publications. A photograph of the principal occupation levels at Northton conveys the depth, if not the details, of stratigraphy (Evans 1971, plate 4: following page 104). Evans, claiming that the stratigraphy at Northton is uniform and immune to lateral variation provides a description of these layers, apparently representative of the entire stratigraphic sequence (see Evans 1971:52-3). Such confidence in the predictability of context is not shared by Simpson, who introduces the stratigraphy at Northton as complex (1976:221).[5]

Published discussions of stratigraphy do not extend to a denouement of context. The majority of sherds in the assemblage are labelled with a context number. The context numbers used to label the ceramic assemblage effectively decide the number of contexts recognised at Northton. Any contexts in which ceramics were not deposited remain unrecognised in this analysis. The interpretive potential of this information is seriously curtailed by an inability to relate context to the structures and features on the site. To mention that beakers are derived from the supposed floors of structure II, but also the external midden into which this building is constructed (Simpson 1966:138; Langley 1978:1), does little to alleviate these difficulties, because such statements fail to relate particular ceramics to specific contexts. It is impossible to ascertain the original significance of these various contexts, and the material culture they contain, in the absence of a complete knowledge of context or stratigraphy at the site. This detrimental circumstance precludes an incisive interpretation of depositional practices, in which ceramics are implicated, or the significance of social context at Northton. That the amount of pottery deposited on the site differs markedly between depositional contexts attests to the probable significance of the original social context, as a formative influence on depositional practices during occupancy of the site.

Table 7.1.: sherd frequency by context

context	number of sherds	weight of sherds
1	44	267
102	20	97
106	1	6
108	7	55
110	727	5261
112	2	4
113	234	1254
116	12	18
122	1	30
132	29	421
133	30	350
135	45	168
138	2118	17927
140	2	10
144	18	61
145	6	46
146	7	31
160	4	49
164	49	238
165	34	116
170	55	244
185	1	6
2	3	25
25	110	833

context	number of sherds	weight of sherds
26	1	11
28	93	541
3	360	2481
33	1	4
5	6	38
51	1	1
53	85	455
55	3	13
60	14	86
62	17	79
63	1	2
70	1	3
85	1	3
86	367	1540
88	2	12
93	81	284
94	5	33
97	42	393
99	1	2
m	25	196
mc	11	107

A total of 45 definite contexts are discernible. Although the precise significance of these various contexts remains obscure, it is possible to demonstrate the differential relevance of context in a quantitative consideration of the amount of sherds deposited in each. A considerable disparity between contexts, in terms of the total quantity and combined weight of ceramic material they contain, exemplifies the significance of context. Table 7.1. shows the amount of pottery, expressed in terms of sherd quantity and sherd weight, recovered from each definite context. The profusion of material from a single context, namely 138, is unsurprising given that the majority of pottery on the site was recovered from midden contexts.

Sherd weight divided by sherd quantity provides a rudimentary measure of relative sherd size between contexts. This value, the hypothetical sherd ratio, is itemised, for all sherds from definite contexts in Table 7.2. below.

Table 7.2.: hypothetical sherd weight/quantity ratio for all sherds from definite contexts

context	hypothetical sherd ratio
1	5.83
102	4.88
106	6.00
108	7.86
110	12.16
112	2.00
113	5.65
116	1.40
122	30.00
132	14.00
133	12.24
135	4.57
138	17.16
140	5.00
144	4.15
145	10.20
146	4.34
160	10.17
164	4.21
165	3.42
170	4.61

context	hypothetical sherd ratio
185	6.00
2	8.34
25	9.78
26	11.00
28	6.64
3	8.06
33	4.00
5	6.60
51	1.00
53	6.87
55	4.34
60	6.46
62	5.04
63	2.00
70	3.00
85	3.00
86	4.61
88	6.00
93	6.81
94	7.125
97	9.77

context	hypothetical sherd ratio
99	2.00
m	8.08

context	hypothetical sherd ratio
mc	7.07

The variability exhibited by the hypothetical sherd ratio indicates a notable variation in average sherd size across contexts. Differences in the original activities, including discard habits or depositional practices, and post depositional processes, that occurred in these contexts are the most plausible explanations of the resultant variation in sherd size between contexts. Although these results suggest that context is worthy of further study, an inability to make meaningful statements about its past archaeological relevance preclude this. A more profitable exercise involves a focus on the available phasing published for the site. The pottery assemblage is catalogued and stored in accordance with these different phases. It is possible to attribute the pottery in the Northton assemblage to either the neolithic or beaker levels and, in the case of the latter, to further assign material to either the beaker I or beaker II layer. Simpson mentions that only undecorated pottery occurs in the neolithic I phase (1976:221). There is no guarantee that contexts which contain only undecorated wares belong to the neolithic I phase, because undecorated pottery continues into the subsequent neolithic II phase. An investigation of the relation between the neolithic and beaker ceramics, to assess the veracity of the traditional dichotomy that exaggerates the difference between them, is therefore feasible.

7.3.4. Site phasing at Northton

The alleged transition from neolithic to beaker cultural episodes accentuates the interpretive significance of Northton. The sequence of occupation comprises two phases of neolithic habitation, neolithic I followed by neolithic II, superseded by two phases of beaker residence, beaker I followed by beaker II. The stratigraphy, which provides unequivocal verification of this phasing sequence, comprises two neolithic and two beaker levels, with each, except the lower neolithic horizon, separated from the subsequent level by a layer of sterile sand (Burleigh *et al.* 1973:61; Simpson 1976:221). The upper neolithic layer is described as: "...a horizontal band of black, greasy occupation material..." (Simpson 1966:137), and elsewhere as compact and charcoal filled (Simpson 1976:222). The beaker layers are mentioned as laminated and stained red with peat ash (Simpson 1976:222). This stratigraphy, conceptualised as a simple succession from the two later neolithic to the two beaker levels, becomes a rudimentary sequential expression of prevalent cultural influence. The use of the terms neolithic and beaker to characterise the stratigraphy approves, and indeed exacerbates, the difference alleged between the material in these successive levels. This categorical and cultural differentiation of stratigraphy, which discourages attempts to investigate a possible continuity between neolithic and beaker ceramic styles, achieves a unanimous acceptance and affirmation in the relevant literature, where these different ceramics are discussed as separate categorical entities and cultural concerns (eg. Burleigh *et al.* 1973:61; Simpson 1966:139; 1971:146; 1976:222, 224).

Unfortunately, the recurrence of identical contexts in separate phases presents any analysis of the ceramic sequence with an immediate difficulty. Different sherds from the *same* context are regularly assigned to *different* phases. Pottery from two particular contexts is assigned to all three phases (neolithic, beaker I and beaker II), and pottery from a further fifteen contexts is assigned to both of the beaker phases (beaker I and beaker II). Presumably, the allocation of sherds from the same context to different phases indicates a tacit reliance on the intrinsic style, and not simply the depositional context, of the pottery, to create the ceramic sequence that encapsulates the phasing of the site. That the ceramics most readily identifiable as beakers derive from the beaker levels is undisputed. Yet the elucidation of separate neolithic and beaker levels is not merely a reflection of an indubitable stratigraphic reality, but also a product of a contingent interpretation. Effectively, the categorical affinities, as well as the contextual locations, of the pottery, determine the phasing of the site. Material culture provides the depositional contexts with a cultural integrity to complement the alleged physical clarity that allows the initial identification of a discernible stratigraphy. The assignation of pottery, from seemingly identical contexts, to different levels, amply demonstrates this important point.

Much of the pottery derived from the same context, but assigned to different phases, is presumably interpreted as residual by the excavator. Certainly, a scarcity of sherds identified as neolithic in the two contexts which contain pottery allocated to each of the three phases would support this interpretation. Table 7.3. provides a quantitative summary of pottery from these particular contexts.

Table 7.3.: a quantitative summary of sherds from contexts containing pottery from all phases

phase	context	number of sherds	weight of sherds
neolithic	113	2	46
neolithic	86	23	44
beaker 1	113	226	1185
beaker 1	86	37	226
beaker 2	113	6	23
beaker 2	86	307	1270

The presence of neolithic material in what are otherwise presumably interpreted as beaker contexts, confuses the clarity of the distinction between an original neolithic and successive beaker occupation. The interpretation of this pottery as residual is not simply preferable, but necessary, to sustain the integrity of a dichotomy between neolithic and beaker phases. Similarly, for the seventeen contexts that contain pottery assigned to either the beaker I or beaker II phase, the majority of sherds in each context are assigned to either one phase or the other, but seldom, with the exception of context 1, to both in equal proportions. Table 7.4. provides a quantitative summary of pottery from these particular contexts.

Table 7.4.: a quantitative summary of sherds from contexts containing pottery from both beaker phases

context	phase	number of sherds	weight of sherds
1	beaker 1	21	92
1	beaker 2	23	175
102	beaker 1	2	10
102	beaker 2	18	87
110	beaker 1	713	4963
110	beaker 2	14	298
113	beaker 1	226	1185
113	beaker 2	6	23
133	beaker 1	29	336
133	beaker 2	1	14
135	beaker 1	44	166
135	beaker 2	1	2
170	beaker 1	7	60
170	beaker 2	48	184
2	beaker 1	1	9
2	beaker 2	2	16
25	beaker 1	108	815
25	beaker 2	2	18

context	phase	number of sherds	weight of sherds
28	beaker 1	1	8
28	beaker 2	92	533
3	beaker 1	345	2372
3	beaker 2	15	109
60	beaker 1	2	21
60	beaker 2	12	65
62	beaker 1	1	3
62	beaker 2	16	76
86	beaker 1	37	226
86	beaker 2	307	1270
93	beaker 1	4	47
93	beaker 2	77	237
94	beaker 1	1	6
94	beaker 2	4	27
97	beaker 1	6	135
97	beaker 2	36	258

Again, an assumption of residuality seems the most plausible explanation to account for this irregularity. An analysis of the decoration on the pottery from Northton necessarily accepts the ceramic sequence implicit in the assignation of pottery to one of the three aforementioned phases.

7.3.5. The pottery assemblage from Northton

A cursory description of the pottery from Northton precedes a detailed analysis of the decoration on both the neolithic and beaker wares. The preliminary statements on the Northton pottery do little more than situate the material within the categorical confines of conventional archaeological classification (c.f. Armit

1996:57). The neolithic I layer contains: "...a number of plain undecorated sherds..." (Simpson 1976:221). The neolithic II layer includes a series of undecorated wares, hebridean wares and unstan wares (Simpson 1966:137; 1976:224). There are general similarities between the ceramics from the two neolithic levels (Burleigh *et al.* 1973:61). Indeed, the assemblage from Northton contains a considerable quantity of unstan bowls and hebridean jars, at least in sherd form. Interestingly, there are almost no flanged bowls, and few necked or shouldered vessels, at Northton, in marked contrast to the assemblages from Eilean an Tighe and Eilean Domhnuill a Spionnaidh. The rim forms in evidence at Northton, including rim forms 1, 2, 3, 6, 9, 10, 12, and 13, are similar to those known from Eilean an Tighe, Clettraval and Unival.

The ceramics from the beaker levels are conceptualised in accordance with a predictable dichotomy between fine wares, similar in both fabric and decoration to beakers from mortuary contexts (Simpson 1976:224; Harrison 1980:99), and coarse wares, understood as domestic beakers due to the contextual proximity of the ostentatious fine wares. There is little differentiation in the pottery between the two beaker levels (Gibson 1982:214), although an increasing diversity of motifs are employed in the upper beaker level (Langley 1978:15). However there are various idiosyncrasies, for example a diverse range of fabric colours and vessel sizes (Simpson 1976:224; Harrison 1980:99), interpreted as local variation, in the fine wares. There is a general progression from squat vessel profiles in the lower beaker level, to more slender ones in the upper beaker levels (Langley 1978:32). However, the vessels in beaker II are also alleged to exhibit: "...a greater slackness of profile..." (Simpson 1976:224) than those in beaker I.

The differences between the pottery from Northton and assemblages elsewhere in the Western Isles is not simply restricted to stylistic differences. The differential sherd composition and physical condition of the assemblage allude to different depositional practices and post depositional processes at Northton. The proportion of rim sherds to body sherds, for example, is fewer at Northton than at Eilean an Tighe. Similarly, the assemblage from Northton is considerably less abraded than the pottery from Eilean an Tighe. The general stylistic similarities between assemblages containing unstan bowls and the various hebridean wares almost certainly disguise genuine differences between these same assemblages. Indeed, the significance of the location of the site, on a coastal rather than islet setting, makes the distinctive nature of the assemblage unsurprising.

The assemblage from Northton comprises 6603 sherds, weighing some 46 427 g in total. Simpson mentions a meagre ceramic presence in neolithic I (1976:221), considerable quantities in neolithic II (1976:222), and several thousand sherds in the beaker levels (1976:224). A quantitative resume of this material, broken down according to phase, is given in Table 7.5. and Figure 7.3 below.

Table 7.5: sherd totals for each phase at Northton

phase	number of sherds	weight of sherds
neolithic	2798	23900
beaker 1	2512	15325
beaker 2	1293	7202

Figure 7.3: sherd totals for each site phase at Northton

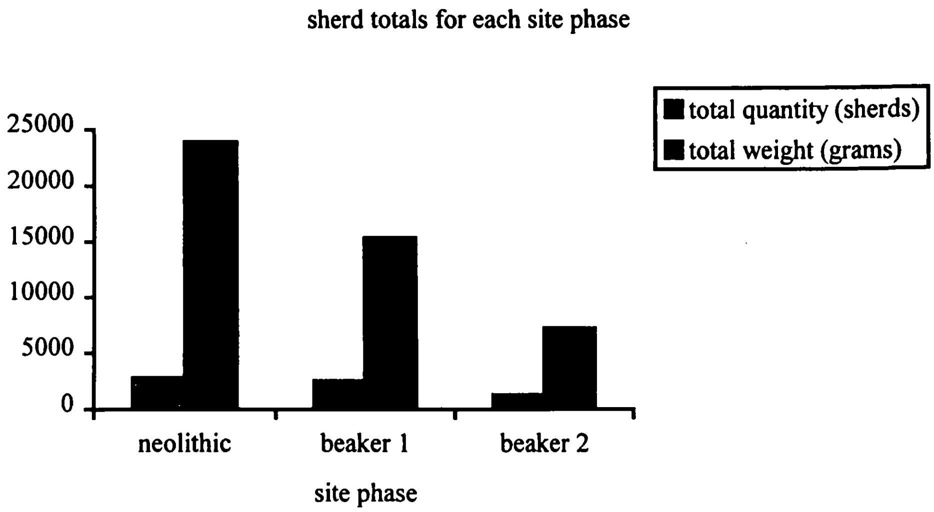


Table 7.6. and Figures 7.4, 7.5, and 7.6 below, provide summary information on the prevalence of different feature sherd types in the assemblage for each phase.

Table 7.6.: sherd profile of assemblage according to phase

phase	feature sherd	total quantity	total weight
neolithic	rim	226	3687
neolithic	body	2550	20123
neolithic	body/base	11	20
neolithic	base	1	-
neolithic	indeterminate	3	18
beaker 1	rim	191	1728
beaker 1		2161	11822
beaker 1	body/base	0	0
beaker 1	base	96	1448
beaker 1	indeterminate	57	288
beaker 2	rim	105	999
beaker 2	body	1133	5736
beaker 2	body/base	0	0
beaker 2	base	41	417
beaker 2	indeterminate	4	17

Figure 7.4: assemblage composition in the neolithic I and II phases

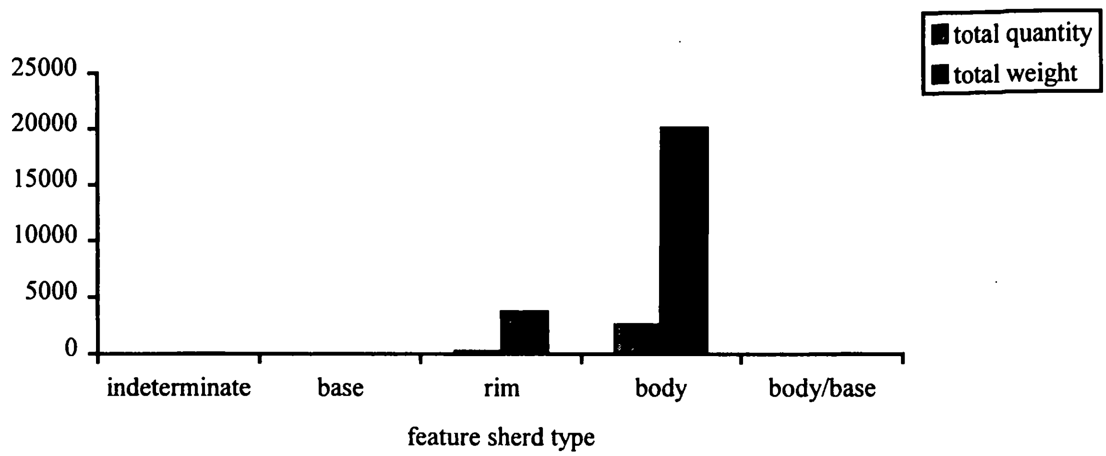


Figure 7.5: assemblage composition in the beaker I phase

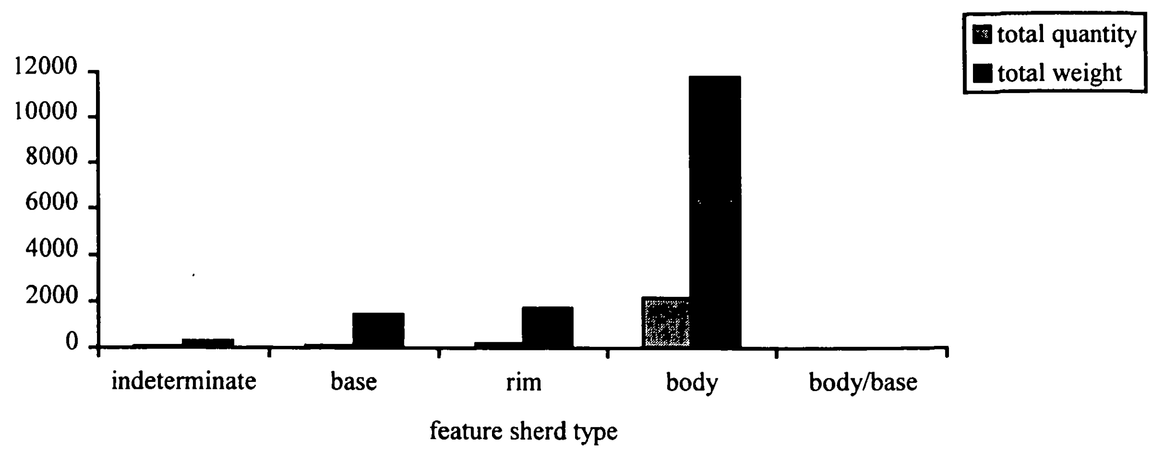


Figure 7.6: assemblage composition in the beaker II phase

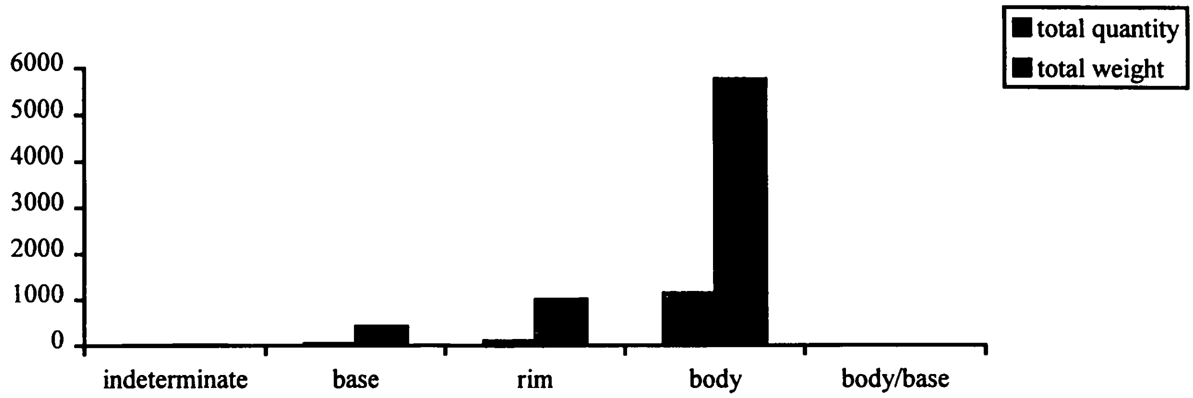


Table 7.7. documents the development of base forms through successive phases.

Table 7.7.: base profile of assemblage according to phase

phase	feature sherd	base form	number of sherds	weight of sherds
neolithic	body/base	round	11	20
neolithic	base	round	1	-
neolithic	base	flat	0	0
beaker 1	body/base	round	0	0
beaker 1	base	round	0	0
beaker 1	base	flat	96	1448
beaker 2	body/base	round	0	0
beaker 2	base	round	0	0
beaker 2	base	flat	41	417

Body sherds predominate throughout the assemblage. The proportion of rim sherds to body sherds, approximately one to ten in all phases, suggests the discard of entire vessels, rather than deposition of specific parts of vessels, at the site. Round bases are exclusive to the neolithic phases; flat bases are exclusive to the beaker phases.

7.4. Pottery decoration at Northton

The admission that considerable quantities of beaker material at Northton are atypical (Gibson 1982:217), and represent possible local imitations (Gibson 1984:89), suggests the assemblage cannot be eulogised as the perfect collection of beakers. It is sufficiently idiosyncratic to cast doubt on its putative beaker identity. The size, thickness and morphology of many vessels make the exclusive definition of the assemblage as a beaker one uncomfortable:

> "Even at sites such as Northton, with a high percentage of fine Beaker, there are still wares which cannot be described as Beaker, and which must represent underlying local traditions" (Gibson 1984:95; cf. 1982:216-17).

Instead of portraying this variability as an eccentric deviation from prototypical beaker styles, it is preferable to interpret such variation as inevitable, indeed typical, amongst domestic assemblages. At Northton, a critical appreciation of such ceramic variability is impeded by the artificial dichotomy that interrupts the neolithic and beaker phases, because this schism tacitly reinforces the conceptual purity of beaker pottery as an abstract, but nonetheless distinct, category of material culture. It is necessary to investigate any possible continuity, and so explore the relation, between the neolithic and beaker phases. If it is possible to identify a continuity in ceramic styles, from the pottery in the neolithic levels, to the pottery in the beaker levels, then the dichotomy between them is considerably weakened, and the untrammelled integrity of the beaker concept questionable. The following enquiry into the role of decoration in the ceramic sequence at Northton is designed to elucidate more fully the relationship between the neolithic and beaker pottery. The development of ceramics identifiable as beaker can be adequately explained without recourse to foreign invasion or exotic influence, but with reference to the preceding neolithic material.[6] Essentially, the neolithic pottery provides ample stylistic precedents with which to explain the stylistic developments that together exemplify beaker pottery.

The traditional preoccupation with decoration in beaker classification ensures that decoration becomes a research priority in the various assessments of the Northton assemblage (eg. Langley 1978:14-31; Gibson 1982:215-16; 1984: *passim*). These evaluations seldom extend beyond description of the decoration on the beaker pottery within the assemblage, and comparison with decoration on beaker material known from elsewhere. The following decorative analysis, pursuing an alternative path, traces developments in the types and frequencies of decoration employed at various stages of the ceramic sequence at Northton. The aim of this investigation is to identify and pursue any continuity in the decorative characteristics of this pottery. A history of decorative techniques, motifs and structures in evidence at Northton, written with respect to the published phasing of the site, is presented in the ensuing sub-sections of section 7.4..

7.4.1. Decorative techniques

The decorative techniques definitely found in the Northton assemblage are incision (A); grooving (B); circular (D1), kidney shaped (D2), crescentic (D3), minuscule dot (D4), and stabbed indentations (D5); contiguous elongated (E2) and consecutive (E3) stab and drag markings; fingertip (F) and fingernail impressions (G); and, finally, squared tooth comb (I), pointed tooth comb (K), cord (J), and shell impressions (H) (see also Gibson 1982:215; Langley 1978:14-29). Although both cockle (cardium edule) and limpet (patella vulgata) shells were used to decorate pottery from Northton (Gibson 1982:216; Langley 1978:22), no distinction is made between them in the following analysis.

No decorative techniques are exclusive to the neolithic phase; only cresentic indentations (D3) and pointed tooth comb impressions (K) are exclusive to the beaker I phase; only kidney shaped indentations (D2), and consecutive stab and drag markings (E3) are exclusive to the beaker II phase. The decorative techniques that occur in the neolithic phases are incision (A), grooving (B), continuous elongated stab and drag impressions (E2), shell impressions (H), and squared tooth comb impressions (I). Circular (D1), cresentic (D3), miniscule dot

(D4), and stabbed indentations (D5); finger tip (F) and fingernail impressions (G); and, finally, pointed tooth comb (K) and cord (J) impressions, are introduced in beaker I phase. Kidney shaped indentations (D2) and consecutive stab and drag markings (E3) are introduced in the beaker II phase. Only crescentic indentations (D3), continuous, elongated stab and drag (E2), and pointed tooth comb impressions (K), are discontinued once introduced. These differences in decorative techniques employed in successive phases are little more than minor variations in the use of particular tools to achieve the desired decorative effect.

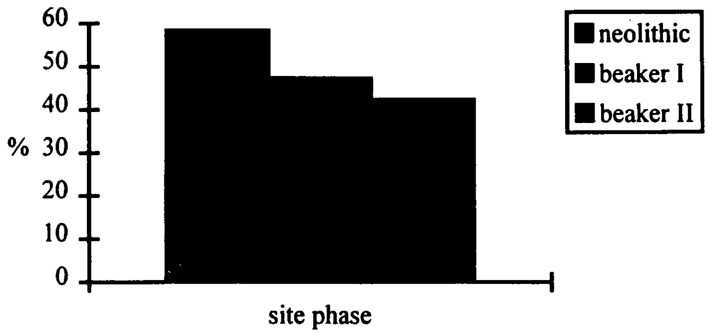
The decorative techniques that transcend the crucial boundary between the neolithic and beaker I phases, namely incision (A), grooving (B), contiguous elongated stab and drag (E2), shell edge impressions (H), and squared tooth comb impressions (I), are of especial interest. Unfortunately, occurrences of stab and drag, shell edge and squared tooth comb impressions are exceptional, for each occur only once, in the neolithic phase, and the solitary, supposedly neolithic, sherd with comb decoration, is from a context that also contains substantial amounts of pottery assigned mostly to either the beaker I or II phases. The use of shell edge and stab and drag, but not comb, impression, as decorative techniques, occur on neolithic pottery from elsewhere in the Western Isles. The occurrence of these decorative techniques on beaker pottery is, with the exception of comb impression, best interpreted as a continuation of certain decorative procedures employed in the manufacture of neolithic pottery.

Incision and grooving, by contrast, maintain a predominance throughout the neolithic phase and into the succeeding beaker phases.

Table 7.8.: proportion of sherds with incised or grooved decoration

phase	**number of sherds**	**number of sherds as % of all sherds in phase**
neolithic	1633	58.36
beaker 1	1190	47.37
beaker 2	548	42.38

Figure 7.7: proportion of incision or grooving,, expressed as a percentage of all sherds, in each site phase



The prevalence of incision (or grooving) as a decorative technique, and its arrangement into horizontal bands as a decorative structure, in the ceramics from the beaker levels is often remarked upon (Simpson 1976:224; Langley 1978:14-5; Gibson 1982:215). The preponderance of incision at Northton contrasts with the predominance of comb impressions on beakers elsewhere in Britain (Langley 1978:14). This alleged discrepancy from the decorative traits interpreted as typical on beakers causes unease amongst some commentators. Langley, for example, explains the prevalence of incision with reference to the social significance of decoration on ceramics made for domestic use in settlement contexts:

> "In a domestic context, the decoration of vessels put to mundane uses was probably less compelling, and it is arguable that decoration by incision was a less laborious process than comb impression, where large numbers of vessels were being produced" (1978:14).

Langley effectively interprets the size of the substantial assemblage at Northton to suggest the site as a centre of ceramic manufacture. An efficient production procedure mitigates against the use of comb impression, laborious though intricate, in favour of incision, simple but effective, as a practical decorative technique to produce designs adequate for mere utilitarian needs. Incision becomes an impoverished substitute for comb impression. Similarly, Gibson is unable to reconcile the idea of incision as preferable to comb impression on beaker pottery. He suggests the use of combs to inscribe decorative arrangements of parallel lines, and refers to some incision as: "...blurred comb..." (1982:215). A reappraisal of the prevalence of incision, on a local rather than national basis, facilitates a more plausible interpretation that emphasises continuity from earlier neolithic ceramics rather than deviance from abstract typological criteria (see Langley 1978:14). The use of incision as a decorative technique, and its organisation into horizontal bands as a decorative structure, both have a demonstrable ancestry in the local neolithic ceramics (Gibson 1982:74,214; 1984:93). The tool used for incision and grooving was evidently similar, if not identical, to that employed elsewhere in the Western Isles. This tool had a small notch cut into its rounded end, to judge from the profile of the resultant decorative mark.

It is similarly preferable to interpret, as a decorative technique, the use of cardium and cockle shells, not as a local attempt to imitate comb decoration (see Clarke 1970; Gibson 1984:85; Langley 1978:14-15, 22, 25), but as a continuation of extant traditions. The care taken in the application of both incision and shell impressed decoration perhaps indicates that these decorative techniques were not regarded as impoverished substitutes for comb impressions (see Langley 1978:14).

7.4.2. Decorative motifs

7.4.2.1. Decorative motifs in isolation

Some fifty different decorative motifs are recognisable in the Northton assemblage.[7] The number of motifs necessary to classify adequately the decoration across the neolithic and beaker transition, increases from some twenty five motifs in the former, to around thirty five in the latter. These figures, which suggest a comparatively moderate increase in the array of motifs employed to decorate pottery, disguise considerable changes in the motif repertoire across the neolithic to beaker transition, in which nine existing motifs are discontinued and nineteen new, or perhaps adapted, motifs are introduced. The separate identities of the neolithic and beaker I phases that lie on either side of this alleged transition, are, in terms of motif decoration, further emphasised by the occurrence of certain motifs unique to each. Eight motifs are exclusive to the neolithic phase, five to the beaker I phase, and three to the beaker II phase. The overall impression, in terms of decorative motifs used, is one of radical upheaval across the neolithic and beaker I transition. However, scrutiny of the actual frequencies of these various motifs, whether discontinued in the neolithic phases, introduced in the beaker phases, or exclusive to either, indicates that none occur frequently in the assemblage. Tables 7.9. and 7.10. below itemise the types and frequencies of motifs that are discontinued at the demise of the neolithic phase, and introduced at the inception of the beaker I phase, respectively.

Table 7.9.: motifs from neolithic phases discontinued in beaker I phase

decorative motif	number of sherds	number of sherds as % of all sherds in the neolithic phase
6a	24	0.86
6b	8	0.29
7	4	0.14
7a	6	0.21
8	19	0.68
9	25	0.89
12	1	0.04
16b	5	0.18
21	1	0.04

Table 7.10.: novel or adapted motifs introduced in the beaker I phase

decorative motif	number of sherds	number of sherds as % of all sherds in the beaker I phase
11a	2	0.08
16a	10	0.40
16c	7	0.28
16f	3	0.12
19b	1	0.04
22	42	1.67
25	10	0.40
26	1	0.04
27	19	0.76
28	4	0.16
29	2	0.08
30	23	0.92
31	1	0.03
33	7	0.28
34	7	0.28
35	1	0.04
36	5	0.20
37	3	0.12
38	19	0.76

Tables 7.11., 7.12., and 7.13. depict the decorative motifs unique to either the neolithic, beaker I or beaker II phases, respectively.

Table 7.11: decorative motifs exclusive to the neolithic phases

decorative motif	number of sherds	number of sherds as % of all sherds in the neolithic phase
6a	24	0.86
6b	8	0.29
7	4	0.14
7a	6	0.21
8	19	0.68
9	25	0.89
12	1	0.04
21	1	0.04

Table 7.12: decorative motifs exclusive to the beaker I phase

decorative motif	number of sherds	number of sherds as % of all sherds in the beaker I phase
11a	2	0.08
16c	7	0.28
26	1	0.04
35	1	0.04
38	19	0.76

Table 7.13.: decorative motifs exclusive to the beaker II phase

decorative motif	number of sherds	number of sherds as % of all sherds in the beaker II phase
17	1	0.08
19	1	0.08
39	1	0.08

Clearly, these various motifs are rarities in the repertoire of decorative motifs available to potters in these separate phases. The variability in decorative motif that characterises the transition from the neolithic phases to the beaker I phase is not sufficiently widespread throughout the assemblage to indicate the replacement of one suite of decorative motifs with another. The scarcity of the above motifs in their respective phases, suggests that many are simply experimental variations of more common designs. More informative are the numerous motifs that remain current across the aforementioned transition. Table 7.14. depicts motifs retained across the transition, and represented on more than two percent of sherds in the assemblage. This proportion, admittedly an entirely arbitrary choice, identifies those motifs more frequently used in both the neolithic and beaker phases.

Table 7.14.: quantity and proportion of decorative motifs popular in all phases

decorative motif	phase	number of sherds	number of sherds as % of all sherds in the phase
undecorated	neolithic	969	34.63
undecorated	beaker 1	895	35.63
undecorated	beaker 2	307	23.74
1	neolithic	39	1.39
1	beaker 1	51	2.03
1	beaker 2	10	0.77
2	neolithic	593	21.19
2	beaker 1	244	9.71
2	beaker 2	177	13.69
3	neolithic	66	2.36
3	beaker 1	52	2.07
3	beaker 2	18	1.39
4	neolithic	93	3.32
4	beaker 1	477	18.99
4	beaker 2	328	25.37
5	neolithic	96	3.43
5	beaker 1	134	5.33
5	beaker 2	50	3.87

A substantial proportion of the pottery from Northton is undecorated (cf. Bamford 1982:66). According to Simpson, plain ceramics monopolise the neolithic I layers, and continue into the neolithic II levels (1976:221). It is apparent that undecorated pottery remains prevalent in the beaker phases also. With respect to decorated material, herringbone (1), opposed diagonal line (3), and vertical linear line (5) motifs enjoy a relatively consistent representation across the chronological range of the assemblage. The most salient feature of the development of decorative motifs across the transition is a decline in the use of diagonal linear lines (2) and an increase in the use of horizontal linear lines (4) at the manipulation of the beaker I phase. The latter motif evidently replaces the former as the design most frequently chosen for decorating pottery during the later (beaker) phases of the site. The general prevalence of parallel linear lines, arranged into herringbone (1), diagonal (2,3), horizontal (4) or vertical (5) motifs throughout the entire assemblage, in all phases, is notable (cf. Gibson 1982:215-16; 1984:90; Langley 1978:15). That this popularity of design continues throughout the lower and upper beaker levels (see Langley 1978:15) is apparent from Table 7.14.. The remaining motifs represented in both the neolithic and beaker phases occur so seldom that they are not considered further here. It is significant however, that these various motifs, seldom used in the neolithic phases, remain similarly obscure in the succeeding beaker phases.

Table 7.15.: proportion of ambiguous and indeterminate motifs in assemblage

decorative motif	phase	number of sherds	number of sherds as % of all sherds in the phase
20	neolithic	572	20.44
20	beaker 1	287	11.43
20	beaker 2	194	15.00
20x	neolithic	116	4.15
20x	beaker 1	144	5.73
20x	beaker 2	88	6.81
indeterminate	neolithic	177	6.33
indeterminate	beaker 1	317	12.62
indeterminate	beaker 2	235	18.17

The decorative motifs on a substantial amount of pottery proved impossible to identify decisively. Table 7.15. reveals the considerable quantity of decorative motifs that eluded a definitive classification, largely because the original orientation of the sherd on which these dubious motifs occurred could not be ascertained.

The repertoire of motifs necessary to classify adequately the neolithic material, requires relatively few additions to accommodate satisfactorily the beaker material. The suite of motifs employed to decorate pottery in the beaker I phase relies heavily on the previous repertoire of motifs used to decorate pottery in the neolithic phases. The apparent proliferation of motifs that accompanies the inception of the beaker I phase belies the rarity of these motifs on the actual pottery. Many of these apparently novel designs are probably inspired by the repertoire of motifs extant on the pottery from the preceding neolithic phases.

Inevitably, some motifs elude classification. One sherd, assigned to the beaker I phase, has an impression of what appears to be the exterior surface of a cardium shell, applied at the clayware stage of manufacture, on its own exterior surface. Similarly, another sherd, also attributed to the beaker I phase, has familiar motifs superimposed in a novel design, to create a decorative image that is unclassifiable within the confines of the extant decorative vocabulary.

These new motifs are best interpreted as elaborations upon established decorative themes. Because the motifs are geometrical, entirely abstract compositions of linear and curvilinear lines, it is easy to envisage the transformation of one motif into another. Strategies of juxtaposition, repetition, opposition, and symmetry are explored to arrange elementary geometric designs into a complex tapestry of abstract images. The differences between separate motifs are often extremely subtle, where one motif is simply a distortion of another. Motif 1, for example, is a rudimentary constituent of motif 23; motifs 22 and 24 emphasise either a vertical or horizontal orientation depending on the angle at which the various constituent lines are juxtaposed. Given the fluidity of design that geometrical decoration allows, the consistency with which motifs were selected and organised at Northton is a notable characteristic of the assemblage, and symptomatic of neolithic and beaker pottery in the Western Isles generally.

7.4.3. Decorative structure

The prevalent decorative structure on the pottery from Northton is horizontal zonation, although metopic panels are also in evidence (Gibson 1982:215). Horizontal bands virtually monopolise decorative structure in the assemblage. Metopes, unknown in the neolithic levels, occur frequently in the lower, but seldom in the upper, beaker levels (Langley 1978:15, 36). The consistency with which horizontal zonation is employed to arrange decorative motifs is typical of neolithic pottery from the Outer Hebrides. Each horizontal band invariably comprises only one or two motifs. There is little evidence to suggest the use of different motifs to decorate the same horizontal band. It is possible that this is as much a consequence of the fragmentary condition of the assemblage, in which the continuity of decorative structure is interrupted by breakage, as an indication of original archaeological circumstance. Metopes, by contrast, employ a greater variety of motifs, juxtaposed in both diagonal and vertical alignments, to create the impression of decorative complexity. Section 7.4.3. attempts to evaluate the manner in which different decorative motifs compile the resultant decorative structure. A general continuity of decorative structure is discernible stretching across the neolithic and beaker phases.

The extent of decoration over the vessel surface, which seldom extends beyond the upper portion of the vessel in the lower beaker level, becomes more pervasive through time, as decoration extends further down the vessel towards the base in the upper beaker level (Langley 1978:30). This expansion of decoration is perhaps explained, firstly, by continuity of existing potting traditions, and, secondly, by changes in the morphological design of vessels, in these successive levels. The confinement of decoration to the upper portions of a vessel is typical of pottery from the neolithic phases. Its manifestation in the lower beaker levels is most readily explained as a continuation of extant decorative configurations familiar on the preceding neolithic pottery. It is possible that the prevalence of round bases in the neolithic levels discourages the application of decoration to the lower surfaces of a vessel, because such areas are more liable to be obscured by whatever means of support is used ensure the vessel remains upright. The prevalence of flat bottomed vessels in the beaker levels, a design development which allows the entire surface area of the walls to remain visible as the vessel stands unsupported, encourages the extension of decoration across the lower portions of the vessel surface.

7.4.3.1. Decorative motifs in combination

In an attempt to evaluate the prevalence of different motif combinations, the manner in which decorative motifs were combined on the pottery was recorded. A *decorative signature* was created for each decorated sherd according to the order in which the extant motifs were juxtaposed on the extant ceramic surface. The decorative signature, for motifs arranged in horizontal bands, comprised the order in which the motifs were tiered, and for motifs arranged in vertical metopes, comprised the order in which the motifs were panelled. For motifs arranged in horizontal bands, then, the constituent motifs of each decorative signature were written, with respect to the decorative positions introduced in chapter four, in the following order: interior surface (G), internal rim surface (A3), upper rim surface (A1), external rim surface (A2), neck (B), shoulder (C), exterior surface (E or F), and base (D). For motifs arranged in vertical metopes, the constituent motifs of the decorative signature were simply recorded in the order in which they were juxtaposed. In the text, motifs in horizontal band motif signatures are separated by an oblique symbol (/), and motifs in vertical metope motif signatures are separated by a squiggle symbol (~). When these different types of decorative structure were combined, with, for example, a series of horizontal bands interrupted by panels of vertical metopes, the motif combinations were recorded separately for each decorative structure. No attempt was made to record motif combinations across the boundaries of separate decorative schemes.

The original orientation of a sherd was not always discernible. Only the orientation of rim, base and distinctive body sherds could be ascertained beyond doubt. The curvature on the wall, allowed the orientation, but not the inversion, of the majority of remaining body sherds to be calculated. To ensure that these sherds were eligible for inclusion in the analysis of decorative signatures, no distinction was made between the immediate order in which two motifs were juxtaposed in double motif combinations. The motif series 2/4, for example, is therefore identical to the motif series 4/2. Sherds of indeterminate orientation were excluded from the analysis of motif combinations.

Inquiries into the organisation of decorative motifs tend to ignore the specific motif designs and focus instead on the relations between motifs. This, firstly, is due to the influence of structuralism, and, secondly, is a consequence of practical considerations, in the analysis of decorated archaeological artefacts. An investigation of individual motifs, and the manner in which they are juxtaposed, generates an immense number of possible motif combinations. Such is the enormity of these potential combinations, that specific decorative sequences are seldom recurrent. Attempts to elucidate the decorative structure are frustrated by the sheer diversity of motif combinations. It is therefore preferable to concentrate on the similarities and differences between motifs, because such an approach identifies the structure, and does not simply reiterate the content, of the decorative schemes that are the intended subject of study.

With respect to the Northton assemblage, however, an approach that recognises the actual motifs, and not simply the relation between them, is worthwhile for two reasons. Firstly, the fragmentary nature of the pottery severely hampers the latter type of approach to decorative structure. Such is the diminutive size of many sherds that extended motif combinations are something of a rarity. The vast majority of sherds exhibit nothing more substantial than a decorative signature comprising one or two motifs, due to the truncation of the larger ceramic surface upon breakage. Clearly, a structural approach to motif combinations and decorative schemes requires at least two, and preferably three or more, motifs in series to become meaningful. The paucity of extended motif signatures in the Northton assemblage frustrates any attempt to investigate decorative arrangement. Essentially, the physical condition of the pottery restricts the applicability of a structural approach. Table 7.16. below indicates the paucity of sherds that contain extended motif combinations.

Table 7.16.: number of motifs in decorative signatures

number of motifs in decorative signature	phase	number of sherds	number of sherds as a % of all sherds in the phase
indeterminate	neolithic	163	5.83
indeterminate	beaker 1	300	11.94
indeterminate	beaker 2	227	17.56
undecorated	neolithic	969	34.63
undecorated	beaker 1	896	35.67
undecorated	beaker 2	307	23.74
1	neolithic	1184	42.32
1	beaker 1	825	32.84
1	beaker 2	387	29.93
2	neolithic	442	15.80
2	beaker 1	287	11.43
2	beaker 2	159	12.30
3	neolithic	33	1.18
3	beaker 1	98	3.90
3	beaker 2	79	6.11
4	neolithic	7	0.25
4	beaker 1	74	2.95
4	beaker 2	67	5.18
5	neolithic	none	0.00
5	beaker 1	10	0.40
5	beaker 2	36	2.78
6	neolithic	none	0.00
6	beaker 1	4	0.16
6	beaker 2	14	1.08
8	neolithic	none	0.00
8	beaker 1	1	0.04
8	beaker 2	17	1.31
9	neolithic	none	0.00
9	beaker 1	4	0.16

number of motifs in decorative signature	phase	number of sherds	number of sherds as a % of all sherds in the phase
9	beaker 2	none	0.00
10	neolithic	none	0.00
10	beaker 1	4	0.16
10	beaker 2	none	0.00
13	neolithic	none	0.00
13	beaker 1	9	0.36
13	beaker 2	none	0.00

Secondly, my analysis concentrates on a single site. It is designed to elucidate a continuity in the use of *specific* motif combinations, and not merely document the longevity of abstract decorative structure, in one particular ceramic sequence. However, to explore fully the interpretive potential of the assemblage, severely limited by the fragmentary condition of the pottery, both of the above approaches to decoration are explored below.

The sparsity of extended motifs sequences in the assemblage necessarily restricts the analysis of specific motif arrangements to double motifs combinations. Even this concession to archaeological circumstance fails to produce meaningful results. The occurrence of every possible double motif combination in the assemblage was investigated. Very few specific motif combinations occur with any regularity, and, significantly perhaps, many such motif combinations do not occur. Table 7.17. below itemises the specific motif combinations represented on more than two percent of all sherds in any given phase.

Table 7.17.: double motif combinations, occurring on more than two percent of all sherds in any given phase

decorative motif signature	phase	number of sherds	number of sherds as % of all sherds in the phase
2/2	neolithic 1	276	9.86
2/2	beaker 1	18	0.72
2/2	beaker 2	13	1.01
2/4	neolithic 1	27	0.96
2/4	beaker 1	75	2.99

decorative motif signature	phase	number of sherds	number of sherds as % of all sherds in the phase
2/4	beaker 2	145	11.21
4/5	neolithic 1	13	0.46
4/5	beaker 1	60	2.39
4/5	beaker 2	17	1.31
4/u	neolithic 1	none	0.00
4/u	beaker 1	7	0.28
4/u	beaker 2	30	2.32
4/14	neolithic 1	none	0.00
4/14	beaker 1	26	1.04
4/14	beaker 2	33	2.55

If the frequency with which motif combinations are employed are calculated with respect only to sherds which exhibit unambiguous multiple motif decoration, rather than with respect to all sherds within a particular phase, the representation of certain double motif combinations within the assemblage becomes more noticeable. Table 7.18. below depicts those motif combinations represented on more than two percent of sherds decorated with multiple motifs.

Table 7.18.: double motif combinations, occurring on more than two percent of sherds with multiple motif decoration, in any given phase

decorative motif signature	phase	number of sherds	number of sherds as % of all sherds with multiple motif decoration in the phase
1/1	neolithic	25	5.45
1/1	beaker 1	2	0.51
1/1	beaker 2	1	0.35
1/4	neolithic	none	0.00
1/4	beaker 1	24	6.08
1/4	beaker 2	8	2.81
2/2	neolithic	276	60.13
2/2	beaker 1	18	4.56
2/2	beaker 2	13	4.56
2/4	neolithic	27	5.88
2/4	beaker 1	75	18.99
2/4	beaker 2	145	50.88

decorative motif signature	phase	number of sherds	number of sherds as % of all sherds with multiple motif decoration in the phase
2/5	neolithic	26	5.66
2/5	beaker 1	2	0.07
2/5	beaker 2	3	0.76
2/u	neolithic	17	3.70
2/u	beaker 1	2	0.51
2/u	beaker 2	8	2.81
2/18	neolithic	4	0.87
2/18	beaker 1	15	3.80
2/18	beaker 2	none	0.00
3/3	neolithic	23	5.01
3/3	beaker 1	none	0.00
3/3	beaker 2	none	0.00
3/4	neolithic	3	0.65
3/4	beaker 1	27	6.84
3/4	beaker 2	12	4.21
4/4	neolithic	none	0.00
4/4	beaker 1	19	4.81
4/4	beaker 2	5	1.75
4/5	neolithic	13	2.83
4/5	beaker 1	60	15.19
4/5	beaker 2	17	5.96
4/u	neolithic	none	0.00
4/u	beaker 1	7	1.77
4/u	beaker 2	30	10.53
4/14	neolithic	none	0.00
4/14	beaker 1	26	6.58
4/14	beaker 2	33	11.58
4/18	neolithic	none	0.00
4/18	beaker 1	18	4.56
4/18	beaker 2	2	0.70
4/22	neolithic	none	0.00
4/22	beaker 1	23	5.82
4/22	beaker 2	31	10.88
4/23	neolithic	none	0.00
4/23	beaker 1	5	1.27

decorative motif signature	phase	number of sherds	number of sherds as % of all sherds with multiple motif decoration in the phase
4/23	beaker 2	6	2.11
4/27	neolithic	none	0.00
4/27	beaker 1	7	1.77
4/27	beaker 2	12	4.21
4/28	neolithic	none	0.00
4/28	beaker 1	none	0.00
4/28	beaker 2	17	5.96
4/30	neolithic	none	0.00
4/30	beaker 1	16	4.05
4/30	beaker 2	2	0.70
4/31	neolithic	none	0.00
4/31	beaker 1	none	0.00
4/31	beaker 2	9	3.16
4/34	B	none	0.00
4/34	beaker 1	1	0.25
4/34	beaker 2	12	4.21
4/16d	neolithic	none	0.00
4/16d	beaker 1	1	0.25
4/16d	beaker 2	23	8.07
14/18	neolithic	none	0.00
14/18	beaker 1	11	2.78
14/18	beaker 2	2	0.70
16d/u	neolithic	none	0.00
16d/u	beaker 1	none	0.00
16d/u	beaker 2	23	8.07

The low values of these frequencies prevent a decisive interpretation of any variation in the arrangement of motifs in multiple motif decoration in the assemblage. Differences between frequencies, for any given motif combination, are largely insignificant in statistical terms. Nonetheless the frequencies emphasise the prevalence of the juxtaposition of repeated or opposed diagonal lines on pottery in the neolithic phases (in motif combinations that include motif 2), and, by contrast, identify the preponderance of the use of horizontal, parallel linear lines in the beaker phases (in motif combinations that include motif 4).

Metopes occur not at all in the neolithic phases and only infrequently in the beaker phases. Table 7.19. below shows those vertical motif combinations represented on more than two percent of sherds decorated with multiple motifs.

Table 7.19.: vertical motif combinations on sherds decorated with multiple motifs

decorative motif sequence	**phase**	**number of sherds**	**number of sherds as % of all sherds with multiple motif decoration in the phase**
2~u	neolithic	none	0.00
2~u	beaker 1	8	2.03
2~u	beaker 2	none	0.00
2~38	neolithic	none	0.00
2~38	beaker 1	12	3.04
2~38	beaker 2	none	0.00
4~5	neolithic	none	0.00
4~5	beaker 1	7	1.77
4~5	beaker 2	9	3.16
5~22	neolithic	none	0.00
5~22	beaker 1	9	2.28
5~22	beaker 2	2	0.70
5~23	neolithic	none	0.00
5~23	beaker 1	15	3.80
5~23	beaker 2	3	1.05

Again, as for the horizontal motif combinations, the paucity of specific vertical motif combinations, manifest as low frequency counts, impedes the interpretive utility of the results. An alternative investigative strategy, involving an assessment of the differential relations between motifs, as outlined previously, is pursued below.

A structural approach to decoration emphasises differences between motifs rather than the nature of the actual motifs. A specific motif combination, for example 2/2/4/2/5/4 on any given sherd, becomes A/A/B/A/C/B, and, similarly, 3/4/5/3/4/5 on another sherd becomes A/B/C/A/B/C. To characterise motif signatures in this way elucidates the relationships between the constituent designs of multiple motif decoration. The following motif structures, itemised in Table 7.20, were investigated in accordance with the site phasing: single motif repetition (A/A, A/A/A, or A/A/A/A), double motif repetition (A/A/B/B), and alternate motif repetition (A/B/A, A/B/A/B, A/B/A/C, or A/B/C/A/B/C). Information on motif structure A/A incorporates motif structures A/A/A and A/A/A/A, and details of motif structure A/B/A incorporates motif structures A/B/A/B and A/B/A/C, because the former motif structure is also a component of the latter motif structures in each case. The pitiful frequencies revealed are largely a consequence of the fragmentary condition of the assemblage, in which almost all motif combinations are incomplete, and in which longer motif signatures are a rarity. To alleviate this detrimental situation, frequencies are calculated not simply according to all sherds but also, for any given decorative signature, according to sherds which display an equal or greater number of component motifs in their decorative signatures. So the frequency of a single motif repetition, for example A/A, in each phase is calculated with respect to sherds which exhibit two or more motifs. Similarly, the frequency of an alternate motif repetition, for example A/B/A/B, in each phase is calculated with respect to sherds which retain three or more motifs.

Table 7.20.: the quantity and frequency of horizontally banded motif structures in the assemblage

motif structure	phase	number of sherds	number of as % of all sherds in the phase	number of sherds as % of sherds with equal or greater number of motifs in decorative signature in the phase
single motif repetition				
A/A	neolithic	307	10.98	63.69
A/A	beaker 1	48	1.91	9.78
A/A	beaker 2	22	1.70	5.91
A/A/A	neolithic	13	0.46	32.50
A/A/A	beaker 1	1	0.04	0.49

motif structure	phase	number of sherds	number of as % of all sherds in the phase	number of sherds as % of sherds with equal or greater number of motifs in decorative signature in the phase
A/A/A	beaker 2	2	0.15	0.94
A/A/A/A	neolithic	1	0.04	14.29
A/A/A/A	beaker 1	none	0.00	0.00
A/A/A/A	beaker 2	none	0.00	0.00
double motif repetition				
A/A/B/B	neolithic	none	0.00	0.00
A/A/B/B	beaker 1	none	0.00	0.00
A/A/B/B	beaker 2	none	0.00	0.00
alternate motif repetition				
A/B/A	neolithic	9	0.32	22.50
A/B/A	beaker 1	143	5.69	70.09
A/B/A	beaker 2	202	15.63	94.84
A/B/A/B	neolithic	3	0.11	42.86
A/B/A/B	beaker 1	40	1.59	37.74
A/B/A/B	beaker 2	70	5.42	52.24
A/B/A/C	neolithic	none	0.00	0.00
A/B/A/C	beaker 1	73	2.92	35.78
A/B/A/C	beaker 2	101	7.83	75.37
A/B/C/A/B/C	neolithic	none	0.00	0.00
A/B/C/A/B/C	beaker 1	none	0.00	0.00
A/B/C/A/B/C	beaker 2	none	0.00	0.00

The prevalence of repeated and alternate motif combinations, in the neolithic and beaker phases respectively, are discernible in Table 7.20. above.

The above motif relations were investigated with respect to motif structures organised into vertical panels rather than horizontal bands. This survey, the results of which are itemised in Table 7.21. below, also failed to reach a satisfactory conclusion.

Table 7.21.: quantity and frequency of metopic motif structures

motif structure	phase	number of sherds	number of sherds as a % of all sherds in the phase	number of sherds as % of sherds with equal or greater number of motifs in decorative signature in the phase
A~A	neolithic 1	none	0.00	0.00
A~A	beaker 1	none	0.00	0.00
A~A	beaker 2	none	0.00	0.00
A~A~A	neolithic 1	none	0.00	0.00
A~A~A	beaker 1	none	0.00	0.00
A~A~A	beaker 2	none	0.00	0.00
A~A~A~A	neolithic 1	none	0.00	0.00
A~A~A~A	beaker 1	none	0.00	0.00
A~A~A~A	beaker 2	none	0.00	0.00
A~A~B~B	neolithic 1	none	0.00	0.00
A~A~B~B	beaker 1	none	0.00	0.00
A~A~B~B	beaker 2	none	0.00	0.00
A~B~A	neolithic 1	none	0.00	0.00
A~B~A	beaker 1	34	1.36	16.66
A~B~A	beaker 2	26	2.01	12.21
A~B~A~B	neolithic 1	none	0.00	0.00
A~B~A~B	beaker 1	8	1.36	7.55
A~B~A~B	beaker 2	10	0.77	7.46
A~B~A~C	neolithic 1	none	0.00	0.00
A~B~A~C	beaker 1	12	0.48	11.32
A~B~A~C	beaker 2	none	0.00	0.00
A~B~C~A~B~C	neolithic 1	none	0.00	0.00
A~B~C~A~B~C	beaker 1	none	0.00	0.00
A~B~C~A~B~C	beaker 2	none	0.00	0.00

The paucity of correlations between the motif structures searched for, and the motif structures that comprise metopic decoration on the pottery, is a predictable consequence of the previously mentioned empirical constraints. More informative perhaps are the longer motif signatures, all from the beaker phases, occasionally present in the assemblage. Decorative signatures containing more than five constituent motifs are depicted in Table 7.22. below.

Table 7.22.: a sample of extended decorative signatures from the beaker phases in the assemblage

{-/A/B/A}/{A~B}	{A/B/A/C/A/B/A/C/A}
{A/B/C/A/B/C}	{A/B/C/B/A/B/D/B}
{A/B/C/B}/{A~B}	{A/B/C/D/C/D/C/E}
{A/A/B/A/C/A/B/A}/{A~B}	{A/B/A/C/A/B/A/D/A/B/A/C/A}
{A/B/C/A/C/A?}	{A~B}/{A}/{A~B~A}
{A/B/C/B}/{A~B~A~C~A}	{A/B/C/D/C/D}
{A/B/A/B/C/D}	{A/B/A}/{A~B~A~C~A}
{A~B~A~B}/{A/B/A/C}	{A}/{A~B~C~A~B~A~D}/{A/B}
{A/B/C/B}/{A~B~C~B~D}	{A}/{A~B}/{A}/{A~B~A~B~A~B~A}/{A/B}

Judging intuitively from the available evidence, only a limited number of motifs are employed in the decoration of each vessel. Indeed, no more than five different motifs occur on any given sherd in the entire assemblage. It is possible to dismiss this frugality of design selection as a consequence of the diminutive size of almost all sherds in the assemblage. Yet this economy of motif selection is more probably an indication of the conservatism of design structure. Decorative strategies concentrate upon of the repetition of a limited repertoire of specific motifs, to develop elaborate decorative surfaces, rather than attempting the random juxtaposition of innumerable different motifs to exhaust the ceramic surface area available for decoration. The potential, if not the prevalence, of limited finite motif combinations, for example, A/B, endlessly repeated, is apparent from the few surviving extended motif combinations. The manner in which specific sequences of motifs comprise the constituent components of larger decorative signature is also discernible. There is no appreciable difference between the ways in which designs are juxtaposed in horizontal bands or vertical panels. It is misleading to identify an increase in decorative complexity, coinciding with the advent of beaker pottery, in the ceramic sequence at Northton. The same strategies of juxtaposition, repetition, substitution, and symmetry are employed in the composition of both horizontal zonation and vertical metopes.

7.4.3.2. Decorative motifs and decorative structures

Twenty nine motifs occur only within horizontal banding, whereas just one motif is exclusive to vertical panelling. The occurrence of these various motifs in the assemblage is minimal. Many of the motifs exclusive to horizontal banding occur in more than one site phase, whilst others are unique to a particular phase. These eclectic circumstances, in which some motifs are particular to a specific site phase, whilst others are ubiquitous across them, demonstrates a continuity of decorative creativity across the neolithic and beaker transition. Essentially, in all three phases, different motifs are continually being introduced or discontinued; to modify or further develop the suitability of a horizontal decorative structure. It is not simply the presence, but also a willingness to experiment with, the use of horizontal zonation as a decorative structure, through an exploration of its motif composition that characterises its continued appearance on pottery in the beaker phases. Table 7.23. below conveys something of the dynamism that characterises this decorative process. Motifs unique to a particular phase are identified by italics in the first column.

Table 7.23.: quantity and frequency of motifs exclusively represented in horizontal banded decorative structures

motifs exclusive to horizontal zonation	phase	number of sherds	number of sherds as % of all sherds in the phase
6a	neolithic	24	0.86
6b	neolithic	8	0.29
7	neolithic	4	0.14
7a	neolithic	6	0.21
8	neolithic	19	0.68
8a	neolithic	12	0.43
8a	beaker 1	8	0.32
8a	beaker 2	1	0.08
9	neolithic	25	0.89
9a	neolithic	2	0.07
9a	beaker 1	11	0.44
11	neolithic	5	0.18

motifs exclusive to horizontal zonation	phase	number of sherds	number of sherds as % of all sherds in the phase
11	beaker 1	1	0.04
11	beaker 2	2	0.15
11a	beaker 1	2	0.08
12	neolithic	1	0.04
13	neolithic	3	0.11
13	beaker 1	1	0.04
16b	neolithic	5	0.18
16b	beaker 2	1	0.08
16c	beaker 1	7	0.28
16d	neolithic	1	0.04
16d	beaker 1	2	0.08
16d	beaker 2	24	1.86
16f	beaker 1	3	0.12
16f	beaker 2	1	0.08
17	beaker 2	1	0.08
18	neolithic	10	0.36
18	beaker 1	48	1.91
18	beaker 2	5	0.39
19	beaker 2	1	0.08
19b	beaker 1	1	0.04
19b	beaker 2	3	0.23
21	neolithic	1	0.04
26	beaker 1	1	0.04
28	beaker 1	4	0.16
28	beaker 2	17	1.31
29	beaker 1	2	0.08
29	beaker 2	2	0.15
30	beaker 1	23	0.92
30	beaker 2	5	0.39
33	beaker 1	7	0.28
33	beaker 2	8	0.62
35	beaker 1	1	0.04
37	beaker 1	3	0.12
37	beaker 2	2	0.15
39	beaker 2	1	0.08

That the solitary motif unique to vertical panelling is restricted to the beaker phases is unsurprising, given that metopes are unknown in the preceding neolithic phases. Summary details of this motif introduced in the beaker I phase, and remaining current in the beaker II phase, are provided in Table 7.24. below.

Table 7.24.: quantity and frequency of motifs exclusively represented in metopic decorative structures

motifs exclusive to vertical metopes	**phase**	**number of sherds**	**number of sherds as % of all sherds in the phase**
36	beaker 1	5	0.20
36	beaker 2	5	0.39

The relative sparsity of vertical panelling, even in the beaker phases, affirms horizontal banding as the prevalent decorative structure employed in the decoration of the pottery from Northton. Table 7.25. indicates the frequency of sherds in the beaker phases exhibiting metopic decoration.

Table 7.25.: quantity and frequency of sherds embodying metopic decoration

phase	**number of sherds**	**number of sherds as % of all sherds in the phase**
beaker 1	125	4.98
beaker 2	57	4.41

The use of decoration to contrast with, and sometimes enclose, undecorated zones, is a decorative strategy known in the neolithic phases, but one which reaches aesthetic fruition in the beaker phases. Table 7.26. below indicates the relative rarity of this special decorative motif in the Northton pottery.

In the neolithic phases, undecorated areas are very occasionally incorporated into horizontal bands, where there is a failure to completely circumscribe the vessel with designs arranged in this manner. In the beaker phases, the use of undecorated areas is frequently incorporated into a diagonal or vertical decorative

Table 7.26.: quantity and frequency of undecorated areas within a larger decorative arrangement

phase	number of sherds	number of sherds as a % of all sherds in the phase
neolithic	18	0.64
beaker 1	41	1.63
beaker 2	97	7.50

structure. The horizontal decorative band that circumscribes a vessel is interrupted, or rather interspersed, within novel decorative structures, involving what is effectively undecorated decoration. The use of such undecoration to enhance a decorated surface is an illustration of the increased complexity of ceramic design that characterises pottery decoration in the beaker phases.

7.5. The continuity of decorative practice at Northton

Three significant developments characterise pottery decoration across the transition between the neolithic and beaker phases at Northton. Firstly, novel motifs are developed; secondly, metopes are introduced; and thirdly, the overall decorative design becomes more formalised, in the beaker phases. These various developments initially suggest considerable differences between the ceramics from the neolithic and beaker phases respectively. Yet this initial impression is misleading.

With reference to motifs, the supposedly novel designs manifest in the beaker phases are largely adaptations of previously extant motifs. The relations between successive motif designs in the neolithic and beaker phases are dealt with in the above sub-sections of section 7.4..

With respect to metopes, it is unnecessary to explain the appearance of these distinctive vertical panels as a conceptual innovation introduced by an extraneous beaker influence. The use of a vertical orientation to structure decorative motifs is discernible in the neolithic phases. It is preferable to construe horizontal and vertical decorative structures as complementary rather than contradictory. Certain neolithic vessels contain motifs repeatedly, if roughly, inscribed to form haphazard vertical tiers. Horizontal bands accumulate into vertical tiers; vertical panels combine into horizontal zones of unusual depth. One body sherd, associated with the beaker I phase, contains linear incisions, in a horizontal alignment, interspersed with comb impressions, in a vertical alignment, on the ceramic surface between the incisions. In this case, the use of separate motifs to emphasis different decorative structures demonstrates the flexibility and mutual compatibility of horizontal and vertical decorative structures.

With regard to the general formalisation of decoration in the beaker phases, it is prudent to remember that certain alterations to decoration are not fully explicated in this analysis because they escape quantitative evaluation. Most importantly, the decorative structure across the neolithic to beaker transition becomes more condensed. Motifs decrease in size and are more closely juxtaposed. The organisation of motifs acquires a more compact and formal appearance. There is an increase in the complexity and intensity of the decoration. The transformation in motif 14 is a good example of this process of decorative *formalisation.* In the neolithic phases, this motif is roughly sketched onto the pottery, to form an unravelling network of cross hatched lines of varying depth and clarity. In the beaker phases, this motif is carefully inscribed onto the pottery, to form a precise network of cross hatched lines of regular application and uniform appearance. This motif, loosely sprawled across pottery in the neolithic phases, condenses into a finite, orderly design on pottery in the beaker phases. Yet it is prudent to recognise that decoration on pottery from the neolithic phases is also structured, and often equally intricate. Indeed, measured in terms of the effort and skills invested in production, and in the quality of finish, there is no credible disparity between the ceramics from the neolithic and beaker phases. Indeed the pottery from the neolithic phases provide ample inspiration to explain the superb quality, frequently remarked upon (eg. Armit 1996:90; Burgess 1980:219), of much of the beaker pottery from Northton.

It is unsurprising that the intrinsic design of a motif influences the resultant structure of the decorative scheme. Certain decorative motifs, consonant with metopic panels, are unsuitable for inclusion in horizontal bands. Motifs are adapted, sometimes merely elongated or compressed, to transform their overall orientation, to facilitate their inclusion in novel decorative structures. There was evidently a tendency to employ novel decorative techniques for new decorative motifs, because techniques unknown in the neolithic phases are used to create motifs not previously represented in these same phases.

It is a misnomer to conceptualise decoration as a superficial aesthetic veneer atop morphology. Instead, it is preferable to envisage decoration and morphology embroiled within an intractable relationship of interdependence. The correspondence between morphology and decoration on many vessels, in which different motifs respect, and enhance, vessel morphology, is informative in this regard. This is particularly noticeable on hebridean bag shaped jars, where the subtle ridges incorporated into the design on the vessel provide a series of horizontal bands ideally suited to decoration with parallel, diagonal lines.

It is preferable to envisage the actual process of decorating pottery as contingent and discursive, one in which the potter is able to manipulate known and acceptable designs to embellish the ceramic surface according to their discretion and experience. It is inappropriate to conceptualise decoration as a predefined, explicitly stated, battery of techniques, motifs, and schemes.[8] Decoration is more an active process of improvisation, than an adherence to bland recipes of inscription. The contingency that characterises the decorative process remains discernible on the resultant decorated ceramic. One sherd, from the beaker I phase, contains a triangular motif surrounded by parallel linear lines. The constituent motifs of this decorative arrangement, motifs 1 and 2, are familiar, but the manner in which they are combined, with one imposing upon, and surrounding, the other, is unknown in the neolithic phases. The integration of discrete motifs to create novel designs, for example the use of diagonal linear lines to frame various types of indented motifs, the coalescence of motifs 2 and 16, conveys something of the improvisational qualities integral to the decorative process.

7.6. Conclusion

The above investigation into any possible continuity between neolithic and beaker phases at Northton focuses exclusively on pottery decoration in the neolithic and beaker I phases. This study ignores completely the significance of morphology to this transition, and, similarly, fails to consider the characteristics of the subsequent beaker II phase. This is not to deny the importance of these various topics. Indeed, changes in the shape of many beakers, particularly the development of a flat base and distinctive necked profile, features which occur amongst the pottery in the beaker phases at Northton, are arguably more abrupt, and overt, than the corresponding alterations in decoration. Similarly, the significance of the differences between the two beaker phases are as germane to a consideration of the ceramic sequence at Northton as the contrast between the preceding neolithic and beaker I phases. There is no reason to suppose that the difference between the neolithic and beaker I phases is more crucial or decisive than that between the beaker I and beaker II phases. The differences between the two beaker phases demonstrate the variability within the overall conceptual entity that is beaker pottery. It is therefore regrettable that the differences between the two neolithic phases remain obscure.

It is unnecessary to resort to local catastrophes or foreign invasions to explain the differences between pottery from the neolithic and beaker phases respectively. The novel techniques, motifs and arrangements, initially considered exclusive to pottery from the beaker phases, are invariably identifiable, in some altered form, on pottery in the preceding neolithic phases. That incision and horizontal zonation, aspects of decoration that each hold a virtual monopoly on decorative motifs and structure in the neolithic phases, both continue into the beaker phases is indisputable (c.f. Armit 1996:106). The similarities between neolithic and beaker pottery at Northton (Gibson 1982:216-17; 1984:95), and elsewhere in the Western Isles, at, for example, Callanais, where Henshall (nd.:3) laments the indistinguishable nature of neolithic and beaker pottery, in terms of quality and decoration, apparently confirms the general argument pursued in this chapter. The evidence for continuity between the neolithic and beaker phases is not confined to the pottery. Armit, for example, alludes to similarities between the lithic assemblages from these separate phases (1996:90). Yet the beaker affinities of the pottery from the beaker phases ensure that the occupational sequence at Northton is irredeemably split into two separate, if successive, episodes. Even an acceptance of beaker pottery as a local development, with historical precedents in other neolithic ceramic styles, does not immunise an interpretation from a relapse into notions of beaker pottery as an intrusive phenomenon. It remains possible to recognise, or at least infer, the local advent of beaker pottery (eg. Armit 1996:105-06; Gibson 1982:217; 1984: *passim*), and yet simultaneously conceptualise its appearance as evidence for a decisive invasion of ideas, if not people, in the Western Isles during the neolithic (eg. Armit 1996:88, 93; Gibson 1982: *passim*; 1984: *passim*). The contradictory facets of these arguments are a direct consequence of an adherence to the terminological and theoretical apparatus that together define the beaker concept. It is necessary to recognise that the traditional vocabulary employed to describe and explain this pottery is an interpretive anachronism. To reinvent beaker pottery, as something other than beaker pottery, requires new categories of description and interpretation. To ensure that these alternative categories do not merely supplant an extant classification of these ceramic styles, simply substituting one inadequate typological scheme for another, demands a critical evaluation of the methodological procedures and interpretive aspirations of archaeological classification.

[1] Only the pottery from the neolithic levels has been drawn for publication (Simpson pers comm.). These illustrations, apparently held by the National Museums of Scotland in Edinburgh, are currently unlocated, and therefore unavailable for consultation. The published drawings of material from the beaker levels, intended to characterise decoration in the assemblage (Gibson 1982:214), are rudimentary and necessarily selective (Gibson 1982, figures NOR 1-7:470-6).

[2] Langley, from an assessment of rim sherds, argued that the lower beaker level contained no more than 120 vessels, and the upper beaker level approximately 90 vessels (Langley 1978:1).

[3] Unfortunately, the results of the original post excavation work, details of which were previously assumed to be readily available upon request, were unobtainable, and, as a consequence, the envisaged comparison was impossible.

[4] Several requests to examine the site archive were rebuffed by the excavator.

[5] More generally, the stratigraphy typical of shell middens is sufficiently complex (Stein 1992a:11; 1992c:95, 101) to provoke Stein (1992b:72-88) into a re-evaluation of the adequacy of conventional archaeological conceptions of stratigraphy in the interpretation of middens.

[6] Significantly, some vessels represented in the beaker assemblage from Rosinish display overt similarities with preceding, local neolithic styles (Armit 1996:93; Shepherd 1976:212).

[7] The identification of motifs is invariably based on incomplete designs due to the predominance of sherds in the assemblage. It is possible that some decorative motifs, particularly those only partially present and truncated by the sherd edge, have been identified incorrectly. This is particularly the case with abstract, predominantly geometric, motifs, which are effectively amalgams of either parallel linear, or concentric curvilinear, lines, organised into repetitive alignments at contrasting angles. A portion of motif 37, for example, could easily be mistaken for a more complete part of motif 31. Similarly, designs identified as motif 3 are perhaps, in some cases, the vestigial remnants of motif 33. Only definite motif identifications are employed in this analysis.

[8] The reluctance or inability of contemporary potters to conceptualise decoration in the same manner as ethnographers is understandable (see David et al. 1988:366).

Chapter eight
Signs of casual discard:
the pottery from Rubha an Udail Site 6 on North Uist

8.1. Introduction

The concentration of archaeological sites at Rubha an Udail, on the west coast of the Ard a' Mhorain peninsula, extending out into the Sound of Harris from the north shore of North Uist (see Figure 8.1), indicates a wealth of neolithic and early bronze age activity in the area (Crawford 1996a:17-19). Rescue excavations at Rubha an Udail Site 6 in the early 1980s revealed successive phases of use, dating from the neolithic to the early bronze age, on a multiple phase site (see Crawford 1974; 1980; 1981; 1983; 1984; 1996a; 1996b). A substantial amount of prehistoric pottery was recovered from these various phases.

An analysis of the ceramic assemblage from Rubha an Udail Site 6 comprises the empirical focus of this chapter. The examination of the pottery is restricted to an assessment of manufacturing techniques, an evaluation of the various ceramic styles represented, the construction of a functional profile, a consideration of depositional practices, and an investigation into post depositional processes. This examination is a prologue to an assessment of the significance of the pottery in relation to other assemblages, particularly those dealt with in preceding chapters, from in the Western Isles. The substantial differences between the assemblage from Rubha an Udail Site 6 and those from elsewhere are explained with reference to the function of the assemblage and the nature of the depositional practices responsible for its eventual inclusion in the archaeological record.

8.2. An archaeological landscape at Rubha an Udail

At Rubha an Udail, there are four coastal sites, labelled Rubha an Udail Sites 1, 2, 3 and 6. At Oinlish, a small inter-tidal promontory beside Rubha an Udail, two sites, labelled Oinlish Sites 1 and 2, are currently exposed by coastal erosion.

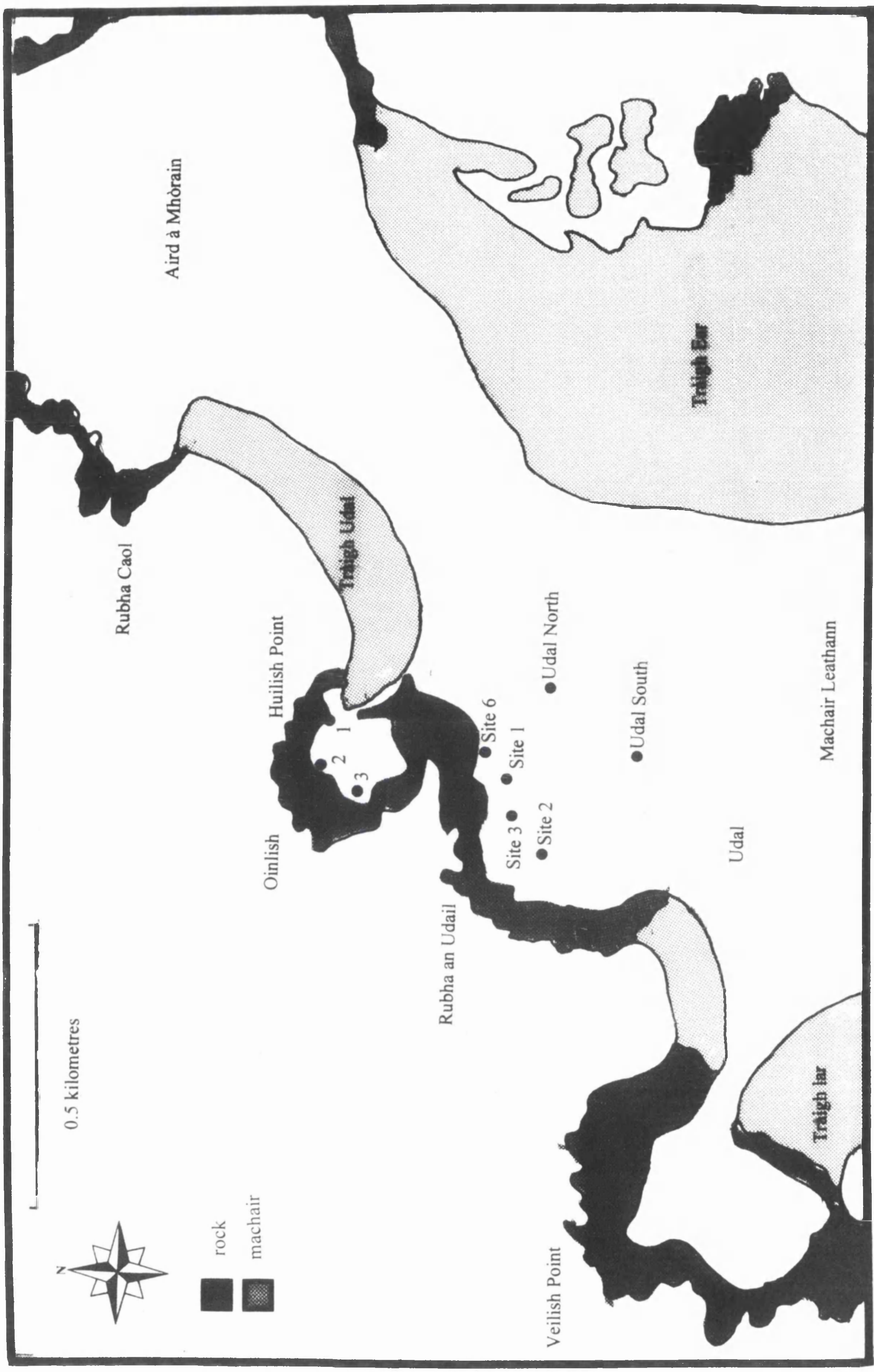


Figure 8.1.: Location of archaeological sites on the Ard a' Mhorain peninsula
(after Crawford 1996b:85)

Evidence of a mesolithic presence or occupation occurs elsewhere amongst the numerous sites in evidence on the Ard a' Mhorain peninsula (Crawford 1993:8).

These various sites at the Udal are situated in an extensive machair landscape in which erosion by wind and sea contribute towards an ephemeral topography of shifting sand. The prolific quantity of archaeology surviving at Rubha an Udail, frequently protruding from the machair due to exposure by aeolian erosion or tidal inundation, requires emphasis. This nexus of sites is preferably conceptualised as an archaeological landscape, in which sites survive as isolated concentrations of archaeology within a denuded machair environment. It is the internal structural features of archaeological interest that consolidate and prevent the destruction of these vulnerable deposits (Crawford 1986:6).

It is possible to identify a continuity of occupation in this deflated landscape by collating artefactual or stratigraphic sequences discernible at separate sites. The upper levels of stratigraphy at Rubha an Udail Site 1 contained ceramic identical to that recovered from the lower levels of deposits at the nearby site of Udal South (Crawford 1980:ii). The bronze age, if not the beaker, levels at Rubha an Udail Site 6 connect with the stratigraphy at Rubha an Udail Site 1, some ten metres to the south (Crawford 1983:3; 1984:1-2), and perhaps with the lower levels at the Udal North site (Crawford 1981:6). Indeed, the bronze age and beaker levels, detectable in several places at Rubha an Udail (Crawford 1980:5), encompass some two hectares (Crawford 1981:6). The idea of a stratigraphy that transcends the traditional archaeological conception of a site, to encompass instead a landscape, is appropriate.

Different aspects of neolithic and early bronze age social practices are represented at separate sites at Rubha an Udail. Sites 1 and 3, for example, settlement sites dating to the beaker and early bronze age phases respectively, provide evidence of occupation (Crawford 1981:4;1983:3; 1984:3; 1986:8) to complement successive episodes of contemporary agricultural and ritual practices at Site 6 (Crawford 1984:4). However, Rubha an Udail Site 6 is the only site to be considered further in any detail below.

8.3. The archaeology of Rubha an Udail Site 6

Rubha an Udail Site 6, a substantial and informative neolithic settlement (Crawford 1980:6), is described as:

> "...an absolutely crucial piece of prehistoric continuity.. ..of unique character..." (Crawford 1981:4; cf. 1993:3).

A summary of the site, to situate a discussion of the ceramic assemblage within a familiar archaeological context, seems appropriate.

8.3.1. Stratigraphy and phasing

The stratigraphy comprises fifteen successive levels, separated into five distinct phases (Crawford 1996a:18), which provide evidence of a continuity of activities, both ritual and domestic, from the neolithic to the bronze age (see Figure 8.2). These phases, labelled E, D, C, B, and A, nominally correspond to the early neolithic, late neolithic, beaker, early bronze age, and modern activities that occurred on the site respectively. Table 8.1. below relates each level to a specific phase and provides a cursory description of this stratigraphy. Allusions to additional levels, or layers within recognised levels (eg. Crawford 1981:31; 1984:5), means that they are best interpreted as blocks of stratigraphy, rather than as individual contexts, in the discussion that follows.

Phase E, assigned a pre neolithic or early neolithic date, encompasses levels XV, XIV, XIII, XII, and the lower layers of XI (Crawford 1996a:29).All levels, with the exception of the XI, are interpreted as the natural. Levels XV and XIV are apparently undisturbed deposits of glacial till immediately above the gneiss bedrock (Crawford 1996a:29). Level XIII comprises:

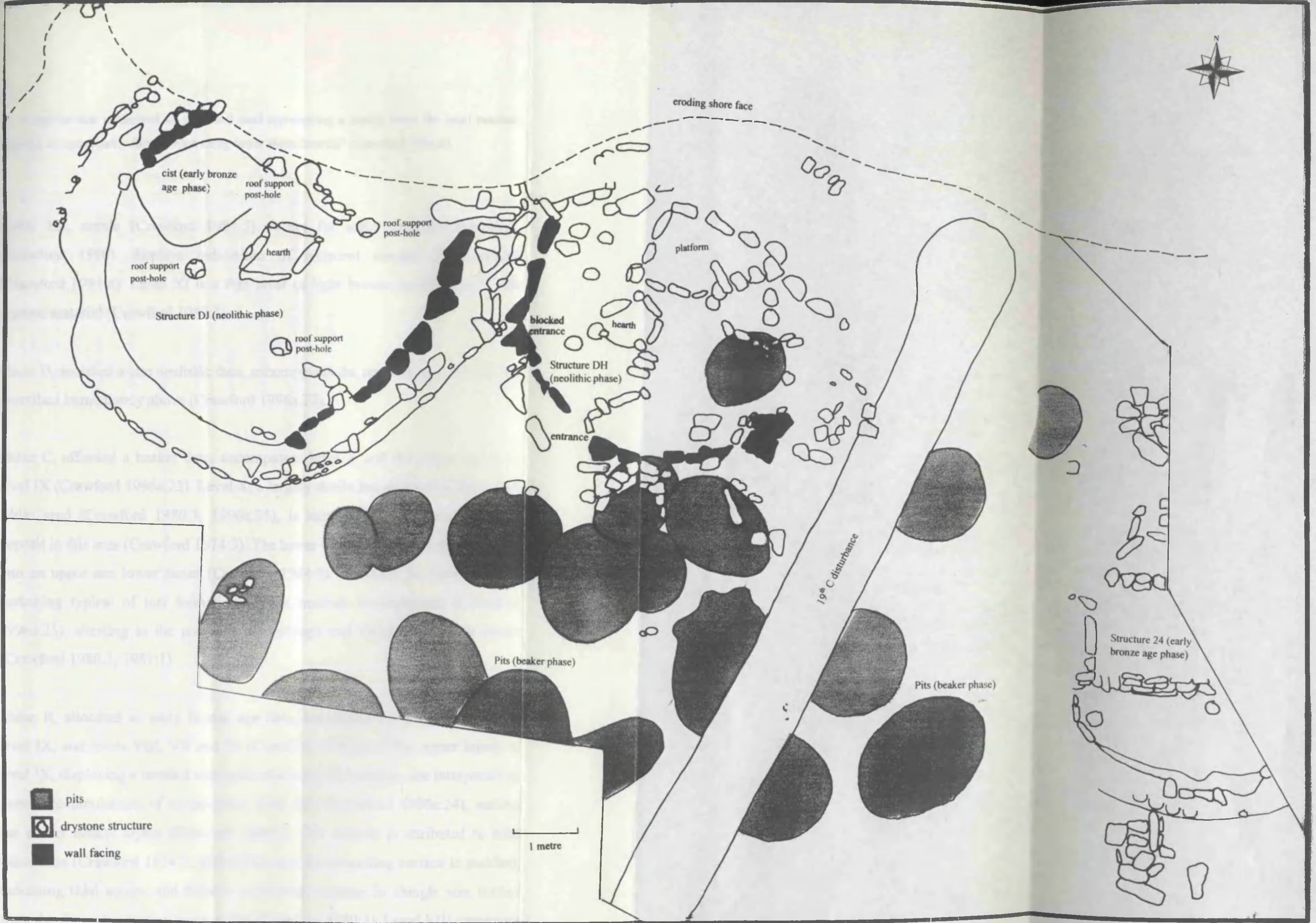


Figure 8.2.: Aspects of neolithic, beaker and early bronze age occupation at Rubha an Udail Site 6 (after Crawford 1981:5

"... a shallow mix of derived till and shell sand representing a period when the local machair deposits lay appreciably further West along lower shore littorals" (Crawford 1984:5).

Level XII, sterile (Crawford 1984:5) except for some quartzite fragments (Crawford 1980), displays indications of incipient machair development (Crawford 1984:8). Level XI is a thin layer of light brown sand enriched with organic material (Crawford 1980:3).

Phase D, ascribed a late neolithic date, encompasses the upper layers of level XI, described immediately above (Crawford 1996a:27).

Phase C, afforded a beaker date, encompasses level X and the lower layers of level IX (Crawford 1996a:23). Level X, a largely sterile but substantial deposit of white sand (Crawford 1980:3; 1996a:25), is interpreted as the first machair deposit in this area (Crawford 1974:3). The lower layers of level IX are separable into an upper and lower facies (Crawford 1984:3), of which the latter exhibits darkening typical of turf formation in wet machair environments (Crawford 1996a:25), attesting to the presence of a plough soil during the beaker phase (Crawford 1980:3; 1981:1).

Phase B, allocated an early bronze age date, encompasses the upper layers of level IX, and levels VIII, VII and VI (Crawford 1996a:23). The upper layers of level IX, displaying a mottled coloration and a puddled surface, are interpreted as natural accumulations of re-deposited shell sand (Crawford 1996a:24), sealing the earlier beaker layers (Crawford 1980:2). The deposit is attributed to tidal inundation (Crawford 1974:3; 1980:3) because the preceding surface is puddled, indicating tidal action, and there is a uniform decrease in shingle size further from the shore, suggesting wave action (Crawford 1980:3). Level VIII comprises a series of light brown soils (Crawford 1981:1). Levels VII and VI comprise the

Table 8.1.: the stratigraphy at Rubha an Udail Site 6 (after Crawford 1974; 1980; 1981; 1983; 1984; 1986; 1996a)

levels	description	interpretation	phase	references
VII	coarse, dense shingle	tidal deposit	bronze age	Crawford 1974:3; 1980:3
VIII	light brown soils	cultivation horizon	early bronze age	Crawford 1981:1
IX	grey/black soil	disturbed floor material, occupation deposit and cultivation horizon	beaker	Crawford 1980:3; 1981:1, 6; 1983:3
X	sterile white sand	initial windblown machair deposit	pre-beaker	Crawford 1974:3; 1980:3; 1981:1
XI	brown sand with organic enrichment	initial cultivation horizon	neolithic	Crawford 1980:3
XII	sterile	incipient machair development	possibly mesolithic	Crawford 1980:4; 1981:3; 1984:5, 8
XIII	glacial till	natural	E (early neolithic)	Crawford 1984:5
XIV	undisturbed glacial till	natural	E (pre neolithic)	Crawford 1996a:29
XV				

remnants of possible plough soils, showing signs of organic enrichment, but much diminished subsequently by wind erosion (Crawford 1996a:24).

Phase A, attributed a modern date, encompasses levels V through to I. These are interpreted as recent deposits of minimal archaeological interest (Crawford 1980:2). Any original archaeological layers, above the bronze age deposits in levels VII and VI, were excoriated by severe wind erosion and human disturbance in the 18th and 19th Centuries (Crawford 1981:1; 1996a:21-2).

Tidal erosion at Rubha an Udail Site 6 has exposed some details of the stratigraphy (Crawford 1974:3), and an enormous trench, cut in the late 19th Century to facilitate salvage operations on shipwrecks (Crawford 1981:1), bisects the entire site down to the natural (Crawford 1980:5). The trench provides two rather grandiose sections of the stratigraphy across much of the site (Crawford 1980:5). Unfortunately, the enormity of this feature creating eastern and western sectors of equal size, interrupts and confuses the lateral continuity of the archaeological surfaces visible in excavation. The ephemeral and inconsistent nature of many levels exacerbates the detrimental effects of this disturbance to the stratigraphy. It is therefore difficult to integrate archaeology, belonging to the same phases, but situated on either side of the nineteenth century trench, across the eastern and western areas of the site. A distinction is maintained between deposits in the western and eastern areas of the site in the following discussion.

8.3.2. A structural sequence

8.3.2.1. Phase E: the pre neolithic or early neolithic period

There are neither structural features nor genuine occupation levels in phase E.[1] Ambiguous indications of human activity occur in the lower layers of level XI (Crawford 1996a:29). The presence of artefactual remains confirms a human presence in this phase.

8.3.2.2. Phase D: the late neolithic period

Signs of initial occupation of Rubha an Udail Site 6 occur in the upper layers of level XI in phase D (Crawford 1996a:29). Several episodes of structural activity are discernible, but only four of the latest remain readily decipherable, the vestiges of earlier ones all but destroyed (Crawford 1996a:27).

The earliest of the surviving structural episodes occur in the eastern half of the site (see Figure 8.3). These initial activities, represented by various stone settings that together form a substantial monumental complex, probably had a ritual function (Crawford1984:1, 5-7). Indeed the first identifiable structure involves the architectural elaboration of a distinctive area of exposed bedrock, where a shallow pit incorporates, and further emphasises, a natural protrusion of gneiss. A modest stone setting, perhaps the vestiges of a wall, defines the eastern edge of this feature, and provides a suitable foundation for the sizeable whale vertebra, installed in a vertical position, crowning the wall. The whale vertebra was perhaps a portal through which votive deposits, for example libations, were dispensed into the feature (Crawford 1984:6), which was reconstructed at least three times (Crawford 1986:7). A substantial pit: "...filled with a dense black deposit and numerous stone and bone artefacts" (Crawford 1984:6) lay beside this alleged votive apparatus. The vestiges of two curvilinear alignments of diminutive orthostats, one of which was dismantled in the neolithic, converge on this supposed depositional focus. A ritual interpretation of these alignments is both plausible and persuasive. The stones that define the sockets of the orthostats are not integral to the stability of the construction. Indeed, Crawford describes these stones as: "...attractive beach pebbles..." (1984:6), and observes that: "...the packers seem almost to be decorative propping" (1984:6). The morphology of the actual orthostats appears significant. Orthostat O is endowed with an: "...eccentric rather phallic shape" (Crawford 1984:6) and orthostat GA, situated in an isolated setting separate from either of these alignments, but oriented towards the same point of convergence:

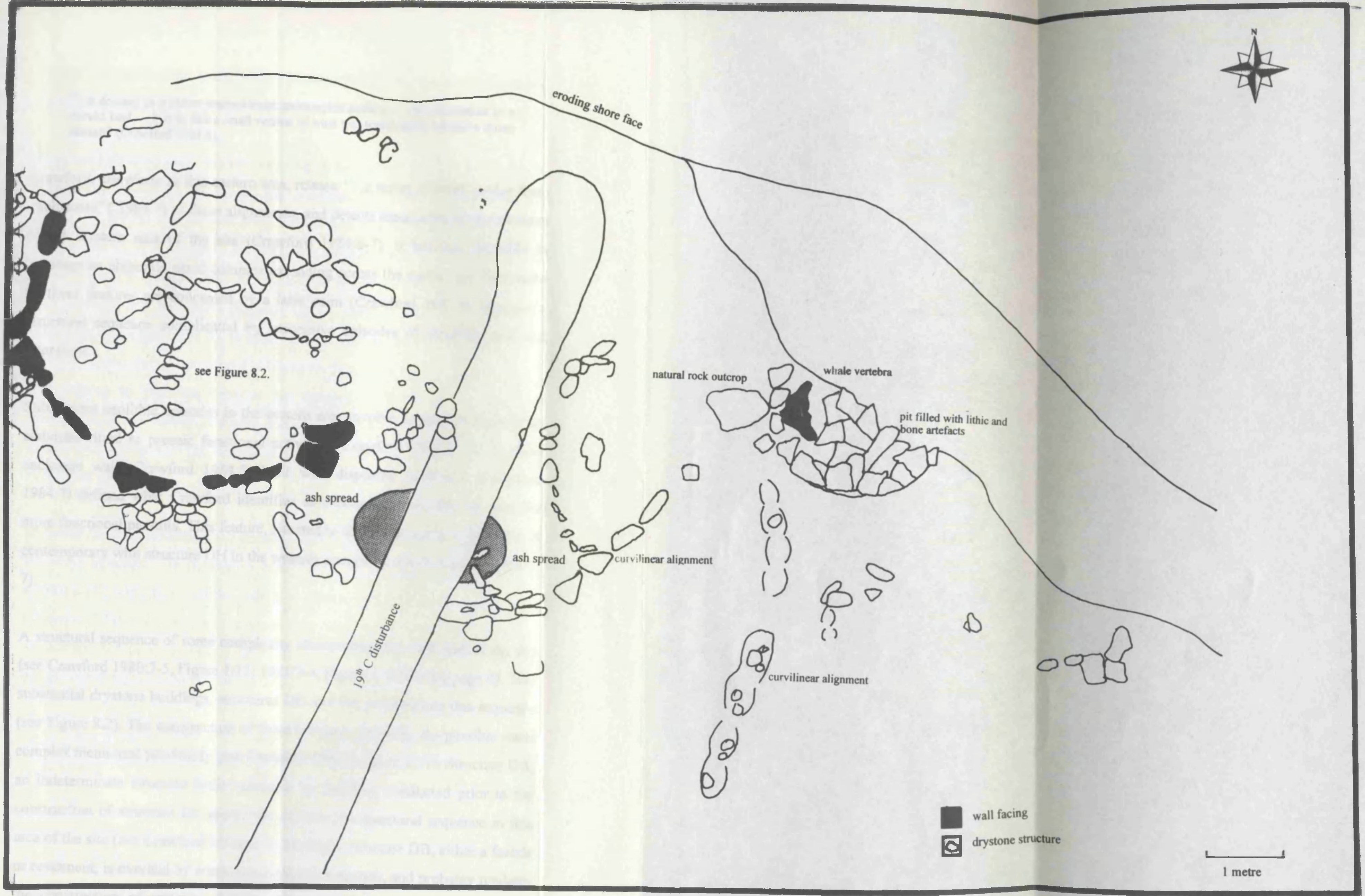


Figure 8.3.: Neolithic archaeology at Rubha an Udail Site 6
(after Crawford 1984:11)

"...is dressed to a rather impressionist zoomorphic outline.. ..and terminates in a curved keel.. ..It is in fact a small version of what was traditionally termed a statue menhir" (Crawford 1984:6).

Crawford, elsewhere in this eastern area, relates: "...a series of small wedge-form enclosures" (1984:7) to these alignments, and detects associated stone structures in the western area of the site (Crawford 1984:6-7). It becomes possible to envisage an elaborate ritual complex extending across the entire site. That some of these features are concealed by a later cairn (Crawford 1984:6) suggests a structural sequence complicated by successive episodes of refurbishment and alteration.

Subsequent neolithic episodes in the eastern area involve a transformation from elaborate ritual to prosaic functional activities (Crawford 1984:5, 7). A small enclosure wall (Crawford 1984:5) built with displaced orthostats (Crawford 1984:7) defined what Crawford identifies as a pound, presumably an area for more functional pursuits. This feature, situated in the upper layers of level XI, is contemporary with structure DH in the western area of the site (Crawford 1984:5, 7).

A structural sequence of some complexity characterises the west half of the site (see Crawford 1980:3-5, Figure 1:11; 1981:3-4, Figure 1: following page 4). Two substantial drystone buildings, structures DH and DJ, predominate this sequence (see Figure 8.2). The construction of these buildings succeeds the possible ritual complex mentioned previously (see Crawford 1984:5, figure c:11). Structure DA, an indeterminate structure badly damaged by levelling conducted prior to the construction of structure DJ, apparently initiates the structural sequence in this area of the site (see Crawford 1996a:27). Similarly, structure DB, either a facade or revetment, is overlain by a substantial depth of deposit, and probably predates the construction of structure DH by some considerable duration (Crawford 1996a:27). Structure DH, which precedes structure DJ, is contiguous with other unspecified, but presumably contemporary structures, and is itself damaged and obscured by subsequent constructions (Crawford 1981:3). The later structure DJ abuts structure DH in this hectic architectural milieu (Crawford 1980:5).

Structure DH is an oval drystone building, 6 metres (m) by 4 m in dimension, with numerous interior furnishings and evidence of several phases of occupation (Crawford 1981:3-4). Two entrances, one of which is blocked, are detectable in its drystone walls (Crawford 1981:3-4). The interior features include small stone edged platforms (feature DH1), a stone lined hearth (feature DH3), curvilinear stone settings and post-holes (features DH2.1, DH2.2) with stone foundations and edges (Crawford 1981:4). A small vertical shaft penetrated the various floor levels to access the natural glacial till beneath them. The various episodes of use are difficult to elucidate because the occupation floors, already thin and discontinuous, are further confused and obscured by sporadic deposits of such glacial till, derived from the vertical shaft, laid down deliberately in the neolithic (Crawford 1981:4).

Structure DJ is a substantial oval drystone building similar to, but larger than, the adjoining structure DH (Crawford 1980:3-4; 1981:3). The drystone walls of structure DJ, with four courses extant in places, are of unusual construction (Crawford 1980:3-4). The walls have an inner facet, made from large flat stones, an internal turf packing, and an outer facet, of substantial rectangular slabs in upright positions (Crawford 1980:4). This entire arrangement is fronted:

> "...with a curious V-formation of small flat stones which may well have both steadied the major walling and prevented etching and undermining by roof dripping" (Crawford 1980:4; feature DJ7).

A polished stone axe had been inserted into the inner wall of the building (Crawford 1980:4; 1986:7). No entrance is discernible in the drystone wall of structure DJ (Crawford 1980:4; 1981:3), an absence readily attributable to removal by tidal erosion (Crawford 1996a:27). In contrast to the earlier structure DH, which continues in use as: "...a working area..." (Crawford 1981:3) at this time, structure DJ supports only a single phase of occupation (Crawford 1981:3).

Internal features include a slab hearth (feature DJ1) and: "...the four major post holes for the roof supports..." (Crawford 1980:4; features DJ3.1, 3.2, 3.3, 3.4).

8.3.2.3. Phase C: the beaker period

The clarity of the beaker horizon, level IX, at Rubha an Udail Site 6 (Crawford 1980:2, 3; 1981:2, 3; 1983:3; 1984:3) and elsewhere in the immediate landscape (Crawford 1980:5) confirm the notion of a discrete episode of occupation (see Figure 8.4). To reiterate, the beaker level displays two separate horizons (Crawford 1984:3-4) which indicate that this location was: "...first the plough land and then later the ritual centre..." (Crawford 1984:4) of the local beaker settlement, Rubha an Udail Site 3 (see Crawford 1996a:25-6).

The lower facet of the beaker level indicates extensive evidence of ploughing (Crawford 1980:3; 1981:2; 1983:3; 1984:4; features CA1-4). The diffuse interface between levels IX and X in the eastern area of the site is attributable to an original disturbance of the stratigraphy by ploughing (Crawford 1980:3; 1981:2). The shallow pits (features CD1-73) that characterise the upper layer of the beaker level disturb the plough evidence, which survives only in the interstices between these pits, in the lower layer (Crawford 1983:3). The ploughing is sufficiently extensive to persuade against a ritual motivation (Crawford 1996a:26).

The upper beaker layer revealed a pervasive distribution of over seventy wide, shallow pits, with a uniform oval shape, and standard dimensions of approximately 2 m by 1.5 m wide and 0.5 m deep (Crawford 1981:2; 1983:3; 1984:3-4; 1996a:25). It is a misnomer to label these features as pits: "...large scoops might be more descriptive..." (Crawford 1983:3). These scoops are prevalent across the entire site, with the exception of areas where underlying neolithic remains restricted the distribution of negative features, and extend beyond the confines of the excavated area (Crawford 1984:3). The function of these features, some of which are lined with stones (Crawford 1981:2; 1983:3),

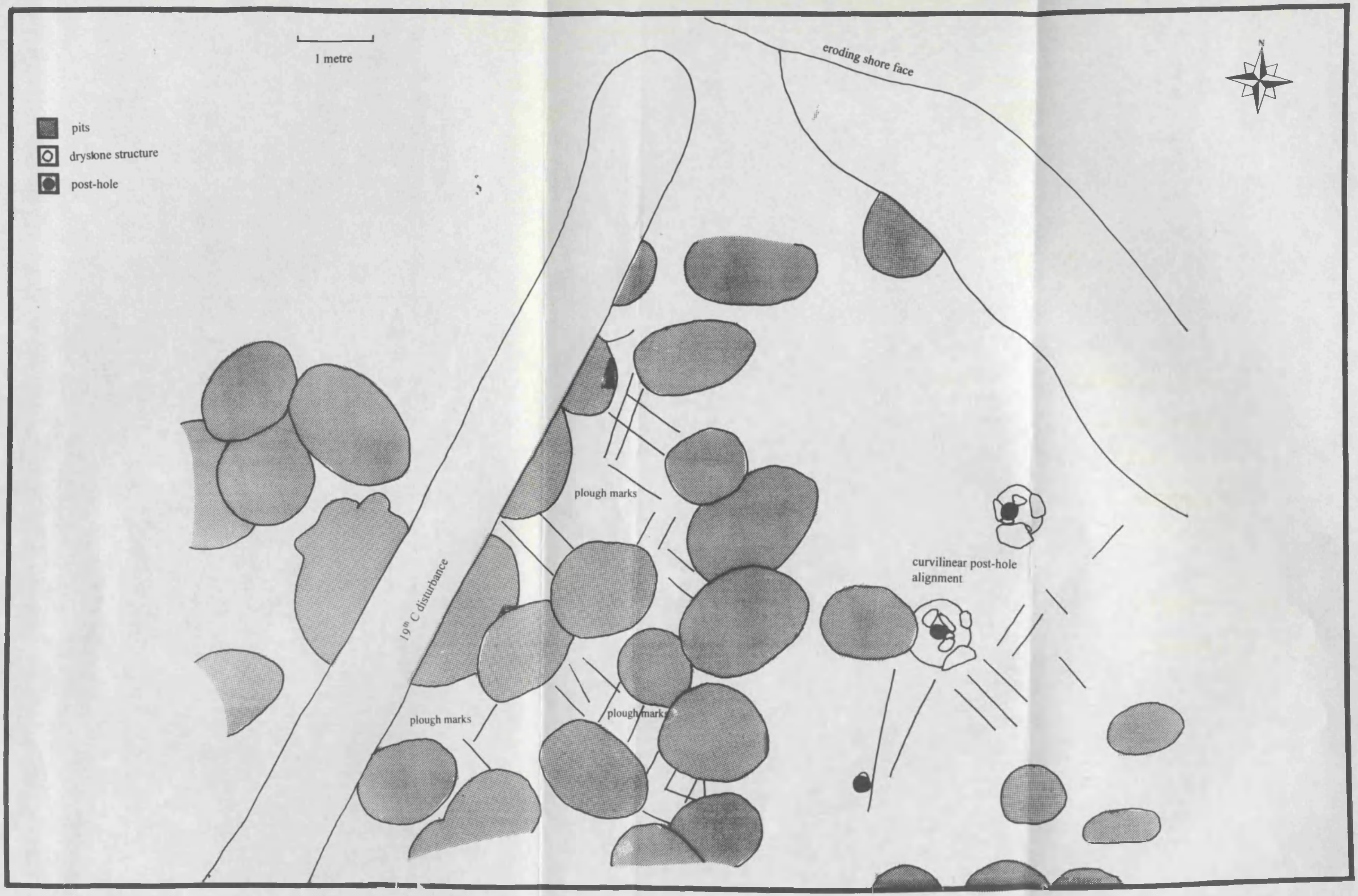


Figure 8.4.: Beaker phase activity at Rubha an Udail Site 6
(after Crawford 1984:10)

remains obscure (Crawford 1981:2; 1983:3; 1984:4). Artefactual deposits are sparse (Crawford 1981:2) and uninformative (Crawford 1983:3). However it is apparent that these scoops were deliberately back filled with turf shortly after their original construction (Crawford 1981:2; 1984:4). Crawford favours either a mortuary or a storage function for these features (1981:3).

The structural evidence in phase C differs from, but demonstrates a continuity with, that of the preceding phase, particularly in the eastern half of the site. In the western area, various stone settings and alignments may represent the remains of a beaker house (Crawford 1980:5). In the eastern half, in an area devoid of scoops (Crawford 1986:7), three substantial post-holes, arranged in a curvilinear alignment, suggest the vestiges of a more substantial but now destroyed monumental architecture (Crawford 1984:4; features CC2-3). The design of these post-holes, unique within the Udal site complex, incorporates a post-socket some 0.3 m in diameter, almost 1 m in depth and: "...lined by a 2 tier system of fine but long stone packers" (Crawford 1984:4). The exceptional depth of these post holes suggests that each supported a timber of inordinate height (Crawford 1984:4; 1986:7). The central post-hole was reset on several occasions, these successive revamps attributable to structural fatigue (Crawford 1984:4). This post hole complex is probably the remnants of a substantial edifice with a ritual purpose (Crawford 1984:4). The location of this complex, effectively superimposed upon the preceding ritual edifice in phase D (structures DD, DE, DF1, DF2), suggests a continuity of ritual practice in this part of the site (Crawford 1987:7; 1996a:26).

8.3.2.4. Phase B: the early bronze age period

Ritual practices continue unabated in phase B. A substantial monumental complex, consisting of three kerbed cairns (structures BA, BB, BC), in the western half of the site, is contemporary with a ritual complex, comprising a standing stone and associated oval enclosure, in the east half of the site (Crawford 1981:2-3; 1983:2; 1996a:23). The nature of ritual structures in phases C and B differ in the selection of raw materials used for the construction of the necessary ceremonial settings. Structures in phase B, built with stone, contrast with those in the preceding phase, built from wood (Crawford 1996a:24).

Crawford mentions, in the western area: "...a small offertory cist..." (1980:3) embedded within level IX, its contents disturbed, and context distorted, by the tidal action responsible for the formation of this deposit. This structure is either earlier than, or contemporary with, the marine inundation (Crawford 1980:3). The successive construction of three circular cairns, above this re-deposited shell sand, attests to the continued use of the location subsequently (Crawford 1974:3). The construction of the offertory cist presumably precedes the beginning of the cairn sequence. The cairns, two of which conceal a central cist with inhumation (structures BB3, BC3), are between 5 and 15 m in diameter, and each is delimited by a substantial drystone perimeter wall. The final cairn in the sequence is the largest, and circumscribes the previous cairn constructions (Crawford 1974:3; 1980:2).

At least ten substantial pits (features BJ1-10) occur in the eastern area of the site (Crawford 1980:5; 1996a:33). One of these pits, adjoining a probable robbed out wall (Crawford 1981:3; 1983:2), is stone lined (Crawford 1980:5). These immense pits, apparently focused around the standing stone (structure BD), are equivalent, if not identical, to the numerous scoops manifest in the preceding phase, and seemingly allude to a continuity of ritual practice between phases C and B in this part of the site (Crawford 1996a:24).

Structure 24, in the eastern area of the site (see Figure 8.5), is a complicated amalgam of features in level IX (see Crawford 1981:2-3, figure 1:5; 1983:1-2, figure 1:4; 1984:2-3, figure A:9; 1996a:33). The structure comprises an oval enclosure (structure BG) and incorporates an adjacent pedestal and monolith (Crawford 1996a:23; structures BD.1, BD2). The enclosure, in which five episodes of use are apparent (Crawford 1984:2), encloses an area of approximately 5 m by 4 m (Crawford 1981:2; 1983:1). These various phases are discernible as successive floors (feature BG4), in each case a compact deposit of

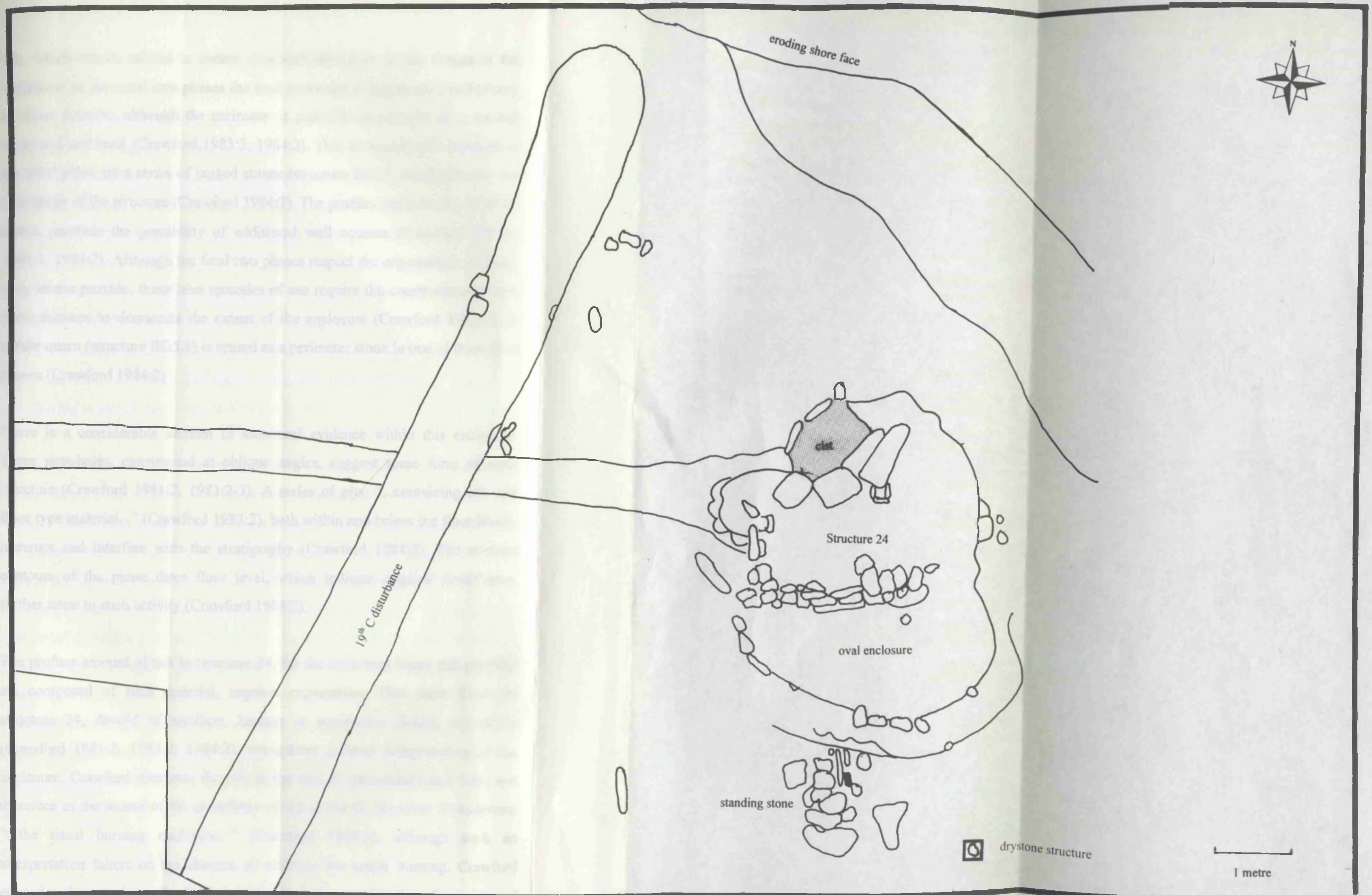


Figure 8.5.: Early bronze age activity at Rubha an Udail Site 6
(after Crawford 1984:9)

ash, which can be related to certain structural alterations in the design of the enclosure. In its initial two phases the oval enclosure is represented exclusively by floor deposits, although the perimeter is probably demarcated by a modest stone and turf bank (Crawford 1983:3; 1984:2). This arrangement is replaced in the third phase by a series of jagged stones (structure BG2), which reiterate the oval shape of the structure (Crawford 1984:2). The profiles and positions of these stones preclude the possibility of additional wall courses (Crawford 1981:2; 1983:1; 1984:2). Although the final two phases respect the organisation of space such stones provide, these later episodes of use require the construction of new stone features to demarcate the extent of the enclosure (Crawford 1981:2). A saddle quern (structure BG5.1) is reused as a perimeter stone in one of these later phases (Crawford 1984:2).

There is a considerable amount of structural evidence within this enclosure. Three post-holes, constructed at oblique angles, suggest some form of erect structure (Crawford 1981:2; 1983:2-3). A series of pits: "...containing ash and floor type material..." (Crawford 1983:2), both within and below the floor levels, interrupt and interfere with the stratigraphy (Crawford 1984:2). The unusual contours of the phase three floor level, which indicate original disturbance, further attest to such activity (Crawford 1984:2).

The profuse amount of ash in structure 24, for the enclosure floors and pit infill are composed of such material, requires explanation. That these floors of structure 24, devoid of artefacts, hearths or occupation debris, are sterile (Crawford 1981:2; 1983:2; 1984:2), strengthens a ritual interpretation of the enclosure. Crawford interprets the pits as the foci of ephemeral ritual fires, and therefore as the source of the abundance of ash (1984:2). Structure 24 becomes: "...the ritual burning enclosure..." (Crawford 1984:2), although such an interpretation falters on the absence of evidence for actual burning. Crawford concedes that: "...these ritual fires may have been very brief conflagrations..." (1984:2). At any rate, structure 24 was evidently a focus for the ritual deposition of ash, if not the source of the fires responsible for its production.

The remnants of the standing stone (structure BD1) and plinth (structure BD2), which form: "...an apsidal extension..." (Crawford 1983:1) to structure 24, are integral to the design of this entire structural complex. Although the monolith remains in its original location, situated within one of the redundant post-holes of level IX (Crawford 1984:3, 4) some 3 m to the south of structure 24 (Crawford 1981:2), only the base survives (Crawford 1981:2; 1983:1; 1984:3). The measurements of the monolith, 0.15 m thick, 0.5 m wide and probably no more than 4 m tall, attest to the foliar profile of a monument hewn from gneiss (Crawford 1984:3). This standing stone, contemporary with the first phase of activity at structure 24, is oriented towards this enclosure and the north (Crawford 1983:1; 1984:3). The plinth comprised a substantial stone setting and turf packing to secure the monolith (Crawford 1984:3).

A cist inhumation (structure BM1), covered by a small kerbed mound (structures BM2, BM3), is constructed subsequently on structure 24 (Crawford 1983:1-2; 1984:2). These later features incorporate some of the redundant architecture of the earlier structure into their design (Crawford 1984:2). In addition to a crouched inhumation, the cist contains a complete red deer skeleton, a large urn, R26, three diminutive bone points, a distinctive pebble and a considerable amount of quartzite. The lithic material, segregated from the other artefactual deposits, is held in a stone compartment within the cist (Crawford 1984:2). The presence of this cabinet, described as: "... a very neatly constructed 'offertory' cistlet with stone sides and bottom..." (Crawford 1984:2), recalls the presence of similar compartments, elsewhere on North Uist, within the interiors of certain neolithic chambered cairns (see Scott 1935:487, 526-27; 1948:8, 12, 31).

8.3.2.5. Phase A: the modern period

The durable nature of the structures in phase B protected the stratigraphy associated with them. Unfortunately, any levels formed subsequently were deflated and effaced by wind erosion, leaving a concentration of artefacts from these vanished levels lying in layers formed relatively recently (Crawford 1996a:21). Activities in the modern period, dating from the 18th and 19th Centuries, but germane to the preceding phases, include robber trenches into the cairn complex in phase B, and the removal of cairn stones for the construction of kelp drying dykes in the immediate vicinity (Crawford 1996a:22).

8.4. An analysis of the ceramic assemblage

The assemblage from Rubha an Udail Site 6, typical of prehistoric sites containing pottery in the Western Isles, is substantial. The following evaluation of this pottery focuses variously on ceramic technology and manufacture, the archaeological nature, style and function of the assemblage, depositional practices, and post depositional processes, to complement the interpretation of the site formulated by the excavator, and summarised in section 8.3.3. above.

8.4.1. The manufacture of the pottery

8.4.1.1. Fabric

The raw materials necessary for pottery production were all available in the immediate locality. The glacial till on which Rubha an Udail Site 6 is located is a readily available source of clay suitable for ceramic manufacture. Indeed, within the confines of structure DH, a vertical shaft afforded access to the glacial till lying beneath the floor levels (Crawford 1981:4). It is not unreasonable to speculate that some of the vessels represented in the assemblage, particularly those from phase D, were manufactured with clays extracted from this source. Presumably, the various minerals and rocks, many of which are unidentifiable at a macroscopic level of analysis, in the fabrics all derive from the local geology. Indeed, the felsic and mafic minerals that *are* identifiable are all probably derived from weathering of the gneiss that outcrops so extensively in the vicinity (cf. Brown nd.).[2]

It is generally impossible to distinguish between inclusions occurring naturally in a fabric and inclusions added deliberately to a fabric. The size range across which any given type of inclusion occurs is invariably continuous rather than discrete, and, similarly, the frequency with which this same type of inclusion occurs within this size range is likely to be variable. The uneven distribution of inclusions within the fabric of, for example, vessel R79 demonstrates the inconsistency in the composition of fabric. However, that fabrics *are* discernible on the basis of differences in the type, size and frequency of inclusions suggests that many such inclusions were added deliberately (cf. Gibson 1995:100). Indeed, there is some evidence to suggest that the density of inclusions within a fabric was altered to facilitate the manufacture of different parts of the vessel. The base of, for example, vessel R22 appears to contain a higher proportion of inclusions than do the corresponding walls.

Interestingly, there were no instances of bone or grog inclusions in any fabric manifest in the assemblage. The profuse amount of bone and, of course, ceramic recovered from Rubha an Udail Site 6 (see Crawford 1996a:14), both substances ideal for use as aplastic inclusions in a ceramic matrix, make the absence of bone or grog inclusions in any of the resultant fabrics notable. This absence presumably alludes to an original proscription on the use of these specific substances in ceramic manufacture.

The inordinate size of the occasional inclusion in any given fabric demonstrates a disregard for the technical dictates of ceramic technology. Substantial quartz and rock inclusions, up to 20 mm in size, frequently protrude from the fabric of various vessels. Many of these inclusions are not simply thin slivers, but substantial fragments of rock.

In certain respects, the fabrics manifest in the assemblage from Rubha an Udail Site 6 are comparable with those in other assemblages of prehistoric pottery in the Western Isles. There is minimal diversity and variability in fabric composition within, if not always between, phases at Rubha an Udail Site 6. Such circumstances are paralleled in the neolithic assemblages from, for example, Calanais (Henshall in prep), Eilean Domhuill (Brown 1996:2), Eilean an Tighe, Clettraval, and Unival on North Uist, Northton on Harris, and Site T26/T26A at Allt Chrisal on Barra (Gibson 1995:100). The fabrics in assemblages for which macroscopic fabric sequences are available are differentiated variously by type, frequency and size of visible inclusions. Gibson defines five distinct fabrics in terms of inclusion type, and one indeterminate fabric on the basis of poor preservation, for the Allt Chrisal assemblage (1995:100). Brown (nd.) distinguishes eight distinct fabrics in terms of inclusion type and size, and one indeterminate fabric on the basis of poor preservation. The general similarities between fabrics within any given assemblage indicate the longevity of employing mineral and rock fragments, supplemented variously by organic and shell inclusions, to temper fabrics satisfactorily in the Western Isles.

Tables 8.2. and 8.3. below itemise the frequency of each fabric manifest in the assemblage, according to phase, with respect to the number of sherds and the number of vessels represented respectively.[3] Despite the overall similarities of fabric composition in the assemblage, there are considerable differences in the frequency of these fabrics between phases. Interestingly, only fabrics 1, 2 and 4 are represented in all phases of the assemblage. Fabric 9 occurs in all but the early neolithic phase; fabrics 3 and 6 occur only in the beaker and early bronze age phases; 5 and 8 are confined to the early bronze age phase; and fabric 10 is restricted to the late neolithic phase. Perhaps the most significant change in the fabric composition of the assemblage lies at the boundary between the beaker and bronze age phases. Essentially, fabrics containing larger shell inclusions, namely fabrics 4 and 9, predominate in the late neolithic and beaker phases, whereas fabrics containing rock inclusions, namely fabrics 2 and 3, predominate in the early bronze age phase. This difference in the frequency of fabric composition arguably represents a transformation from a preference for shell, to a predilection for rock, inclusions in the manufacturing process. No significance is attached to either the occurrence or the absence of fabrics from the modern phase, because all the pottery from this phase derives from disturbed or recently formed contexts.

Table 8.2.: assemblage composition in terms of fabric per phase

phase	fabric	number of sherds	number of sherds as % of all sherds in phase
A	1	8	10
A	2	20	25
A	3	1	1
A	4	1	1
A	9	33	41
B	1	23	2
B	2	153	12
B	3	236	18
B	4	42	3
B	5	14	1
B	6	5	<1
B	8	25	2
B	9	41	3
C	1	1	<1
C	2	43	19
C	3	1	<1
C	4	29	13
C	6	6	3
C	9	107	48
D	1	13	<1
D	10	55	1
D	2	244	5
D	4	280	6
D	9	1141	25
E	1	40	62
E	2	24	37
E	4	1	2

Table 8.3.: number and % of vessels represented in each fabric in each phase in relation to total number of vessels in each phase[4]

phase	fabric	number of vessels	number of vessels as % of all sherds in the phase
A	1	3	16
A	2	7	37
A	3	1	5
A	9	5	26
B	1	5	7
B	2	27	36
B	3	20	27
B	4	4	5
B	5	5	7
B	6	3	4

phase	fabric	number of vessels	number of vessels as % of all sherds in the phase
B	8	1	1
B	9	5	7
C	1	1	4
C	2	6	26
C	3	1	4
C	4	3	13
C	6	1	4
C	9	10	43
D	1	1	1
D	10	6	6
D	2	5	5
D	4	22	22
D	9	53	54
E	1	2	40
E	2	2	40
E	4	1	20

8.4.1.2. Forming methods

There is a considerable amount of evidence to inform upon the manufacturing techniques employed in the making of the pottery. The prevalence of partially exposed, or even entirely detached, internal building coils, and the frequency of laminar fracture throughout the assemblage, together confirm the ubiquity of coiling and lateral joining as the production techniques employed to manufacture the pottery. Approximately, half of the vessels identifiable in the assemblage display some evidence of either coiling, lateral joining or a combination of both such methods. The high incidence of laminar fracture displayed by the pottery, occurring on approximately one third of all sherds in the assemblage, is most likely a consequence of the use of lateral joining in the manufacture of the vessels from which such fragments are derived. The predominance of lateral joining in the Western Isles, remarked upon previously elsewhere (see Stevenson 1953:66), is perhaps surprising, because it is a relatively ineffectual forming method. The resulting lateral joins are effectively planes of weakness within the fabric, susceptible to laminar fracture either during the initial firing or subsequently during use. Original cultural preferences evidently defied modern technological expectations.

The manner in which various parts of a vessel were manufactured is sometimes apparent. The slab join or lateral join between the base and wall indicates that the lower part of a flat based vessel was assembled from previously formed components. The body of a vessel was invariably constructed by combining coiling with lateral joining. Sloping coil joins, which maximised the area of ceramic surface available for bonding, were presumably intended to strengthen the body of the vessel (Gibson and Woods 1990:37). Many coils, combined by lateral joining to thicken the walls, were effectively internal building layers. Rim mouldings were usually formed by folding the necessary amount of clay back upon itself to create the desired morphological elaboration.

It is often difficult to distinguish between rim sherds with a simple or everted convex rim surface, and detached internal building coils, which exhibit a similar, if spurious, morphology. For example, detached internal building coils from vessel R26, a substantial vessel with a bulbous rim morphology, look very much like everted rim sherds from a moderately sized bowl. Similarly, it is often difficult to distinguish between the original external surfaces of a vessel and the lateral building layers employed in its manufacture.

The severity of post depositional abrasion precludes a comprehensive assessment of the surface treatments applied during secondary manufacture. At any rate, the majority of vessels in the assemblage were probably either wiped, smoothed or burnished. Evidence for other types of surface treatment are meagre and inconclusive. The only possible instance of slurrying, on the exterior of vessel R19, remains dubious. Similarly, evidence of roughening, readily confused with pedestalled temper, remains ambiguous. However, the interior surfaces of vessels R85 and R114 were possibly roughened during manufacture. Interestingly, the outside of a vessel is more often in better condition than the inside, suggesting that exterior surface treatments were invariably more thorough than those applied to the vessel interior. The superior resistance to abrasion afforded by burnishing, in comparison with wiping or smoothing, is readily documented elsewhere (Rice 1987; Sinopoli 1991). It is therefore reasonable to suppose that vessels represented in the assemblage from Rubha an Udail Site 6 were frequently burnished on the outside, presumably for both functional and decorative reasons. That some vessels were burnished on the exterior, for example vessels R79, R146, and R170, is certain.

8.4.2. The archaeological nature of the assemblage

The assemblage comprises 6244 sherds, weighing 15656g. The entire assemblage, manifest in poorly fired and friable fabrics, comprises small and severely weathered sherds. The average sherd size and sherd weight in the assemblage is less than 20mm, and less than 3g, respectively.

The composition of the assemblage, measured in terms of the quantity and weight of different sherd types, and tabulated in Table 8.4. below, begins to convey something of its archaeological nature.[5] Much of the assemblage comprises either indeterminate fragments or sherds for which only a provisional identification is possible. The majority of remaining, identifiable fragments are body sherds; other sherd types occur seldom within the assemblage. Of course, a quantitative evaluation of sherd type, germane to a consideration of depositional practices and post depositional processes, fails to inform upon vessel composition in the original assemblage. The interpretive significance of sherd type frequencies is elucidated in Section 8.5. below.

The fragmentary condition of the assemblage frustrates any attempt to identify conjoinable fragments, and hampers attempts to ascertain the form and function of vessels represented in the assemblage. Under such circumstances, an analysis of the assemblage is normally confined to an evaluation of sherds with a distinctive morphology, or otherwise diagnostic trait, to identify the vessels represented. Unfortunately, this methodology necessarily ignores the vast

Table 8.4.: composition of assemblage expressed as frequency of sherd types

feature sherd	number of sherds	number of sherds as % of all sherds in the phase	weight of sherds	weight of sherds as % of all sherds in the phase
indeterminate	2908	47	2155	14
base	42	<1	1384	9
body	2328	37	8011	51
carinated	17	<1	264	2
ceramic object	2	<1	2	<1
neck	18	<1	177	1
rim	158	3	1009	6
shoulder	34	<1	161	1

majority of sherds in the assemblage. Consequently, efforts were made to identify vessel refit groups for all of the pottery. Approximately half of the sherds in the assemblage were collated into sherd families considered to derive from specific vessels. Regrettably, despite following this approach, many of vessels recognisable in the assemblage from Rubha an Udail Site 6 are identifiable from, if not represented exclusively by, a solitary rim sherd, base sherd, or decorated body sherd. About one third of all vessels identifiable in the assemblage are represented by a solitary sherd, and around three quarters of the remaining vessels are represented by fewer than fifteen sherds. An inevitable corollary of this catholic refitting strategy is that many of the vessels discernible in the assemblage are represented exclusively by body sherds, usually with a distinctive superficial appearance.

Some 210 vessels are identifiable in the assemblage. Table 8.5. below offers a summary of vessels represented in each phase.[6]

Table 8.5.: number of vessels represented in each phase

phase	number of vessels
A	19
B	74
C	23
D	99
E	5

Table 8.6.: number of vessels represented by specific number of sherds

number of sherds representing the vessel	number of vessels
1	72
2	26
3	15
4	6
5	9
6	4
7	6
8	5
9	8
10	3
11	10
12	4
13	4
14	3
17	2
18	1
20	2
21	2
22	1
23	2
24	1
25	1
26	1
27	2
28	1
29	1
30	3
31	2
34	1
35	1
38	1
39	2
41	1
48	1
49	1
56	1
62	1
69	1
70	1
72	1
76	1
101	1
110	1
131	1
216	1
696	1

8.4.3. Ceramic styles represented at Rubha an Udail Site 6

The fragmentary condition of the assemblage severely impeded attempts to elucidate either vessel form or vessel type. It is impossible to reconstruct the profile or style of the majority of the vessels identifiable in the assemblage. The following discussion of ceramic styles is limited to a small number of select vessels with a discernible form and recognisable type. A considerable reliance is necessarily placed on the intrinsic morphology discernible on, or deducible from, the surviving vessel fragments to identify ceramic styles potentially manifest in the assemblage. Vessel styles or types are frequently identified on the basis of, for example, rim morphology. Indeed, only 36 vessels, out of a total of 216 identifiable vessels, have a perceivable form, and even fewer are sufficiently diagnostic to merit stylistic comparison.

In an attempt to evade the obstacles to stylistic identification created by a fragmentary assemblage, vessels were intuitively separated into the qualitative categories of fine, moderate and coarse to facilitate interpretation. Criteria employed to distinguish between these subjective descriptive categories included fabric, surface treatment, wall thickness, decoration, and the envisaged vessel dimensions. Essentially, cups, bowls and beakers are treated as fine or moderate vessels; jars and buckets are considered as moderate or coarse vessels.[7]

Table 8.7.: number of vessels in each phase with a discernible vessel profile

phase	number of vessels
A	2
B	8
C	4
D	20
E	2

8.4.3.1. Phase E: the 'pre neolithic' or 'early neolithic' assemblage

Vessel R210 is presumably a bipartite bowl, but its form, whether open, closed or necked, remains obscure. Vessel R211, a neutral shaped vessel with a simple rim and subtle shoulder, is probably a moderately sized jar. Vessels R212 and R214, with slightly everted and beaded rims respectively, are sufficiently delicate to interpret as cups, although residues suggest bowls of indeterminate type.

8.4.3.2. Phase D: the 'late neolithic' assemblage

Innumerable simple rim sherds, with a convex or flattened rim surface, and relatively thin walls, indicate the presence of several possible cups, with either a simple, necked, splayed or constricted profile at the orifice, in the assemblage. Possible simple cups include R121, R146, R152, R153, R160, R163, R166, R170, R173, R181, R191, R194, R199, R202, and R207; possible necked cups include R147, R154, R155, R158, and R190; possible splayed cups, with a slightly everted rim, include R165 and R193; possible constricted cups, with an inturned rim, include R148. Possible bowls, with similar, if larger, rim forms to those found on the possible cups, include R115, R100, R101, R102, R107, R175, R195, R196 and R200; possible necked bowls include R132, R159, R183, and R201; possible bipartite bowls, either open, closed or necked, include R113, R127, R128, R140, R151, R167, R169 and R172; possible open bowls, with externally expanded rims include R112. The profile of R180, possibly a closed bowl, remains obscure. Many neutral shaped vessels, frequently with a flat base and possible shoulder, suggesting the presence of barrel shaped jars of varying sizes, include R114, R116, R117, R118, R119, R126, R131, R133, R139, R150, R157, R162, R168, R174, R182, R186, R204, R206 and R208. R137, probably a neutral shaped vessel, interpreted as a barrel shaped jar, has a horizontal cordon on its exterior surface. The position of the cordon in relation to the height of the vessel remains obscure. Vessels with flat bases and indeterminate, but probably either barrel or bucket shaped, profiles, include R134, R135, R136, R138 and R203.

It is possible to venture into the realms of definite categorical ascription, and offer specific parallels, for the occasional ceramic. Vessel R167, represented by an everted rim sherd, with cardium impressed decoration, is probably an open carinated bowl (vessel type 7), with parallels in evidence at both Eilean an Tighe and Eilean Domnhuill. Vessel R122, decorated with incised lozenge motifs, is a beaker, presumably in the northern tradition (see Clarke 1970), with immediate parallels, in terms of both profile and decoration, in evidence at Northton. Vessel R141, undecorated but with a similar profile to vessel R122, is also interpreted as a possible beaker. Vessels R120 and R205, coarse, thick walled vessels, with fingertip impressed, rusticated decoration, are readily placed within a domestic beaker tradition. Similarly, vessel R178, with undulations on its exterior surface plausibly interpreted as fingertip impressions, is placed within this same broad ceramic tradition. Vessel R164, flat based with horizontal decoration on its exterior immediately above the base, and therefore, presumably, extending across the entire exterior surface, is interpreted as within the domestic beaker tradition.

It is necessary to emphasise that the stylistic identification of many vessels relies exclusively on the intrinsic morphology of the surviving rim fragments. Notably, vessel R206, for example, a moderately sized shouldered vessel with a neutral profile, has a rim form identical to that of many of the rims taken to derive from cups. That there is no direct correlation between rim morphology and vessel style, may, from a pessimistic perspective, make the entire exercise of stylistic comparison specious. Yet some attempt is necessary to isolate potential vessel types to which the vessels identified at Rubha an Udail Site 6 may bear some stylistic affinity.

8.4.3.3. Phase C: the 'beaker' assemblage

Possible open bowls, identified solely on the basis of externally expanded rims, include vessels R99, and perhaps, vessel R106. Vessels, frequently flat based and always with neutral profiles, are interpreted as jars, and include vessels R89, R102, R103, R107 and R109. Vessels R90 and R93, with body sherds embodying a tight curvature, were probably cylindrical shaped, and, as such, locatable within a beaker domestic tradition. Vessel R110 is possibly a fine beaker. Vessel R98, with an inturned rim morphology (type 9) readily paralleled on neolithic pottery from elsewhere in the Western Isles, is probably a necked bowl or jar. Vessel R94, possibly with a bipartite profile, is a heavy bowl. Similarly, vessel R101 may have a bipartite profile. Vessel R217 is a flat based, but otherwise indeterminate, vessel. Vessel R111, otherwise indeterminate, has a cordon on its exterior.

8.4.3.4. Phase B: the 'early bronze age' assemblage

Vessels with a neutral profile, moderate wall thickness, occasionally necked, and frequently a flat base, including vessels R19, R22, R25, R26, R30, R31, R33, R35, R44, R54, R61, R68, R78, R79, R82, R86, and R87 are interpreted as jars. Vessels R71 and R88, each with an indeterminate profile, were flat based, and possibly represent jars.

Vessel R17, with a solitary impression surviving on its exterior, is interpreted as a coarse jar within a domestic beaker tradition. Similarly, vessel R39, if the possible rustication is genuine, is interpreted as a domestic beaker.

Several vessels, of indeterminate form and type, display decoration typical of neolithic and early bronze age pottery in the Western Isles. In this respect, vessels R64 and R74, each decorated with diagonal, parallel linear lines, are both interpreted as a possible fine beaker; similarly, vessel R66, decorated with horizontal, parallel linear grooves, recalls a beaker tradition. Vessel R70, decorated with short, vertical, parallel lines, arranged in horizontal bands, immediately below the rim on the vessel exterior, is probably a necked vessel within the beaker tradition. Vessels R65, R73, and R76 are each decorated with parallel linear grooves in an indeterminate alignment. Vessel R73, represented by a solitary, diminutive body sherd, is decorated with particularly deep, parallel grooves, which do not occur elsewhere in the assemblage. Such decoration is reminiscent of the deep horizontal grooves that circumscribe the neck of unstan bowls immediately below the rim. Indeed, this minute sherd is the only persuasive evidence to attest to the presence of unstan ware in the assemblage. Vessels R41 and R84, each with an indeterminate profile, have a thickened rim (rim form 10) and an externally expanded rim (rim form 4), the latter with an internal bevel, respectively. Both of these rims forms are documented on neolithic pottery from elsewhere in the Western Isles. Vessel R37, represented by a solitary rim sherd, is interpreted as a cup, comparable to similar vessels in preceding phase D.

Vessel R20, and probably vessels R23, R43 and R51, are necked bowls, readily paralleled elsewhere in the Western Isles. Vessels embodying a carination, presumably with a bipartite profile, include vessels R24, R63 and R77. Vessel R69, a carinated bowl (vessel type 7) with an open profile, is readily paralleled elsewhere in the Western Isles.

It is not too fanciful to discern a heavy bowl tradition within the early bronze age phase of the assemblage. Vessels R28, R38, R53, R60, R62, R85, some of which are extremely coarse, each embody a carination, and presumably display a bipartite, but otherwise indeterminate, profile. Vessels R18, R32, R42, R46, R50 each represented by fragments of a substantial externally expanded rim, are possibly heavy open bowls. Admittedly, an external rim expansion, a rim moulding designed to improve the handling properties of a vessel, is not exclusive to open bowls.

Some vessels display a morphology or decoration sufficiently idiosyncratic to make difficult the identification of comparable material from elsewhere. Vessel R45, with an inturned rim, constricted orifice, and neutral profile, suggests a barrel shaped vessel. Vessel R47, with a marked shoulder, probably had a funnelled neck, a constricted orifice and a closed profile. Vessel R52, if the orientation of the rim is correctly identified, has a large internal bevel on a pronounced external expansion, and may be a necked jar. Vessel R65, with apparently isolated, perpendicular grooved and incised marks on its exterior surface, is difficult to position within established ceramic styles. Vessel R75, of indeterminate form and type, was decorated with short, regularly spaced horizontal impressions, immediately under the rim. Vessel R83, a neutral vessel, has deliberate, presumably decorative, corrugations evenly spaced across its exterior surface at regular intervals.

8.4.3.5. Phase A: the 'modern' assemblage

Vessel R3, a neutral vessel with a flattened rim, pinched on its exterior side, is a rim form found amongst neolithic pottery at Eilean an Tighe.

Vessels R14 and R16, each with an everted rim (rim type 2A), the latter decorated with motifs typical of neolithic pottery, are interpreted as necked bowls. Similarly, vessel R4, embodying a carination, is also interpreted as a bowl.

Vessels R5 and R6, each decorated with horizontal, parallel, linear grooves on the exterior, situated, in the case of the latter vessel, immediately under the rim, are interpreted as fine beakers. Similarly, vessel R9, with decorated with parallel linear grooves in an indeterminate alignment, is also interpreted as a fine beaker. Vessel R15, similarly decorated, is more appropriately included within a beaker domestic tradition.

Vessel R8, represented by a minute extremity of a possible external rim expansion, may, if this identification of the rim morphology is correct, be an open bowl. Vessel R2, with a coarse fabric and a neutral shape, is interpreted as a jar. Vessel R1, with an inturned rim, constricted orifice and neutral shape, is more likely later, than earlier, prehistoric.

8.4.4. The function of the assemblage

The poverty of vessels with recognisable form, compounded by a near total absence of vessels with known dimensions, frustrates the development of a functional interpretation of the assemblage. The following, largely speculative, review of vessel function focuses on vessel form, size, abrasion traces and residue patterns.

Table 8.8.: number of each vessel form represented in each phase

phase	vessel form	number of vessels
A	neutral	2
B	closed	1
B	neutral	7
C	neutral	4
D	neutral	20
E	neutral	2

That the vessels with definite profiles in each phase are largely, in some cases exclusively, neutral shaped, is more an indication of the fragmentary condition of the assemblage than an accurate reflection of archaeological reality. Yet it is reasonable to suppose the predominance of neutral shaped vessels in every phase. This suggests that ceramics were used for storage and cooking rather than serving.

Despite the severity of abrasion suffered by much of the assemblage, several vessels retain signs of use related attrition. Indeed, some 23 vessels displays signs of possible use related abrasion on the interior; similarly, 29 vessels show signs of use related abrasion on the exterior. A further 13 vessels display discrete patches of abrasion on the exterior, and another 4 have similar finite traces of abrasion on the interior. These attrition marks frequently relate to vessel morphology in a meaningful way.

Abrasion around the rim, probably acquired gaining regular access to the contents, occurs on vessels R3, R21, R42, R115, R167, R185, and possibly R45. Abrasion around the rim and throughout the interior, probably accrued by stirring and scraping of contents, occurs on vessel R26. Indeed, vessels abraded throughout the interior include vessels R1, R4, R17, R38, R43, R55, R62, R82, R102, and R209. Abrasion around the rim and across the exterior, presumably derived from general manipulation of the vessel, occurs on vessel R154. Similarly, vessels abraded across the exterior, occasionally resulting in a pedestalled temper, include R7, R13, R19, R20, R22, R25, R33, R52, R59, R61, R96, R100, R113, R117, R119, R159, R161, R162, R206, R208. Vessels abraded on both the interior and exterior include vessels R86, R105, R174. Abrasion is frequently concentrated on a specific, usually prominent part of vessel morphology, and therefore one more susceptible to attrition. For example, vessels abraded on one side only of the exterior of a carination include R94, R140, and R210; similarly, vessel R151 is abraded around the interior of a possible carination. Vessel R122 is abraded on the exterior of the shoulder and also throughout the interior; vessel R157 is partially abraded across the interior. Abrasion concentrated on the exterior of the base, suggesting frequent handling and positioning of vessels in an upright position, occurs on vessels R28, R88, R217, R116, R139, R150, R168. Abrasion on the interior of the base, the part of a vessel most susceptible to attrition from stirring and scraping of the contents, occurs on vessel R89. Abrasion throughout the interior, creating a pedestalled temper, and on the basal exterior occurs on vessel R28, which is also abraded around the rim, and vessel R134.

Numerous vessels retain evidence of sooting or charred food accretions. Over 50 vessels have such residues adhering to their exterior; nearly 60 vessels have such residues ingrained in their interior. Heavy sooting or macroscopic food residues occur on the inside of the rim on vessels R37, R115, R194, and R196; on the outside of the rim on vessels R98 and R124, R170, and R198; and on both sides of the rim on vessels R3, R166; on the outside of the rim and body on vessels R11, R26, R93, R107, and R158; on the inside of the rim and body on vessel R154; on both sides of the rim and body on vessels R152, R173, and R206; on the outside of the rim and inside of the body on vessels R52 and R211; on the outside of the rim and body, and inside of the body, on vessels R212, R122 and R141; on the outside of vessels R17, R19, R38, R43, R44, R60, R89, R90, R126, R128, R132, R137, R143, R168, R169, and R172; on the inside of vessels R12, R13, R25, R30, R33, R35, R47, R59, R66, R67, R86, R100, R105, R108, R113, R117, R119, R142, R149, R179, R180, R182, R189, R204, and R208; on both the inside and outside of vessels R20, R91, R114, R116, R120, R129, R140, R150, R157, R159, R161, and R162; on the inside, including the base, of vessel R22; on the outside, including the base, of vessel R136; on both the inside and outside of the carination on vessels R104 and R127; Admittedly, the residues on some vessels, for example R212, R127, R141, R152, R159, R182, and especially R132, could be the flaky remnants of a decaying slip.

Residue patterns often relate to vessel morphology in specific ways. Sooting or macroscopic food residues on a vessel exterior, for example vessels R11, R93, R97, R107, R115, R122, R158, R190, R198, R206 frequently extend onto, but not entirely across, the rim surface. This distinctive coloration, possibly attributable to firing, is preferably interpreted as sooting. Similarly, charred food residues on the inside of a vessel, for example vessels R115 and R175, sometimes stop abruptly immediately below the rim. On vessel R137 the sooting is confined to the exterior above the cordon; on vessel R140 sooting is confined to one side on the exterior of the carination; on vessel R114 sooting appears to form a distinct band across the exterior; on vessels R157 and R206, sooting on the exterior forms a distinct edge aligned with the curvature of the neck and shoulder respectively.

Many of these possible use related abrasion patterns reveal something of the manner in which the vessels were manipulated. Unsurprisingly, the basal surface of flat based vessels is a focus for abrasion. More notably, the abrasion on one side of a carination, probably relates to the manner in which bipartite vessels were handled and rotated during use. Unfortunately, the vicissitudes of taphonomy preclude a systematic review of possible use related abrasion. Yet the attrition patterns and residue patterns occasionally identifiable, and itemised above, indicate an assemblage composed of vessels actively used, presumably for domestic tasks. The overwhelming presence of moderately sized neutral vessels in the assemblage suggests use as short term storage containers or as cooking pots. The attrition marks and residue patterns itemised below confirm, in every phase, an assemblage frequently handled and regularly placed over open fires. Certainly, some vessels, namely R89 and R122, exhibit a glossy sooting probably acquired through prolonged use over an open fire.

8.5. Depositional practices at Rubha an Udail Site 6

The assemblage from Rubha an Udail Site 6 is readily interpreted as domestic rubbish, accidentally broken, casually discarded, and greatly disturbed by successive episodes of activity on the site. This interpretation explains both the original composition, in terms of vessel styles represented, and the current state, in terms of sherd type, size, quantity and condition, of the assemblage. Only vessel R89, from a negative feature (structure CE) in level IX.34, and vessel R26 from the cist (structure BM1), in level VIII, overlying structure 24 (structure BG), in level IX, are preferably interpreted as deliberate deposits. A resume of the depositional history envisaged for the pottery from each phase is given later below.

The tendency for sherds registered under the same small finds number to embody a similar appearance probably indicates more than simply a worthy attempt to organise the pottery into recognisable vessel refit groups in the field. The similarities of the sherds bagged together, an equivalence perhaps exacerbated by the initial sorting in the field, alludes nonetheless to a close correspondence between sherd family and depositional context. This suggests, firstly, that the original context of deposition and the final context of recovery are potentially synonymous; secondly, that the pottery was probably deposited as larger pieces and broken further only by taphonomy; and, thirdly, that these post depositional processes did not result in the dispersal of sherds across multiple contexts.

A total of seventy two vessels derive from multiple contexts. Table 8.9. below lists these vessels according to phase. That the majority of the contexts from which sherds attributable to the same original vessel derive are closely related is immediately apparent. This scenario confirms the initial impression of the pottery after a superficial examination of the assemblage prior to a detailed analysis.

Table 8.9.: list of vessels which derive from multiple contexts

phase	vessel	phase	vessel	phase	vessel	phase	vessel	phase	vessel
A	R12	B	R34	C	R100	D	R125	D	R162
A	R20	B	R35	C	R105	D	R127	D	R164
A	R28	B	R38	C	R107	D	R128	D	R167
A	R69	B	R43	C	R89	D	R129	D	R168
B	R17	B	R44	C	R91	D	R131	D	R169
B	R18	B	R47	C	R92	D	R132	D	R175
B	R19	B	R50	C	R93	D	R137	D	R177
B	R20	B	R52	C	R96	D	R140	D	R188
B	R215	B	R53	D	R114	D	R141	D	R189
B	R23	B	R54	D	R115	D	R142	D	R206
B	R24	B	R60	D	R116	D	R144	D	R210
B	R25	B	R62	D	R117	D	R150	E	R210
B	R28	B	R66	D	R118	D	R154		
B	R30	B	R69	D	R119	D	R157		
B	R32	B	R86	D	R120	D	R160		
B	R33	B	R88	D	R122	D	R161		

Table 8.4. in Section 8.4.2. above quantifies the composition of the assemblage with respect to sherd type. The number of sherds derived from distinctive parts of a vessel, that is parts other than the body, is minuscule. This relative absence is only partly explained with reference to the unremarkable morphology of many of the vessels represented in the assemblage. Indeed, the paucity of rim sherds and base sherds in the assemblage is sufficiently acute to require explanation. There are some 160 definite rim sherds, representing 123 vessels, and approximately 40

definite base sherds, representing 29 vessels, identifiable at Rubha an Udail Site 6. These base and rim sherds represent less than 1 and 3 percent of the total quantity of sherds in the assemblage respectively, and less than 9 and 7 percent of the total weight of the assemblage respectively.

Admittedly, if an entire vessel is represented, the quantity of body sherds will invariably exceed the number of rim or base sherds identifiable in an assemblage, an effect exacerbated by diminutive sherds. This general maxim assumes, firstly, that each vessel represented was complete upon discard; secondly, that each vessel was recovered in its entirety during excavation; thirdly, that sherd types and sherd families were correctly identified during post excavation analysis; and, fourthly, that every sherd from a given vessel is roughly the same size. That these assumptions are unverifiable ensures that the poverty of specific sherd types in the assemblage escapes a definitive interpretation. Yet such assumptions are alone unable to explain the negligible quantity of rim or base sherds in the assemblage.

If the presence of pottery at Rubha an Udail Site 6 is largely incidental, a consequence of accidental breakage and casual discard, then the proportion of rim and base sherds represented in the assemblage is less than expected. The presence of *some* such sherds in the assemblage suggests that such fragments were indeed discarded upon, or immediately after, breakage. The poverty of these sherds is probably not a consequence of original absence. Instead, it seems likely that rim and base fragments were recovered and removed from the site, either upon breakage or shortly after discard, for reuse and, ultimately, deposition elsewhere. Substantial vessels, presumably with sturdy, if not elaborate, rim mouldings, and thickened flat bases, are represented in the assemblage, but such derivative rim and base fragments do not survive. The vast majority of rim and base sherds left uncollected, and therefore represented in the assemblage, are diminutive. Many of the rim sherds embody a simple rim form; many of the base sherds have truncated walls. At a cursory glance, these fragments, small and unremarkable, are easily mistaken for mundane body sherds of little consequence. Unsurprisingly, such fragments were neglected, in marked contrast to distinctive parts of the rim or base, and not retrieved for further curation. A fundamental objection to this argument is the longevity of such a depositional practice, because the absence of sherds from distinctive parts of a vessel characterises the pottery from all phases of the site.

Table 8.10.: feature sherds totals and percentage by phase

phase	feature sherd	number of sherds	number of sherds as % of all sherds in phase	weight of sherds	weight of sherds as % of all sherds in phase
A	body	35	43.75	123	50
A	neck	1	1.25	5	2
A	rim	10	12.5	35	14
B	base	7	<1	100	2
B	body	422	32	2933	59
B	carinated	8	<1	169	3
B	neck	5	<1	110	2
B	rim	41	3	739	15
B	shoulder	2	<1	23	<1
C	base	7	3	758	60
C	body	156	70	338	27
C	carinated	1	<1	62	5
C	rim	10	5	31	2
D	base	28	<1	526	6
D	body	1668	37	4545	51
D	carinated	8	<1	33	<1
D	ceramic object	2	<1	2	<1
D	neck	12	<1	62	<1
D	rim	90	2	191	2
D	shoulder	32	<1	138	2
E	body	47	72	72	64
E	rim	7	11	13	12

The absence of many familiar types of pottery from the assemblage requires scrutiny. The most obvious explanation for this lacuna of styles is a chronological disparity between the anticipated and actual dates of the various phases of the assemblage. Yet the admittedly meagre presence of *some* familiar ceramic styles in the appropriate phase indicates that a chronological discrepancy may not account for the absence of other contemporary styles from the assemblage. The presence of grooved ware or beaker pottery in the late neolithic phase, for example, leads to the expectation of hebridean or unstan ware, either in the preceding early neolithic phase, or as residual finds in subsequent phases. That no definite examples of the latter styles survive suggests that depositional practices, rather than a temporal divergence, was responsible for their absence from the assemblage. The awaited radiocarbon dates will clarify the chronology of the provisional phasing more effectively than any recourse to typology.

The degree of brokenness and completeness of the vast majority of vessels represented at Rubha an Udail Site 6 conveys adequately the impoverished nature of the assemblage.

8.5.1. The pre neolithic or early neolithic phase (phase E)

All of the vessels identifiable in the early neolithic phase are poorly represented by small and largely abraded sherds. Interestingly, there are no discernible structures or features in this phase (Crawford 1996a:29-30). That the vessels represented are fragmentary and incomplete suggests that the constituent sherds are much disturbed and residual finds. These sherds are unlikely to be intrusive finds because the machair sand from which they were excavated is a particularly stable depositional matrix subsequent to formation (Crawford pers comm.). The presence of pottery therefore attests to activity not otherwise represented by structural evidence in this phase, and, presumably, indicates the presence of occupation nearby. The earliest definite occupation layer occurs in the succeeding phase D.

8.5.2. The late neolithic phase (phase D)

A prodigious amount of ceramic relates to structure DH in the 'late neolithic' phase. Approximately 1100 sherds, weighing some 3700 g, comprising 25 percent of the total number, and 40 percent of the total weight, of sherds within this phase, are derived from contexts affiliated with this structure. The average sherd size and sherd weight is 20mm and 4g respectively; no sherd is larger than approximately 80mm. Unsurprisingly, many of the resultant vessels represented by this material derive mainly from contexts associated with this same structure. Indeed, of the fifty three vessels discernible within this building, thirty vessels derive exclusively from structure DH. Admittedly, twelve of these vessels are represented by orphan sherds. An additional ten vessels also derive predominantly from structure DH. A further five vessels are partially, if not primarily, represented in structure DH.

There is some evidence to indicate deliberate deposition or disposal in specific features within structure DH. An examination of the various features in the interior of structure DH reveals a demonstrable correspondence between vessels represented and depositional context. The following examples demonstrate this general equivalence. Vessels R117, R162, R164, and R206 derive either primarily or exclusively from infill deposits of an unspecified feature, also containing skeletal remains, in level XI. Similarly, vessels R114, R150, and R151 derive either primarily or exclusively from the infill of a negative feature, also containing profuse amounts of shell. Vessels R142 and R144 derive largely from the infill of another shallow negative feature. Vessel R116 derives primarily from the hearth, and the area to the east of the hearth, in floor 1. Vessel R154 derives mostly from the area to the west of the hearth in floor 1. Importantly, these contexts, many of which are negative features, invariably contain a meagre number of diminutive sherds representing yet more vessels. The shallow negative feature containing sherds from R142 and R144, for example, also contains a few fragments from R122 and R177. The presence of the latter, poorly represented by occasional sherds, suggests disturbance of any feature in which such circumstance occurs.

Certain vessels, whether deliberately deposited or casually discarded, are sufficiently complete, and exhibit minimal dispersal across contexts, to suggest that they occupy an original depositional locale. Indeed, the degree of completeness and brokenness of many of the numerous vessels exclusively or primarily represented by sherds from contexts in structure DH indicates that these vessels were probably broken, or at least discarded, within the confines of this structure, and trampled upon subsequently. Vessels R118, R122, R157, R158, R161, and R182, each represented by innumerable, and frequently diminutive, sherds, all derive primarily, and sometimes exclusively, from level XI.01 and the top of floor 1 within structure DH. Vessel R120, represented by a few large sherds and innumerable smaller fragments, derives largely from early stages of level XI.2. Vessel R115, represented by several small sherds, derives variously from levels XI.01, XI.2 and the top block of floor 1.

The majority of vessels identifiable in structure DH are represented by especially small sherds. It is reasonable to envisage the further disturbance, fragmentation and dispersal of sherds originally from the same vessel after discard within this structure. Indeed, the fragmentary nature of the pottery, and the large quantity quartz or quartzite items and occasional flints (Crawford 1980:4; 1981:4), together confirm the interpretation of structure DH formulated during excavation (see Crawford 1996a:27).

Many of the other structures and features recognised in the 'late neolithic' phase also contain pottery. A modest amount of pottery derives from the later structure DJ (see Crawford 1996a:27). Approximately 90 sherds, weighing nearly 300g, comprising less than 1 percent of the total number, and less than 4 percent of the total weight, of sherds in this phase, respectively, derive from contexts associated with structure DJ. Six vessels are exclusively represented in contexts germane to structure DJ. Admittedly, two vessels are represented only by orphan sherds. An additional five vessels are partially represented in contexts affiliated with structure DJ. The quantity of pottery recovered from structure DJ is small in comparison with that excavated from structure DH. However, some similarities, in terms of depositional practices, are recognisable in these successive structures.

There is evidence of intentional discard, and even votive deposition, in structure DJ. Vessel R112, exclusively derived from under the walling of this building, was probably deliberately deposited, perhaps as a foundation deposit. Similarly, vessels R136, R137 and R139, all of which derive exclusively from a pit in the interior of the structure, were probably deliberate deposits. That these four vessels are relatively well represented by numerous, often moderately sized, sherds, and that each is confined to a single context, occurring nowhere else on the site, further suggests controlled deposition. The presence of a polished stone axe, inserted into the inner wall of the building (Crawford 1980:4; 1986:7), confirms the deliberate deposition of at least some items of material culture in structure DJ.

Pottery is also associated with other features, including, for example, structure DB, the facade in level XI.22; structure DC, the central setting of a possible ritual complex; feature DL, a pit in level XI c/d; and, finally, feature DK, a discrete burnt and blackened area outside structures DH and DJ. A solitary sherd from vessel R122, and another from vessel R125, occur within structure DB, which probably precedes structure DH (Crawford 1996a:27), in the early stages of level XI.2. The fragment from vessel R122, well represented in structure DH, is presumably intrusive. Vessel R135, derived exclusively from feature DC, is the only vessel identifiable in this structure, and was deliberately smashed as a votive offering (see Crawford 1996a:27). Vessel R138 derives exclusively from another pit, located elsewhere on the site, in level XI c/d. Vessel R168 derives largely from feature DK, but is partially represented by larger fragments within structure DH in the early stages of level XI.2. Interestingly, the only other vessel identifiable in feature DK, vessel R120, represented by two small sherds, otherwise derives almost entirely from the early stages of level XI.2 in structure DH. That the only two vessels identifiable in feature DK also derive from the same context within structure DH suggests that the former feature comprises a dump for material initially broken or discarded within structure DH.

There is some evidence to suggest minimal dispersal after breakage. The fragmentary remnants of vessel R149, from a specific location in level XI, suggest that the vessel, represented by innumerable associated fragments, merely disintegrated after discard. That vessels R185 and R193, each represented by orphan sherds, also derive from this immediate location, merely confuses the issue. Vessels R133 and R134 are represented by often sizeable sherds exclusively derived from the junction of buildings 2, 3 and 5. Vessels R156 and R179, each represented by numerous fragments, are both from blackened floor Y, which is truncated by feature AA. Vessel R171, represented by moderately sized sherds, derives from the early stages of level XI.2. Vessels R172 and R173, represented by numerous diminutive sherds, derive from level XI.02. None of these vessels is represented in other contexts elsewhere on the site.

Thirty one vessels represented in the 'late neolithic' phase derive from multiple contexts. The majority of these vessels are at least partially represented in contexts relating to specific structures. Particularly, vessels R129, R131, and R160, are, to varying degrees, represented by sherds from contexts in both structures DH and DJ.

Approximately a quarter of the vessels identifiable within phase D are represented by a solitary sherd. That the sole representation of each of these vessels, which together comprise a substantial proportion of the assemblage in the 'late neolithic' phase, is a single sherd, invariably minute, suggests that many vessels broken on site were removed after breakage and then deposited elsewhere. Essentially, the sherds remaining were insufficiently large to merit retrieval.

8.5.3. The 'beaker' phase (phase C)

The majority of vessels identifiable in the beaker phase are fragmentary and incomplete. Only vessel R89, from a negative feature (feature CE) in level IX.34, was deposited relatively intact. The absence of rim sherds, and the presence of conjoinable base sherds, suggests that only the lower portion of the vessel was deposited. Indeed, the amount of pottery from this context is insufficient to reconstruct a vessel of this size. Minuscule sherds, probably derived from vessel R89, were recovered from outwith feature CE, in levels X.0/.1 and IX.3/X, increasing the likelihood of either the breakage of the vessel before deposition, or the disturbance of feature CE after deposition.

Of the twelve vessels represented by multiple sherds, only three, namely R90, R93, and R97, are represented by sherds that derive exclusively from a single context. R93, represented by minuscule fragments, is derived exclusively from, and evidently accompanied R89 within, feature CE. Presumably, a larger fragment of this vessel was deposited in this feature, and broken subsequently by taphonomy. Vessels R90 and R97 are represented by small sherds recovered from levels X.0. or X.1 and level X respectively.

The remaining nine vessels derive from multiple contexts. Many of these are poorly represented by diminutive sherds, and derive variously from the pits and layers in level IX.3. The incomplete and fragmentary condition of these vessels alludes to an initial deposition elsewhere, then disturbance, dispersal and eventual re-deposition across the site.

That eleven vessels are represented by solitary, and, in the case of R94, substantial, sherds, demonstrates the incomplete nature of the pottery, and conveys something of the degree of disturbance presumably responsible for this partial representation of the original assemblage.

8.5.4. The 'early bronze age' phase (phase B)

R26, deposited into feature BM, a cist containing a crouched inhumation, a complete red deer skeleton, three diminutive bone points, a distinctive pebble and a considerable amount of quartzite. was certainly an intentional deposit (see Crawford 1984:2). The lithic material, segregated from the other artefactual deposits, was held in a stone compartment within the cist (Crawford 1984:2). Despite the robust morphology and substantial size of R26 there are no base sherds remaining. Evidently, only the upper part of this vessel was interred in the cist.

Some vessels from this phase relate to other features and structures identified around the site. R30, with the exception of one sherd dubiously assigned, derives exclusively from a pit beneath a stone in floor 1 of structure 24 within feature BG. That the four largest sherds refit into two larger fragments suggests that a substantial part of this vessel was deposited intact. Other vessels, represented by sherds from multiple contexts, but including fragments from specific features, include R215, from floors 2 and 3 of structure 24 within feature BG4; R32 from the infill of feature BH to the east of feature AA; R34, R38 and R53 from 'Janis' Inlaid Feature' in levels IX-XII; R35, and possibly R60, from the slab or cist slots within feature BB3; R47 from floors 1 and 2 of structure 24 within feature BG4, and from 'Janis' Inlaid Feature' in levels IX-XII; R62 from the large pits, and possibly floor y, in the east half of the site; R69 from both the cist insert and cist infill III within feature BB; R86 from floor 0 in feature BH; R25 from floor 0 and the capping of cist 24 within feature BM. Many of the vessels identified in these features and structures are there represented by a few sherds only, or better represented in other contexts located elsewhere across the site. Importantly, the sherds representing these numerous vessels do not derive exclusively from these specific features. There is, then, no reason to suppose that any of the aforementioned vessels, with the exception of vessels R26 and R30, were deliberately deposited or associated with these features or structures.

Many vessels were recovered from multiple contexts apparently unrelated to specific features or structures. These vessels, which derive predominantly from levels IX.1 and IX.2, but also from levels VII and VIII, in the east part of the site, are usually poorly represented by diminutive sherds. The incomplete and fragmentary condition of these vessels alludes to an initial deposition elsewhere, then disturbance, dispersal and eventual redeposition around the site. Yet there is some evidence to suggest that certain vessels were discarded relatively complete in some of these contexts. R20, derived primarily from floor y in the east part of the site, was, judging from the quantity of sherds surviving, deposited whole, but broken and scattered subsequently. Similarly, R28, recovered variously from levels VII, VIII, IX.1, IX.2, IX.21 and X, is sufficiently well represented to suggest deposition entire, but further breakage and dispersal subsequently.

That twenty four vessels are represented by solitary, and, in the case of R39, R41, R55, and R87, substantial, sherds, demonstrates the incomplete nature of the pottery, and conveys something of the degree of disturbance presumably responsible for this partial representation of the original assemblage.

8.5.5. The 'modern' phase (phase A)

All of the vessels identifiable in the modern phase are poorly represented by small and largely abraded sherds. The majority of these sherds, all derived from disturbed contexts, were recovered from successive machair horizons deflated by wind erosion, from erosion edges, and during surface clearance (Crawford 1996a:21-2). The condition of the pottery, where the vessels represented are fragmentary and incomplete, is therefore unsurprising, and further confirms the interpretation of these contexts as much disturbed. The pottery from the modern phase includes styles that encompass the entire chronological range of the assemblage.

8.6. Post depositional processes at Rubha an Udail Site 6

The physical condition of the assemblage frustrates any attempt to use the pottery to investigate differential post depositional processes across the site, because the vast majority of sherds are small, abraded and concreted. Indeed, some 4725 sherds, approximately 75 percent of the total number of sherds in the assemblage, weighing some 8432g, approximately 53 percent of the total weight of sherds in the assemblage, are abraded across all surfaces and fracture profiles. Some 461 sherds, approximately 7 percent of the total number of sherds in the assemblage, weighing some 3394 g, approximately 21 percent of the total weight of the assemblage, are concreted across all surfaces and fracture profiles. Essentially, only around 1470 sherds, approximately 28 percent of the total number of sherds in the assemblage, weighing some 6424 g, approximately 41 percent of the total weight of sherds in the assemblage, escape entirely from some degree of abrasion, concretion, or both.

The fragmentary condition of the assemblage is not entirely due to the disturbance of discarded pottery during successive phases. The weight of the overlying machair sand probably precipitated the further fragmentation of vessels already broken and previously deposited. The innate friability of the constituent fabrics, and the waterlogging of many contexts for prolonged periods at some indeterminate time in the depositional history of the site, discussed further below, probably compounded the propensity of the pottery to disintegration. This post depositional scenario recalls, and certainly explains, the close correspondence between sherd family and depositional context. Indeed, the recurrence of innumerable diminutive sherds, apparently from the same vessel, in association within the same context, is, in all phases of the assemblage, endemic.

A significant amount of pottery and other artefacts in the Ruhba an Udail Site 6 assemblage are embedded within larger concretions of machair sand and disintegrated gneiss. These curious amalgams of disparate artefactual material and consolidated contextual matrix are evidently a consequence of post depositional processes operating at the site. Various artefacts and environmental evidence, including charcoal, shell, bone, ceramic, mica, quartz, feldspar, and indeterminate rock, are embedded within these concretions. These artefacts, many of which survive as whole objects, are often of considerable size. The ceramic often comprise substantial sherds, the shells are invariably complete, and the bones, although disarticulated, are seldom fragmentary. The consolidated matrix was initially interpreted as an extremely friable and poorly fired fabric, namely fabric 7, and the artefacts it contained as deliberate inclusions. However, a more satisfactory interpretation of these amorphous lumps explains them as the curious consequence of natural formation processes.

The various reasons to suggest that these unusual concretions are a product of natural post depositional processes are persuasive. Firstly, close inspection of the ceramic embedded within the matrix reveals conjoinable sherds from the same vessel, indicating that the pottery has broken in situ. Secondly, many of these sherds exhibit signs of deformity, and, although from different vessels, are apparently contiguous. These sherds have evidently been deformed and compressed together by taphonomy, frequently at awkward angles, to create bizarre amalgams of ceramic. Thirdly, there are no instances in which the consolidated matrix itself exhibits a coherence of form or design. On occasion, these concretions acquire the shape of the ceramic to which they adhere, or which they contain, lending them the misleading appearance of a recognisable morphology. Fourthly, the inordinate size of some of these concreted lumps makes it unlikely that any derive from conventional ceramic containers. Fifthly, the laminated texture of these consolidated amalgams, and the profuse quantity of eclectic artefacts they contain, suggest that these lumps are best interpreted as the detached and concreted remnants of larger midden deposits.

After deposition, the physical pressure, or detrimental chemistry, of the overlying machair sand has distorted, compacted, and finally, consolidated the extant sherds together into a miscellany of artefactual material and consolidated depositional matrix. The *deformation* rather than *fracture* of many sherds suggests that the depositional contexts in which such pottery lay was waterlogged. Ceramic, as a brittle substance, is more likely to break than bend, and disintegrates after prolonged immersion in water. However, it is possible that decomposed sherds firmly encased within machair sand would retain their shape, due to the fine texture and supportive structure of the depositional context. Indeed, such pottery would undergo a deformation, rather than a collapse, of morphological form, and, upon consolidation. Presumably, the deformed pottery from Rubha an Udail Site 6 was firstly decomposed by waterlogging, then deformed by the physical pressure of the overlying machair sand, and, finally, either consolidated by this same physical pressure or concreted by chemical percolation, to appear with an altered morphology.

8.7. Conclusion

The notion of deliberate deposition of artefacts within apparently domestic structures may seem an unnecessary interpretive complication, induced by a superfluous theoretical hedonism. Yet there is reason to believe that deliberate deposits of material culture were an essential component of the buildings in which they may occur. The stone axe inserted into the wall of structure DJ in phase D (see Crawford 1980:4; 1986:7), alludes to the necessity of specific artefacts becoming part of the fabric of the building itself. These acts of deposition, which effectively facilitate the transformation of material culture, from artefactual commodity to structural resource, are best interpreted as activities crucial to the preservation of domestic routine and, ultimately, to the continuity of habitation at the site.

The composition of other substantial assemblages of prehistoric pottery known from elsewhere in the Western Isles, expressed in terms of sherd type and vessel type represented, contrast strongly with that from Rubha an Udail Site 6. The assemblages from Eilean an Tighe, Unival, Clettraval, and Eilean Domhnuill on North Uist, and from Northton on Harris, generally contain larger sherds, and, importantly, an array of sherd types more representative of the vessels from which they derive. Furthermore, the vessel forms and types variously represented in these assemblages, for example, unstan bowls, hebridean jars, flanged bowls, and beakers, differ from the styles identifiable at Rubha an Udail Site 6. These numerous differences are readily attributable to the differential nature of depositional practices perpetrated at each of these separate sites. Essentially, the presence of pottery at Rubha an Udail Site 6 is largely the incidental consequence of accidental breakage. At sites such as Eilean an Tighe and Eilean Domhnuill, and overtly at Unival and Clettraval, the presence of pottery is largely a direct consequence of intentional deposition for ritual or ceremonial purposes. The divergence of depositional practices, and its significance for an interpretation of these different sites, is explicated more fully in chapter nine.

[1] Features and structures in all phases are identified with the labels used in the available structures report (see Crawford 1996a).

[2] The geology of the Western Isles is almost entirely composed of Lewisian gneiss, although this general uniformity is disrupted by the occurrence of exotic lithological outcrops, in close proximity to Rubha an Udail, on south Harris and elsewhere on North Uist (see Johnstone and Mykura 1989:22-7; cf. Armit 1996:21-2). The mineralogical and petrological inclusions manifest in the fabrics in the Rubha an Udail Site 6 assemblage presumably derive from these various sources.

[3] Only definite fabric assignations are included in these quantitative summaries.

[4] The sum percentage for each phase does not always total 100 percent because the fabric composition of many vessels remains uncertain. Only vessels for which fabric assignations are definite are included in Table 8.3..

[5] Only definite sherd identifications are included in Table 8.4..

[6] The total number of vessels represented in the various phases exceeds the actual number of vessels represented in the entire assemblage because some vessels are represented in more than one phase.

[7] Clarke (1976) employed an identical criteria of fine, everyday and coarse wares to articulate the otherwise unclassifiable variety of domestic beaker assemblages. Similarly, the necessity of adopting an equivalent scheme here relates to the fragmentary condition of the pottery and the undiagnostic nature of many of the vessels represented.

Chapter nine
Ceramic as symbol:
a neolithic of the Western Isles

9.1. Introduction

The preceding chapters have dealt variously with specific interpretative issues or ceramic assemblages germane to the study of the neolithic of the Western Isles. This final chapter attempts to employ the different aspects of inquiry encapsulated in these chapters to write a succinct history of this particular region during the neolithic. Issues germane to the inception of the neolithic, the prevalence of ceramics, the significance of monumentality, the nature of settlement and economy, and the ambiguity of chronology are discussed below in an attempt to develop a plausible interpretation. There is a therapeutic emphasis on theoretical issues in the following discussion, as an antidote to the empirical focus in the preceding chapters. Unfortunately, the absence of a comprehensive absolute chronology, a lacuna dealt with more fully in section 9.9. elsewhere below, precludes the establishment of an internal chronology for material culture and monuments datable to the neolithic from the Western Isles.

9.2. The mesolithic to neolithic transformation

Considerable debate has recently centred on the nature of the transition between the mesolithic and neolithic periods, resulting in a fundamental alteration in prevalent perceptions of this transformation (eg. Barclay 1997; Barrett 1994; Bradley 1993; Thomas 1991; 1993b; 1996a; Whittle 1996). Briefly, a gradual transition, no longer an economic phenomenon and involving little or no population movement, is envisaged. The emergence of the neolithic, more satisfactorily explained with reference to social and ideological changes occurring over a prolonged period of time, is characterised by a regional diversity and the selective adoption of various, allegedly innovative, resources. The neolithic, if a definition is deemed necessary, was characterised by the necessity of monumentality, encapsulated by chambered cairns and other forms of megalithic architecture, and the symbolic potency of the concept of domestication, exemplified by the development of a novel material culture, including ceramic, and the cultivation of domestic flora and fauna (see Barclay 1997:127-29; Bradley 1993:17-8; Herne 1988:25; Kinnes 1988:4; Thomas 1993a:92; 1993b:388).

Unfortunately, there is no unequivocal archaeological evidence of a mesolithic presence in the Western Isles (Armit 1996:36; Brayshay and Edwards 1996:19-20; Crawford 1978a:54; Edwards 1996: *passim*), although a mesolithic occupation seems likely (Armit 1996:35-6; Branigan 1995c:199; Woodman 1996:156). Certainly, it is possible to interpret the charcoal peaks and arboreal troughs in several pollen diagrams from the Western Isles as evidence of mesolithic landscape management:

> "The palynological evidence from the Western and Northern Isles is sufficiently similar to that from the Inner Hebrides to justify the notion of a human presence in Mesolithic times. It can be said with some certainty that the woodland resource was there, that woodland was clearly being reduced and that combustible materials were being burned (for whatever reason)" (Edwards 1996:34; cf. Bennett *et al.* 1990:295-96; Tipping 1996:53-4).

The inception of the neolithic in northern and western Scotland is, then, for the purposes of argument, characterised by the acceptance of an alternative repertoire of material culture, including pottery, and by innovative explorations in monumentality, including chambered cairns. These various aspects of the neolithic were originally explained as a corollary of an agricultural economy. Pottery, as utilitarian cooking utensils, and large monuments, as territorial markers, were each appropriate expressions of, or, more accurately, reactions to, sedentism. However, the revisions recently proposed to the concept of the neolithic, in which the period is defined more by ideological possibilities than economic constraints, ensure that an alternative understanding of these accompanying material things is necessary.

Interpretations of the existing cultural milieu, into which the material resources and conceptual leanings subsequently labelled neolithic emerged, have also undergone revision. Armit and Finlayson, discussing the introduction of pottery from a symbolic perspective, explored more thoroughly in section 9.4.1. below, bestow a previously unsuspected social complexity and ideological diversity on the resident gatherer hunter communities of the mesolithic (Armit and Finlayson 1995:268-69; 1996:277). Condescending notions of environmental determinism, economic rationality, or cultural inferiority, to explain the adoption of supposedly neolithic traits, are dismissed (Armit and Finlayson 1992:665; 1995:268; 1996:273-75). Instead, these neolithic resources, whether material, faunal or floral, were considered a fecund source of innovative symbolic capital, and adopted selectively and judiciously by local mesolithic communities, according to existing social obligations and political strategies (Armit 1996: 40; Armit and Finlayson 1992:672, 674; 1995:268; 1996:270, 277). The consequences of the fastidious incorporation of nominally neolithic resources into gatherer hunter societies did not provoke the cataclysmic dissolution of institutional structure, but rather facilitated further the pursuance of existing social priorities (Armit 1996:39; Armit and Finlayson 1992:671; 1995:267; 1996:270, 276). The adoption of one particular neolithic trait, for example pottery, did not require the acceptance of any sundry items still available on this comprehensive neolithic inventory. It is a gross interpretive fallacy to envisage the transition from mesolithic to neolithic as inevitable (Armit and Finlayson 1992:673). The temptation to remove contingency from a retrospective interpretation is preferably resisted.

There is, then, no reason to suppose the gatherer hunter societies of the mesolithic were overwhelmed by the paraphernalia usually ascribed to the neolithic. Indeed, Armit and Finlayson emphasise that the archaeological evidence intimates a continuity between the mesolithic and neolithic in the north west Scotland (1992:667). Pottery, for example, is known from definite or probable mesolithic contexts at Ulva Cave on Ulva, Bolsay Farm on Islay, and Spurryhillock near Stonehaven (Armit 1996:36,41; Armit and Finlayson

1992:668-69; 1995:270; 1996:281-83).[1] Yet the concept of mesolithic pottery is obscured by an inevitable circularity of argument:

> "Pottery in the Scottish Mesolithic is presently a conceptual impossibility since the very presence of pottery on a Mesolithic site is taken to indicate a Neolithic presence" (Armit 1996:40; cf. Armit and Finlayson 1992:671; 1995:269-70; 1996:282-84).

The advent of pottery is readily explained as the adoption of a fecund and novel symbolic resource, to complement or replace existing items of material culture able to sustain a symbolic interpretation, by local aceramic (mesolithic) communities (Armit 1996:40; Armit and Finlayson 1995:270; 1996:284-87). Indeed, differences between mesolithic and neolithic evidence are probably as much a consequence of theoretical prejudice as empirical circumstance (Kinnes 1985:21). This, given that the neolithic is defined by a specific repertoire of material culture and particular set of monuments, is hardly surprising. At any rate, the mechanics of transformation, whether by colonisation or acculturation, are poorly understood (Kinnes 1985:19; 1988:7-8).

The implications of a radiocarbon chronology, the negligible evidence for a conventional agrarian economy, and ethno-archaeological comparisons, have prompted a reappraisal of the development of monumentality in the neolithic. The advent of a megalithic architecture, adumbrated by the especial significance accorded to the locations in which such monuments were built, heralded new conceptions of, for example, nature, landscape, and inheritance (see Barrett 1994; Bradley 1993; Fraser 1996; Thomas 1993a). Ironically, in a reversal of traditional interpretive priorities, chambered cairns, and the ideological beliefs of which they were an integral part, possibly provided the basis for the introduction of a neolithic economy (Bradley 1993:18). Cereals, livestock, ploughing, enclosure, material culture, especially pottery, and other trappings of sedentism, cohered by the novel concept of domestication, were probably understood in symbolic rather than economic terms. The contribution of such resources to actual subsistence was quite possibly incidental (Bradley 1993: *passim*).

The demise of a traditional understanding of the neolithic obscures the difference between the concepts of mesolithic and neolithic. Indeed, these terms, previously endowed with a chronological and cultural significance, are effectively terminological anachronisms of a defunct culture history. Yet it has proved impossible to retain the former, whilst dispensing with the latter, properties of such terms. The chronological expressions mesolithic and neolithic, exuding still a latent cultural significance, have become ambiguous terms of general reference (cf. Kinnes 1985:19). Essentially, the transformation from mesolithic to neolithic, intimates only a temporal progression. It is necessary to replace these misleading terms with a detailed calendrical chronology based on a comprehensive series of calibrated radiocarbon dates. A radiocarbon chronology contains no implicit interpretive implications relating to the transformation between mesolithic and neolithic periods. It is more a symptom of resignation than conformity that compels the retention of these terms, for the dual purposes of clarity and convenience, in the succeeding sections of this chapter. The following discussions rely heavily on the revamped interpretation of the neolithic given above.

9.3. Ceramic as symbol

The excessive utility and ready portability of pottery, the ability to fulfil innumerable divergent functions in various different contexts, ensures that it commands an inordinate symbolic versatility, able to connote a diversity of concepts during use (Rice 1987:268). Indeed, the recurrence of pottery in specific contexts, despite its ready portability, is of considerable significance to the interpretation of material culture (Rice 1991:276). At any rate, there is considerable evidence to suggest the symbolic capacity of ceramic was central to its development and acceptance in Ireland and Britain during the neolithic. The carinated bowl, enjoying a stylistic consistency and geographical ubiquity, intimated, according to Herne, the advent of pottery in the neolithic of Ireland and Britain (1988:16 *ff.*; cf. Kinnes 1985:19; 1988:4). A developing radiocarbon chronology, for Scotland and Ireland anyway, confirms the early, and pervasive, presence of the carinated bowl in these areas during the early neolithic (Sheridan 1995:7, 17). The symbolic capacity of ceramic is not necessarily restricted to fine carinated bowls. There is considerable evidence to suggest other types of neolithic and early bronze age pottery, including hebridean ware and grooved ware, enabled symbolic understandings. Obviously, there is no suggestion that these various ceramic styles, many enjoying a considerable longevity of use, or else occurring at different times across millennia, enabled the same, or even consistent, symbolic understandings.

The following theoretical preamble, attempting to explain the potential of ceramic, as a particular kind of materiality, to sustain symbolic understandings, introduces a re-evaluation of neolithic pottery from the Western Isles from a symbolic perspective. These introductory comments firstly discuss the unreasonable assumption of ceramics as exclusively utilitarian objects; secondly, emphasise the intrinsic quality of neolithic pottery; thirdly, expose the fallacy of ceramics as apposite only to permanent settlement; fourthly, contest the notion of the introduction of ceramics as a technological innovation; and, finally, focus upon the culinary, and cultural, implications of the introduction of ceramics.

9.3.1. The afunctionality of pottery

Neolithic pottery from Ireland and Britain, manifest almost exclusively in the form of containers, ensures that such ceramics are interpreted as prosaic utilitarian receptacles. Essentially, the morphology of these vessels encourages a mundane functional interpretation. Darvill, for example, whilst conceding the possibility of ceramics as gifts in exchange (1987:73), interpreted a jadeite axe, but not an intact ceramic and its preserved contents, beside the Sweet Track as a votive deposit (1987:73; cf. Herne 1988:17, 23). Customary reference to the frequency and durability of ceramics in the archaeological record accord with the assumption that pottery is a mundane utilitarian resource, readily available, easily replaceable, and utterly disposable. Sizeable collections of neolithic ceramics are invariably interpreted as domestic detritus (eg. Evans 1953: Wainwright 1972), and the substantial assemblages from the Western Isles, aside from those from chambered cairns, are no exception. Of course, many ceramics were employed for culinary purposes, given the indubitable presence of attrition patterns and residue traces on many vessels. Ceramics, as materiality capable of sustaining a complex symbolism, were not simply utilitarian utensils devoid of social significance.

9.3.2. The ambiguous quality of pottery

The intrinsic quality of much early neolithic pottery from Ireland and Britain provoked some admiring comments (eg. Newbigin 1937:190; Piggott 1931:72-3). Similarly, Herne, commenting on the extremely high quality of carinated bowls, emphasised the degree of effort invested in the manufacture of these vessels (1988:25).[2] The undeniable intrinsic quality, and uncanny stylistic uniformity, of carinated bowls accentuated the symbolic significance of these vessels (Herne 1988:26). The quality of unstan bowls is equal to that of any early neolithic pottery from elsewhere in Britain (Henshall 1963:106; 1972:177), and the quality of some beacharra bowls is exceptional (Henshall 1972:102, 177). Certainly, the quality of much of the pottery from the Western Isles, particularly flanged bowls (see Branigan 1995c:199; Gibson 1995a: 104-10; Scott 1951a:29), is indubitable. The unstan wares and flanged bowls from Eilean an Tighe, and the fine beakers from Northton, for example, embody a remarkable delicacy.

Significantly, many of the fabrics of the neolithic pottery from the Western Isles contain innumerable flecks of mica. These inclusions, natural rather than artificial, both frequent and lustrous, are highly noticeable and impart a distinctive appearance to these fabrics. These ceramics, often highly burnished, enjoy a superlative quality of finish. The original aesthetic importance of burnishing is betrayed by the restriction of a polish to prominent areas of the vessel surface. Open bowls, for example E47 from Eilean an Tighe, were frequently burnished on the upper rim and interior surfaces, but not on the lower rim or exterior surfaces, presumably because only the former areas are highly visible during use. Similarly, on the exterior of one neutral vessel also from Eilean an Tighe, namely E50, successive bands of decoration are interspersed with undecorated bands of burnishing.

9.3.3. Mobility and pottery

The assumption that pottery is a cumbersome and fragile commodity, more suitable to fixity than portability, is a traditional one. Pottery, susceptible to breakage, is unsuitable for transportation. The correlation alleged between the development of sedentism and the advent of pottery in the archaeological record appears to confirm this assumption (see Arnold, D. 1985:109-10; Skibo *et al.* 1989:126). It is improbable that an entire ceramic assemblage, especially large or cumbersome vessels, would be taken away upon the abandonment of a settlement (see Deal 1985:270; Mills 1989:142). There is, however, a plethora of ethno-archaeological evidence to suggest that the proverbial fragility of ceramics does little to inhibit the manufacture, use and transportation of pottery amongst both sedentary and non-sedentary societies (see Arnold, D. 1985:110-19; Arnold, P. 1991:105; Schiffer and Skibo 1987:608; Skibo *et al.* 1989:123-24). There are a number of qualities befitting pottery made and used within mobile societal groups. Firstly, all vessels should fulfil multiple functions, restricting the necessary size of the assemblage (Skibo *et al.* 1989:126). Secondly, the use of organic inclusions, designed to facilitate easy manufacture, perhaps enhance impact strength resistance, and certainly reduce vessel weight, all performance characteristics desirable in frequently moved pottery, allegedly find favour in mobile societal groups which manufacture and use ceramic vessels (Bollong *et al.* 1993:41; Skibo *et al.* 1989:123-27, 139-40; Vaz Pinto *et al.* 1987:129). The ease with which a vessel is grasped, handled or transported depends largely upon the presence of, for example, handles or flanges, designed to improve graspability, and the different ways in which the vessel is carried and manipulated when in use or carriage. It is apparent that these factors are predominantly qualitative, dependent on the social contexts of pottery use, and not the intrinsic properties of the ceramics (see Rice 1987:226). Instead, societal mobility impedes the production, rather than the actual use, of pottery, due to constraints of the environment rather than fragility of the product. In the processual parlance of Arnold:

> "..the lack of sedentariness provides negative feedback for pottery production not primarily because of its fragility, but because settlement impermanence limits the amount of time in one place needed to make pottery, can complicate obtaining suitable resources and may reduce opportunities for making pottery in a favorable climate" (Arnold, D. 1985:119).

It is significant that the ethno-archaeological survey on which this general explanation is predicated derives largely from societies resident in non temperate climates. It is unlikely that neolithic societies in temperate Europe were obliged to negotiate similar environmental obstacles to ensure the successful manufacture of pottery.[3] The manufacture of pottery by mobile societies, for reasons of ideology and not simply economy, was probably both regular and regulated during the neolithic.

9.3.4. Ceramics as a technological innovation

It is a misnomer to consider pottery as a technological development, of profound cultural significance, invented only as recently as the neolithic, coeval with the advent of agriculture (cf. Brown 1989:212). The sporadic occurrence of ceramic is known in various late palaeolithic contexts in Europe (Brown 1989:207; Matson 1989:14-5; Rice 1987:8; Sinopoli 1991:1). An appreciation of the plasticity of clay, an awareness of the composition of clay, and a knowledge of the transformation of clay into ceramic by fire, is demonstrable in the late palaeolithic (Rice 1987:8). The inevitable use of hearths, for warmth and cooking, presumably acquainted people with the transformation, effected by an intense heat, of clay into ceramic. The initial clay base of a fire, and the resultant hardened clay, perhaps even ceramic, surface beneath the remaining ash, would indicate the formative effect of fire on clay (Matson 1989:22). The use of fire to prepare raw materials for manufacture, a procedure familiar to lithic technology, anticipates the use of fire to transform raw materials for manufacture, essential to ceramic technology.

The basic knowledge necessary to manufacture ceramics was known, in various cultural contexts at different times, long before the advent of pottery. This effectively demonstrates that despite a familiarity with the necessary technological skills, a knowledge of ceramic was insufficient to instigate its manufacture as pottery (Longacre 1995:278). This confounds the conception of pottery, as an archetypal technological innovation, fundamental cultural advance, or indispensable commodity (Brown 1989:204). Technical ignorance did not prevent the manufacture of pottery. These early instances of ceramic use, interesting perhaps to a history of technology, are of marginal relevance here. More important is to demonstrate a familiarity with ceramic immediately prior to the appearance of pottery in Ireland and Britain in the fifth millennium bc. The absence of such evidence is more likely a consequence of contemporary interpretive prejudice than original empirical circumstance (*pace* Kinnes 1988:4).

The durability and impermeability of hardened clay, noticeable in clay ovens, in the clay lining of storage pits, and in the clay reinforcement of otherwise non-ceramic containers in the Near East, would have demonstrated the utilitarian potential of clay as a raw material, and encouraged the deliberate manufacture of ceramic containers (Matson 1989:15; Rice 1987:8). The most plausible sources of inspiration to encourage the manufacture of pottery were contemporary containers made from wood, bark, leather, fibre, or some other material (see Rice 1987:8). It is possible that non-ceramic containers were employed as moulds in the manufacture of pottery. The skills and equipment utilised in the production process were presumably taken from the technologies employed in the manufacture of existing non-ceramic containers (Matson 1989:15). The morphology of early pottery frequently recalls the often distinctive shapes of such non-ceramic containers (Rice 1987:8). The round bases of early neolithic pottery in Britain suggest that these vessels perhaps emulate earlier or contemporary containers made from perishable organic materials.

The invention or introduction of pottery into previously aceramic societies is traditionally seen as an technological development of fundamental significance. Shepard speculates that pottery:

> "...might be a thing of wonder to people who had never seen it before..." (Shepard 1985:352).

Whilst this is perhaps true of societies in which the properties of clay were completely unknown, it seems an unlikely reaction where people enjoyed a basic familiarity with the potential of clay:

> "Pottery, rather than being a spectacular new achievement at this time, is better considered as a transformed exploitation of an already familiar raw material" (Rice 1987:9).

Ceramics are not a technological or cultural advance, a civilising influence, with universal implications for a putative history of humanity (Kolb 1989a:380-81; Myers 1989:2). The ramifications of the advent of pottery were significant only at a cultural, rather than an evolutionary, level (Ehrich 1965:1). Given that the aceramic societies of the late mesolithic neglected the opportunity to manufacture pottery, despite a familiarity with the production technology, it is preferable to envisage the subsequent development of pottery manufacture and use as an ideological strategy rather than technological innovation.

To identify various organic containers as the aceramic precursors of pottery, neglects to explain why it became necessary to manufacture equivalent versions, not simply in ceramic, but in morphologies reminiscent of the distinctive shapes of existing containers. If a knowledge of ceramic was familiar in the late mesolithic, prior to its use for manufacturing containers, the reasons behind its sudden desirability and acceptability as material culture require examination. The retention of morphology in such instances suggests that the raw material rather than the style was the important factor. The concept of skeumorphism lends an interesting contribution to this investigation. The morphology, the general appearance, and even some decoration, of early neolithic pottery resembles the shape, treatment and stitching of leather bags (Childe 1931:38, 39, 41; Piggott 1931:80-1, 84). Explanations, other than the practical advantages of ceramic (*pace* Myers 1989:2), are necessary to explain the advent of pottery as a skeumorphic representation of existing non-ceramic containers (Brown 1989:208-09). Generally, skeumorphism and imitation manipulate material culture, creating different possibilities of perception, and generate alternative understandings of an otherwise familiar materiality, rather than direct and prosaic copies of existing artefacts, produced, for example, for reasons of economy (Foster 1989:31). Skeumorphism offers opportunities to situate replicable images in new spatial and dimensional contexts, to explore alternative manifestations of form and function, to transcend the distinction between derivation and innovation (Foster 1989:41). It is, then, preferable to conceptualise ceramic containers as containers of ceramic, and explore the possible symbolic significance of the use of clay, as a raw material during manufacture, and the transformation into ceramic, as a resultant materiality during use.

Unfortunately, the possible symbolic significance of the use of clay to manufacture material culture is obscured by an emphasis on utility. There remains a latent, and not unreasonable, assumption that containers made from ceramic were, in a functional sense, more versatile, and so more desirable, than those made from alternative raw materials:

> "The appearance and widespread adoption of fired pottery reflects both continuing and new needs for tools and resources - principally storing and preparing newly important foods such as domesticated grains - and new ways of meetings these needs" (Rice 1987:9).

That there is no determinant connection between sedentism and pottery is often conceded, but, nonetheless, the manifestation of pottery within a sedentary subsistence milieu is usually interpreted as an urgent functional development stimulated by an inevitable economic demand (Kolb 1989:380-81; Myers 1989:22; Rice 1987:9; Sinopoli 1991:1-2). The appearance of pottery at the inception of the neolithic is not necessarily a coincidence confirming the assumption that new subsistence strategies required new artefactual commodities. The presumed correlation between a domestic ceramic assemblage and a neolithic household supported by a mixed farming economy, the former able to cope with the diverse functional demands of the latter, is, then, no longer sustainable. Ceramics are neither a function of a neolithic economy, nor an essential element in the artefactual apparel of a neolithic household.

9.3.5. The culinary and cultural implications of the use of pottery

The functional potential of ceramics are only really advantageous within the context of an agricultural economy. The adoption of pottery by readily mobile gatherer-hunter communities suggests alternative reasons for the expansion of existing repertoires of material culture. However, once established, the novel properties of ceramic probably precipitated experimentation and innovative developments in culinary practices. The following brief resume of the culinary advantages of ceramic introduces a discussion of the cultural implications of such functional potential.

Pottery offers a bewildering variety of culinary advantages over alternative non-metal types of container. Firstly, the refractory properties of ceramic increased the variety of ways, for example boiling, steaming, brewing and distilling, in which food and drink were prepared and preserved. The direct and persistent heating of food increased the efficiency of the whole cooking process. Secondly, the possibility of an extended soaking or cooking time ensures that certain foodstuffs become more nutritious, palatable, digestible, or even edible. A prolonged heating, only possible with pottery, detoxifies the poisons found in many types of food, to render them edible. Thirdly, foodstuffs in a ceramic container require little attention, and can be left unattended, during the cooking process. Fourthly, the free soluble salts within the porous walls of a vessel impart a pleasurable and distinctive flavour, through leaching, to its contents. Fifthly, ceramic containers are invariably more durable and replaceable than other non-metal containers (see Arnold 1985:128-44; Myers 1989:2 *ff.*; Rice 1990:6, 208).

Sixthly, it is possible to manipulate some of the performance characteristics of pottery, for example fabric composition, in a manner that is impossible with alternative raw material resources from which containers can be made (Skibo 1992:35). It is preferable, given its adept functional versatility, to conceptualise pottery as a technological simplification, which made innumerable culinary tasks easier (Schiffer and Skibo 1987:608; cf. Myers 1989: *passim*). The main disadvantages of pottery are its fragility and unsuitability for the storage of cooked foods (Arnold, D. 1985:142; Rice 1987:208).

The advent of pottery probably had profound implications for cultural perceptions, and more specifically, the production, preparation, and consumption, of food (Herne 1988:26; Longacre 1996:279; Thomas 1993b:389). Overall, the manufacture, use and deposition of this pottery, given its sensitive role in societal discourse, probably incurred considerable cultural proscription, and was perhaps governed by careful adherence to innumerable rules as a consequence (cf. Herne 1988:26). An abundance of evidence, culled from ceramic ethno-archaeology, confirms that symbolic concerns pervade all stages of the production, characterise several aspects of the use, and determine many strategies of the discard, of pottery (eg. Gosselain 1992a; 1992b; Hodder 1982b; 1991; Lévi-Strauss 1988; Welbourn 1984). Similarly, several archaeological studies of ceramics, focusing variously on morphology, decoration, and deposition, develop credible claims to identify the use of pottery to facilitate and sustain symbolic understandings during the neolithic or bronze age (eg. Jones 1996:297; Tilley 1984: *passim*; Shanks and Tilley 1987b:137-71).

9.4. Ceramic symbolism in the Western Isles

The neolithic pottery from the Western Isles has been previously conceptualised as a symbolic resource by several commentators. However, these interpretations are restricted to a series of sporadic, and largely cursory, observations on the ceramic assemblages from chambered cairns (eg. Henshall 1972:164-65; Scott 1935:534; 1948:23). Only Armit and Finlayson, writing in a series of articles, have systematically interpreted the adoption, production and use of this pottery from a symbolic perspective (Armit 1996; Armit and Finlayson 1992; 1995; 1996).

9.4.1. Previous interpretations of ceramics as symbols in the Western Isles

The research by Armit and Finlayson (1992; 1995; 1996; Armit 1996), with a welcome emphasis on theoretical issues, represents a notable contribution to the interpretation of neolithic pottery in the Western Isles. A theoretical re-evaluation of the transition between the mesolithic from the neolithic, referred to previously in section 9.2. above, provides the intellectual context in which Armit and Finlayson developed a symbolic interpretation of early neolithic pottery in north west Scotland (Armit 1992; Armit and Finlayson 1992; 1995; 1996).

Armit and Finlayson, emphasising a regional diversity of ceramic styles in the early neolithic in north west Scotland (1995: Figure 21.1:271; 1996: Figure 17.1:286), alleged a discrete distribution for unstan, beacharra and hebridean ware, concentrated in northern Scotland, south west Scotland, and the Western Isles respectively. Additional regional concentrations were claimed for: "...Rothesay/Achnacree Ware, and others..." (Armit and Finlayson 1995:270; cf. Armit and Finlayson 1996:285). They further contended that this correlation between ceramic style and spatial distribution indicated the adoption of pottery by local mesolithic societies as symbols of ethnicity:

> "The multiplicity of early styles suggests that pottery was adopted as a congruent cultural element well suited to displaying ethnicity and identity in communities where these were already significant concerns" (Armit and Finlayson 1995:273).

The development of an incipient sedentism in the late mesolithic precipitated a reduction in contacts between gatherer hunter societies and a corresponding increase in self awareness of community identity (Armit and Finlayson 1996:287). The prominence of pottery in social transactions involving the exchange and consumption of food, both within and between gatherer hunter societies, was reflected in the development of distinctive ceramic styles (Armit and Finlayson 1996:287). Pottery, as a malleable cultural resource, was ideally suited to connote the symbolic evocations of the societies in which it was adopted (Armit and Finlayson 1996:284). The various early neolithic pottery styles therefore encapsulated the increased awareness of ethnicity aroused in gatherer hunter communities by the development of an inchoate sedentism in the late mesolithic.

There are a number of criticisms to level at this commendable attempt to explain the introduction of pottery during a transition to a neolithic (sic) in north west Scotland. Firstly, this interpretation simplifies the empirical complexity of the evidence to a misleading extent; secondly, no theory of symbolism and material culture is developed; and, thirdly, no definition of ethnicity is provided. These criticisms, germane to the conclusions proffered in section 9.4.4., are expanded upon separately below.

The three fundamental style zones identified by Armit and Finlayson, relying entirely on traditional normative categories of dubious interpretive utility, distort the actual distribution patterns of the relevant early neolithic ceramic types. The archaeological reality compromises the integrity of these putative regional concentrations: unstan ware occurs in the Western Isles, allegedly the preserve of hebridean ware, and also beyond the confines of its delineated distribution, in north east Scotland; beacharra ware occurs in the Western Isles and in Ireland; and achnacree ware occurs in the Western Isles, and also in south west Scotland, the latter area the preserve of beacharra ware. The regional concentrations identified by Armit and Finlayson are only plausible at a grandiose scale of analysis of negligible interpretive value to historical particularism. The many exceptions to this ambitious scheme, particularly the recurrence, and contextual association, of unstan ware and hebridean ware in the Western Isles, confound the equation of these distinctive ceramic styles with separate ethnic identities. Admittedly, Armit and Finlayson caution against a direct correlation between ceramic category and ethnic identity (1995:271), but such a connection is forged anyway (see Armit and Finlayson 1995:272-73). The regional style zones serve only to simplify, rather than clarify, the significance of the different distributional patterns of these early neolithic pottery styles. The empirical complexity of these interwoven distribution patterns effectively demonstrate the complexity of the morphological and decorative relations between the plethora of early neolithic ceramic styles.

A further criticism, concerning a failure to develop a theory of material culture symbolism, is perhaps premature, because Armit and Finlayson identify the possibility of a symbolic interpretation, rather than theorise precisely the manner in which pottery was realised as a symbolic resource. However, this omission, perhaps attributable to the interim status of their research, is nevertheless symptomatic of a wider failure in archaeology to address the problem of the attainability of the meanings material culture presumably sustained in the past. The motivations that lie behind the interpretation of pottery as a symbolic resource remain obscure. Yet there are two reasons, implicit in their argument, to explain the allure of a symbolic interpretation of pottery. Firstly, if the emergence of pottery is no longer an inevitable corollary of the adoption of agriculture, then its presence in the archaeological record, as an apparently superfluous commodity, becomes puzzling. The explanatory resort to symbolism is the customary refuge of the bewildered. Secondly, the substantial size of neolithic assemblages in the Western Isles, containing pottery often profusely decorated and highly polished, suggests the votive deposition, perhaps the conspicuous consumption, of a prestigious material culture resource. At any rate, Armit and Finlayson, recognising the potential of ceramics to sustain symbolic interpretations, evidently subscribe to a conventional understanding of material culture symbolism:

> "To the archaeologist interested in the analysis of material culture and exploration of its social and symbolic meanings, the emergence of pottery is of the utmost significance. In much of Europe the rich decoration and range of forms seem to offer the potential for a detailed reconstruction of past ideologies if only we could 'read' the material properly - *crack the symbolic code*" (Armit and Finlayson 1995:270; emphasis added).

Symbolic meaning is regarded as intrinsic to material culture. To decipher these arcane symbols, to read unimpeded the messages of the past, the archaeologist must first learn cryptography. That an obstinate silence is the only sound emitted from these ceramic transmitters suggests the symbolic meanings of the past were the forfeit that allowed the material to survive into the present. The realisation that the symbolic meanings facilitated by material culture in the past are irretrievable usually instils a terminal pessimism. It is little wonder that Armit and Finlayson are unable or unwilling to advocate a theory of symbolism.

If a theory of material culture symbolism is tangential to the interpretive aspirations of Armit and Finlayson, an exploration of ethnicity is of fundamental importance. Ethnicity is, after all, the innovative sociological concept apparently able to vindicate the categorical integrity of the traditional ceramic styles. Surprisingly, the presumably dual concepts of group identity and ethnicity remain untheorised, and the relation between these forms of social organisation and the traditional archaeological culture remains unresolved. If ceramic styles, traditionally representing archaeological cultures, embody instead ethnic identity, as Armit and Finlayson have contended (1995:270 *ff.*), the difference between these two social groupings requires clarification. This nebulous concept of ethnicity, synonymous with a normative definition of archaeological culture, effectively intimates little more than an inadvertent regression to culture historicism.[4] The equation between ceramic styles and ethnicity rather than culture attempts to rejuvenate a tired (traditional) interpretation of material culture with a relatively novel sociological concept (ethnicity).

A more profitable approach to ceramic symbolism involves an investigation of various assemblages to construct a detailed stylistic and functional profile of each, to facilitate a better understanding and comparison of the sites from which they derive. Such an interpretive strategy was attempted in the four preceding chapters. A notable characteristic of neolithic assemblages in the Western Isles is the profuse quantity of pottery and eclectic diversity of styles they contain. The recent excavations at Eilean Domhnuill a Spionnaidh (Armit 1986; 1987; 1988;

1990a; 1996:43-50) and Rubha an Udail (Crawford 1996a; 1996b) on North Uist, and at Allt Chrisal on Barra (Foster 1995) provide the detailed contextual information essential to a comprehensive understanding of the substantial ceramic assemblages from these sites.

9.4.2. Towards a theory of ceramic symbolism

A theory of material culture symbolism, explaining the complexity of the protean ways in which materiality enables symbolic understandings, is excluded from the following commentary due to a proverbial shortage of space. Various theoretical explorations of material culture, informing upon the capacity of materiality to facilitate symbolic understandings, from both an anthropological and archaeological perspective, are readily available elsewhere (eg. Barrett 1994; Bourdieu 1979; Gosden 1994; Hodder 1982; 1987; 1989; 1991; Miller 1987; Miller and Tilley 1984; Shanks and Tilley 1987a; 1987b; Sperber 1975; Tilley 1990; 1991; Turner 1967). Any approach to material culture symbolism is necessarily obliged to dispense with the naïve assumption that the potential of materiality to generate symbolic understanding resides within such a tangible entity. Essentially, symbolic meaning is not an intrinsic property of material culture. Indeed, any symbolic meanings directly reflected by some intrinsic property or quality of material culture are seemingly viewed with some disdain in anthropology (eg. Turner 1967:28). Archaeological attempts to extract the symbolic meaning, or crack the symbolic code, though commendable in their dedication, ultimately fail because they subscribe to a culture historical conception of materiality. If the archaeological record reflects social groupings, then, as a corollary, it is reasonable to expect material culture to contain symbolic meaning. This understanding of materiality, betraying a latent empiricism, means that the intellectual aspirations of culture history are effectively unattainable. That a truculent material culture has not yet been persuaded to relinquish its innate symbolism to an expectant, if exasperated, archaeological audience, suggests that alternative conceptions of materiality require expression.

A reluctance to indulge alternative understandings of material culture is readily explained by the ontological sanctity of the archaeological record. The authority to invent, and arbitrate between, interpretations of the past depends upon logistical and intellectual control of the archaeological record, because the meaning of the empirical evidence allegedly resides within its physical tangibility. To concede that meaning is not intrinsic to material culture is to renounce this authority over the archaeological record. Attempts to resist the ensuing relativism ultimately seek refuge from this inevitable displacement of authority by appealing once again to the empirical primacy of the archaeological record. However, material culture, as a mutable and ephemeral materiality, is more a social than a physical resource. Tangibility, merely one aspect of a contingent materiality, is not necessarily significant to its continuing interpretation in discursive social negotiations to establish meanings. Indeed, there are no appreciable differences between an ontology of an archaeological, and a modern, material culture. It is the covert responsibility of any archaeological practice to create an illusory ontological difference between these separate repertoires of material culture, by investing the archaeological evidence with intrinsic meanings, germane to an understanding of the past. This clandestine procedure guarantees the supremacy of an archaeological practice to adjudicate between differing interpretations of the resultant archaeological record. Ironically, an appurtenance of securing this intellectual authority is the impossibility of extracting subsequently this meaning from the empirical evidence.

The antidote to this casuistry is surely an acceptance of the absolute relativism that the interpretation of material culture as materiality demands. To endorse this conception of materiality entails a shift in the burden of responsibility for ascribing meaning to the past. Archaeologists are necessarily obliged to accept entirely responsibility for their own interpretations of the past, rather than attempting surreptitiously to explain them as interpretations of meanings allegedly innate within, or dependent upon, the archaeological record. A mature sociological and intellectual response to the crisis of relativism, with considerable relevance to a traumatised discipline of archaeology, is available elsewhere (see Bauman 1993; 1995). The responsibility, then, of an alternative archaeology is surely to identify the manner in which specific repertoires of archaeological evidence, in this instance neolithic pottery from the Western Isles, were employed to develop symbolic understandings of the world. A discussion of neolithic pottery as prestige artefacts, circulating as gifts in exchange networks, as culinary utensils, employed during feasting, and as votive deposits, discard through ostentatious disposal, is pursued in successive sections below to emphasise the potential of apparently mundane ceramics to evoke afunctional responses and sustain symbolic understandings.

9.4.3. Ceramics as prestige artefacts in gift exchange

The possibility of differential access to ceramics during the neolithic requires emphasis. The ability or eligibility of different groups of people within society to manufacture, procure, use, or discard pottery was likely variable (cf. Pool 1992:281). It is likely that pottery, as objects of prestige, were prone to inclusion in gift exchange networks. Indeed, a knowledge of pottery manufacture was perhaps precipitated by the exchange of pottery initially introduced, as a prestige item, from continental Europe. At any rate, the raw materials and manufacturing expertise required were probably not entirely unknown to the recipients of these ceramic gifts. The inherent fragility and cumbersome morphology of pottery are insufficient reasons to preclude its inclusion in exchange strategies (*pace* Shepard 1985:352), although pottery probably circulated in exchange networks differently from other artefact types (Rice 1987:198).

The possibility of exchange or exportation involving pottery has been suggested previously (eg. Scott 1951a:27; Scott and Phemister 1942:130). Several instances of the movement of either raw materials or finished products, with respect to neolithic and early bronze age pottery, have been documented.[5] Unfortunately, the overwhelming majority of ceramic studies, focusing on traditional evaluations of style, rather than innovative analyses of fabric, have failed to establish a secure empirical foundation for an assessment of ceramic exchange (Kinnes 1985:21; Peacock 1970:385). Occasional thin section analyses of neolithic pottery from the Western Isles (see Henshall 1972:177; Scott 1951a:34; Scott and Phemister 1942:131-2), from elsewhere in Scotland (eg. Williams 1982:10-12), and from northern Ireland (Sheridan 1985:223 *ff.*; 1991:313-14) suggest the local manufacture of these ceramics.

The evidence attesting to the local manufacture of pottery in the Western Isles is not restricted to petrological analysis. The remnants of a probable collapsed clamp kiln, containing sizeable parts from as many as seven vessels, was discovered at Allt Chrisal in Barra (see Gibson 1995a:100), although none of surviving fragments were immediately recognisable as wasters (Foster 1995:85, 88). A broad shallow pit, probably representing a single phase of activity, and containing several substantial parts of collapsed vessels, which had apparently subsided in the heat during firing, was discovered during construction of the Berneray Causeway at Screvan near Rubh a' Charnain Mhóir on North Uist. The feature was interpreted as the remnants of an unsuccessful firing by the excavator.[6] The assemblage, weighing some 13 kg, comprised nearly 1000 sherds (J. Downes pers comm.). The ceramics derived from these features at these separate sites, and various vessels, suffering from severe spalling, from Eilean Domhnuill a Spionnaidh, are all readily identifiable as wasters (see Brown nd.; Gibson 1995a:100; J. Downes pers comm.). The evidence for clay extraction at Rubha an Udail Site 6 (Crawford 1981:4), the discovery of clay dumps at Eilean an Tighe (Scott 1951a:11, 34), the presence of baked or fired clay, apparently fired accidentally, at both Eilean an Tighe and Eilean Domhnuill a Spionnaidh, and the presence of a clay lump, unlikely to have been transported far from the original firing place, at the latter site, also allude to local ceramic manufacture (Armit 1990a:16; Brown nd.; Scott 1951a:34).

It is unreasonable to expect thin section fabric analyses to identify systematic exchange. Ceramics and their contents, as gifts in exchange strategies, were more likely included in localised exchange networks, and circulated routinely amongst different communities residing in the same region to maintain social obligations and nurture political allegiances. The contents of such pottery, possibly accruing some especial significance due to containment in ceramic, require as much acknowledgement as the containers in which they were carried, presented, and presumably served. The overall quality of neolithic pottery from the Western Isles, in terms of technological expertise, stylistic elaboration and appearance, suggests that many such vessels were deployed in exchange strategies.

9.4.4. Ceramics as symbols in the Western Isles

The sites containing neolithic pottery, yielding assemblages taken to portray a genuine pattern of ceramic use, are usually dismissed as either settlement sites or mortuary sites, containing inordinate accumulations of domestic rubbish and grave goods respectively. The detailed analyses of separate ceramic assemblages made in chapters five through eight suggested an alternative explanation of this pottery was desirable. To interpret ceramics as a catalyst or vehicle for symbolic understandings explains, firstly, the stylistic complexity, secondly, the functional diversity, thirdly, the depositional contexts, and fourthly, the excessive quantities, of neolithic pottery known from the Western Isles. These characteristics of neolithic assemblages in the region, explored separately below from a symbolic perspective, are seldom mentioned, and never explained, in the relevant literature.

9.4.4.1. The stylistic complexity of neolithic pottery in the Western Isles

The extravagance, indeed elegance, of style displayed by many vessels suggests that they were prestige articles intended for ostentatious display in social encounters infused with a political significance.[7] The expanded rims of many ceramic styles under the aegis of hebridean ware serve as a highly visible platform to exacerbate the potential symbolic significance of the circumference and orifice of the vessels (cf. David et. al. 1988:370; Gibson 1995a:104).[8] The profuse decoration on many vessels, with every possible ceramic surface a platform for a bewildering variety of dense geometric designs, further enhances the possible symbolic capacity of such pottery (cf. Armit 1996:59). That vessels such as these, exuding an almost excessive degree of stylistic elaboration, derive from the putative settlement sites of Eilean an Tighe and Eilean Domhnuill a Spionnaidh, situated on islets within fresh water lochs on North Uist, is presumably of considerable significance.

The morphology of many vessels, and the existence of various ceramic objects which overtly defy interpretation as conventional containers, confirms the capacity and legitimacy of ceramic to evoke symbolic interpretations. Cups, for example, replicating the morphology of unstan bowls or hebridean jars, are known from Eilean Domhnuill a Spionnaidh (Brown nd.).[9] These miniature versions, *encapsulating the styles but not the functions,* of other ceramic types, and admittedly occurring infrequently, were presumably employed for symbolic purposes. The unusual beakers from various chambered cairns are perhaps germane to such an argument (see Figure 2.53). Such ceramics, apparently manifest as containers, employ scale to provide a tangible reminder that shape, the essential arbiter of style, is not necessarily a reliable indication of function. The pumice pendant from Unival, shaped like a copper or bronze Breton style flat axe (see Armit 1996:75; Megaw and Simpson 1961:69-70; Scott 1948:23, no. 4, Plate IX: following page 24), and the possible pumice pendant from Eilean Domhnuill a Spionnaidh (Armit 1996:61), intimate the manufacture of miniature skeumorphs using alternative raw materials, also, presumably, for symbolic purposes. The ceramic phalli from Eilean Domhnuill a Spionnaidh (see Figure 9.1), adorned with decoration typical of hebridean ware, suggesting a symbolic connection with ceramics, and displaying similar abrasion patterns and fracture paths, presumably accrued during ritual use, provide a tantalising glimpse of ceramics as symbols (see Armit 1988:24; 1996:59, 61, Figure 4.8:60). These ceramic objects, manifestly unlike the usual ceramic objects, are unlikely to

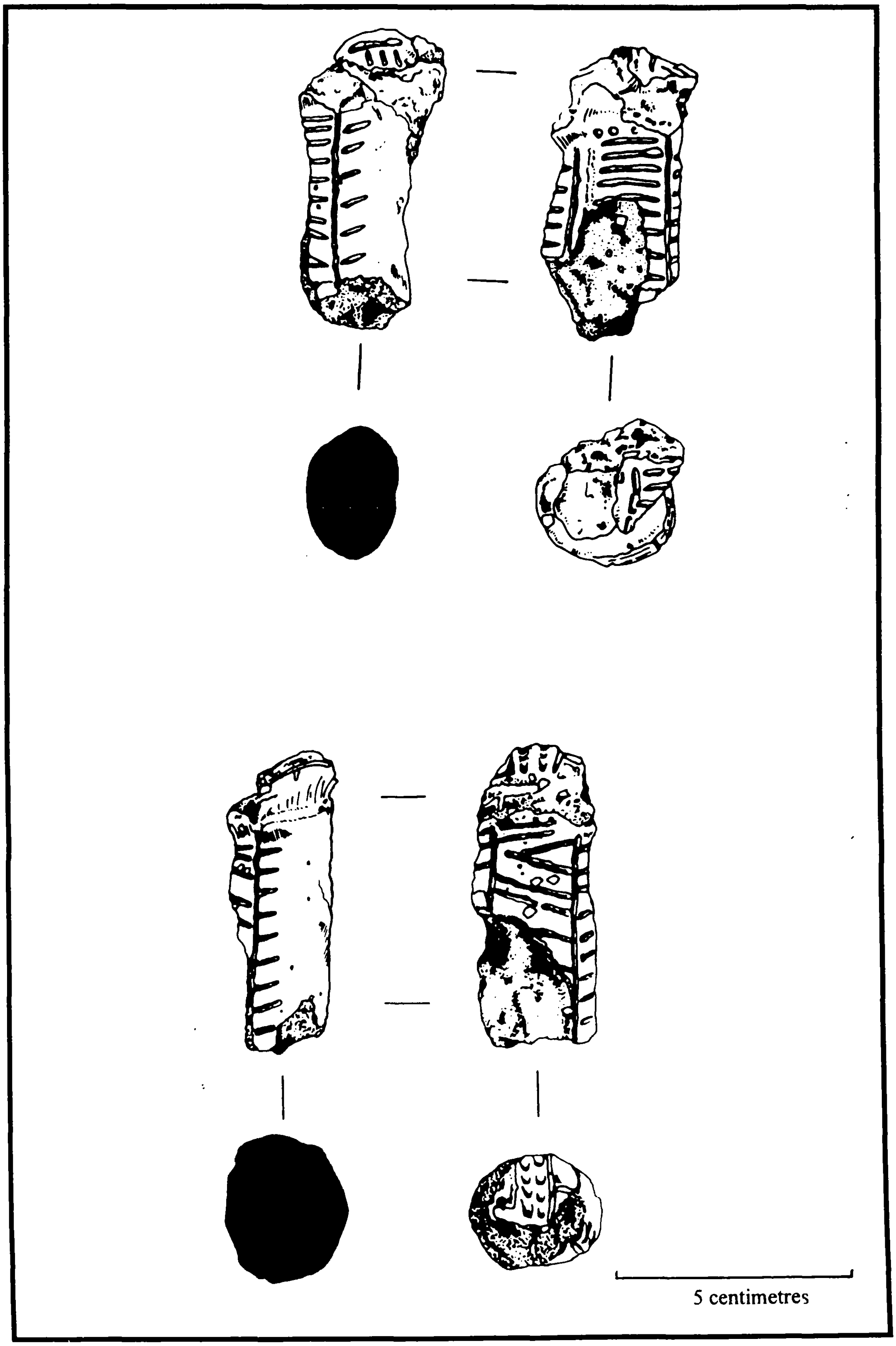


Figure 9.1.: Phallic ceramic objects from Eilean Domhnuill a Spionnaidh

(after Armit 1996, Figure 4.8:60)

evoke such an uncompromising literal understanding as conventional containers.[10]

9.4.4.2. The functional diversity of neolithic pottery in the Western Isles

Any functional diversity, conveniently ignored in conventional reports on the assemblages under study, is effectively rendered invisible in any subsequent perusal of the literature, due, presumably, to the undeniably fragmentary condition of the assemblages and the alleged interpretive potential of a fecund diversity of styles. This suppression of the functional utility of pottery is unfortunate. Assemblages from Eilean an Tighe, Eilean Domhnuill a Spionnaidh, Northton and Rubha an Udail Site 6, all containing vessels displaying abrasion patterns typical of repeated handling, and sooting patterns consistent with a culinary use, suggest the preparation, service, and consumption of foodstuffs at these locations. According to Jones, the initial production, culinary use and mortuary deposition of ceramics in Orkney during the neolithic, epitomised, and further emphasised, a temporality and cosmology in which various aspects of the life cycle, for example birth, harvest, and death, were repeatedly and regularly enunciated (Jones 1996:296-97). Several sherds from Eilean an Domhnuill, analysed using gas chromatography, revealed that the original vessels variously contained fish, nut or vegetable products and milk (Nemcek and Quye 1991; Quye 1992; Taylor 1992).[11] Even vessels from Clettraval and Unival embody evidence of use, evidently acquired before inclusion in mortuary rituals and deposition in chambered cairns.

9.4.4.3. Depositional practices involving neolithic pottery in the Western Isles

That ridged hebridean jars and unstan bowls, occurring in profuse quantities at islet sites, do not occur in chambered cairns (Armit 1993:372; Brown nd.; Gibson 1995a:110), with the exception of Geirisclett (Johnson 1997:14), suggests deliberate depositional practices regulated the discard of ceramics during the neolithic. The deposition of ceramics, both an irreversible physical action, and an irrevocable conceptual transformation, representing a consummation of materiality, infused the architectural locale in which these ceramics were deposited with a social and ideological legitimacy (cf. Thomas 1996b:202).

The recovery of intact or largely complete vessels at several sites yielding neolithic pottery, including Eilean an Tighe, Eilean Domhnuill a Spionnaidh, Rubha an Udail Site 6, and, not overlooking the obvious, Clettraval and Unival, was readily acknowledged in the original excavation reports (eg. Scott 1951a:7) or existing interim reports (eg. Armit 1990a:16). However, these whole vessels continue to be interpreted as domestic rubbish. A small cup, intact and inverted amongst the floor deposits in the Phase 7 building, at Eilean Domhnuill a Spionnaidh, for example, apparently attests to the rapid accumulation of deposits, rather than the deliberate deposition of pottery, within this structure, despite the highly unusual style of the vessel:

> "Its unbroken state supports the idea that the floor deposits of these houses could accumulate rapidly. The cup itself is highly unusual being extremely small and decorated with a single line of incised strokes..." (Armit 1990a:16).

Yet this contextual circumstance recalls the deliberate deposition of vessels at Eilean an Tighe, including E115, E466, and E3738, Clettraval, including C38, C42 and C43, and Unival, including U5, U10 and U13, where ceramics were incorporated into the architectural fabric of the structures either preceding or during construction. Similarly, the small, undecorated, round-based bowl, lying intact beside the sill stone separating the inner and outer compartments at Geirisclett (see Johnson 1997:14), suggests an equivalent depositional concern, although its context of recovery apparently post-dates the construction of the cairn (see Dunwell 1997:23, Figure 2:9). Relatively complete vessels from Eilean Domhnuill a Spionnaidh were probably deposited deliberately (Brown nd.). Notably, one of the controversial ceramic phalli, *incorporated into a wall course*, was almost certainly deposited deliberately (Brown nd.). The deposition of *sherds* representing distinctive or unique vessels, at the juncture of the causeway and the mainland, at the same site, suggests the deliberate deposition of ceramic fragments to acknowledge the transitional zone from land to water (Brown nd.).

This transformation of *artefact into architecture*, effected by means of intentional deposition, presumably legitimated the fabrication, and ensured the totality and inevitability of the buildings, in ideological terms, in which such pottery was inextricably enmeshed. This process was directly dependent upon the symbolic efficacy of the pottery deposited in these structures. The unidentified vessel discovered within an isolated stone setting during peat cutting at Skigersta, Barvas in Lewis, albeit of unknown date, suggests a similar depositional practice (see Ponting, Macrae and Curtis 1984:44). Many ceramics, then, were deliberately deposited, presumably with ostentatious ceremony, to fulfil social obligations and confirm ideological suppositions, perhaps during feasting (cf. Hayden 1995:260 *ff.*). The islet sites, in particular, were more likely occupied temporarily, visited on especial occasions, rather than inhabited permanently, as the mundane residency of an extended household. Similarly, the admittedly meagre quantity of pottery from Pygmies Isle (see Figure 9.2), its association with faunal skeletal material and ash rich deposits uncertain, situated in a precipitous location at the Butt of Lewis, suggests a neolithic presence unlikely to be domestic.[12]

Certainly, the salience of ceramics at sites more reasonably interpreted as settlement sites, for example Rubha an Udail Site 6, Northton, and Rosinish, confirms the importance of pottery to domestic practice. However, the evidence for adjunct ritual activities at many of these domestic sites cautions against any rudimentary distinction between the use of ceramics for exclusively domestic or ritual purposes.

9.4.4.4. The inordinate quantity of neolithic pottery in the Western Isles

The size of these assemblages, allegedly an indication of longevity of occupation, seemingly affirms the interpretation of these sites as successful domestic

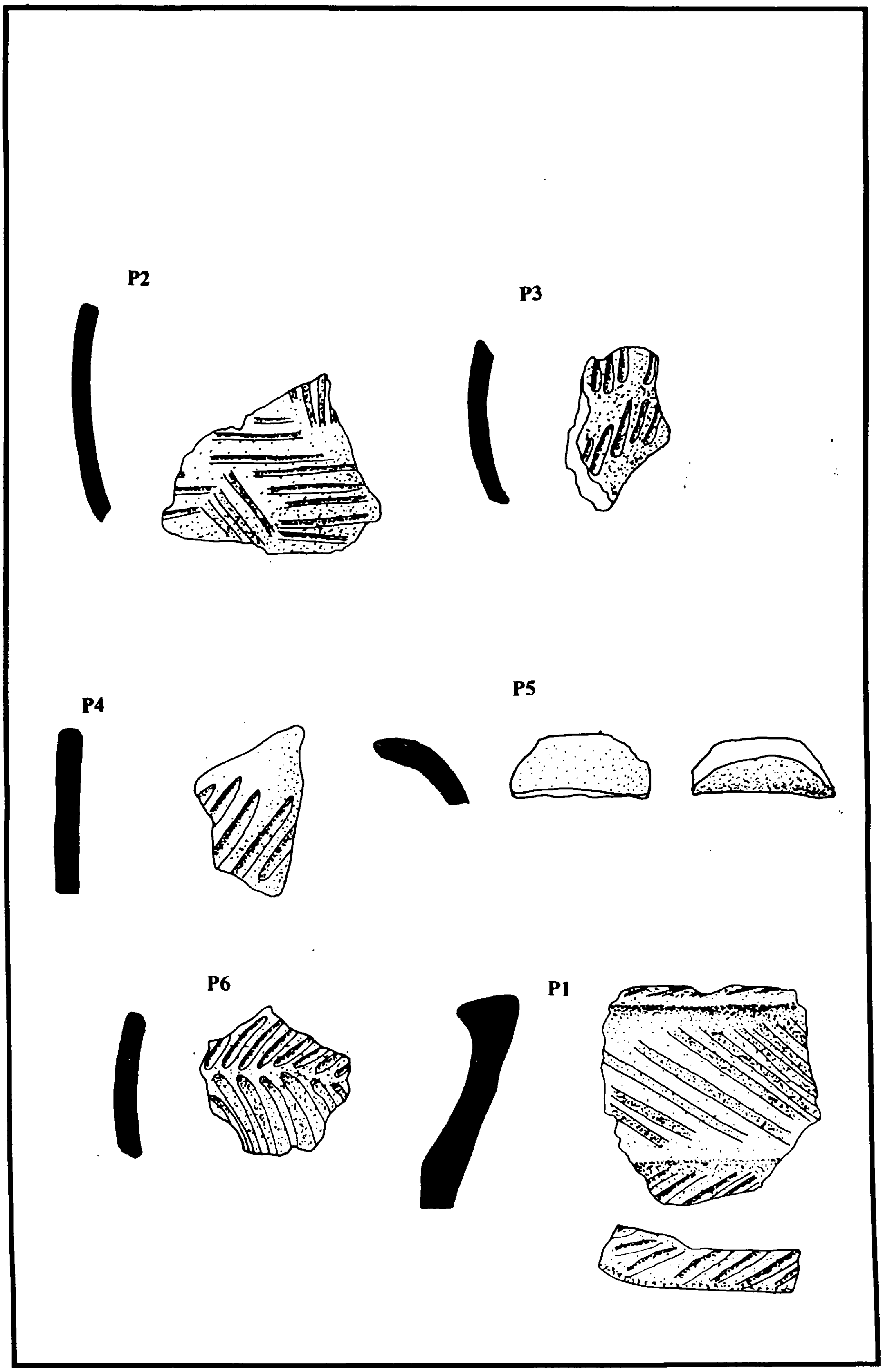


Figure 9.2.: Pottery from Pygmies Isle, Lewis

residences. The depositional practices responsible for the accumulation of prodigious quantities of pottery at these sites, according to the interpretation favoured in this research, escape scrutiny as a consequence. Both the enormous quantity, and stylistic diversity, of ceramics at these sites indicate the intensity and longevity of depositional practices conducted at these locations.

The deliberate deposition of material culture is not necessarily restricted to pottery. For example, the recurrence of stone axes, sometimes with wooden haft intact at the time of discovery, and frequently in pristine condition, as isolated finds in Lewis are preferably interpreted as votive deposits (Armit 1996:61; Sheridan 1992:201).[13] The axes and haft from Shulishader and Coll, in Lewis, the immaculate axes from Loch na Craoibhe at Kershader in Lewis, and Borerary beside North Uist, the cushion macehead from Knock in Lewis, the hoard of five axes from Balallan in Lewis, and the hoard of three axes, carefully arranged with their cutting edges contiguous, from Newmarket, near Stornoway, in Lewis, are all suitable examples of deliberate, presumably votive, deposition (see Armit 1996:61; Cowie 1981:50; Ponting and Ponting 1977:45; Sheridan 1992:201; Thomas 1996b:177).

The style, quality and quantity of fine beaker pottery at Rosinish (Shepherd 1976), Dalmore (Ponting and Ponting 1983) and Northton (Simpson 1976), revealing a continuity with the preceding neolithic ceramics, confirm the continuing importance of pottery, and, presumably, its symbolic potential, in the Western Isles. The coarse nature, but not the depositional contexts, of many vessels from, for example, the later phases at Rubha an Udail Site 6 suggests the intrinsic quality and superficial appearance of ceramics were no longer of especial importance to its capacity to sustain symbolic understandings.

9.5. The aggrandisement of monumentality

The diversity and quantity of monumental evidence, including chambered cairns, stone circles, cairns, and standing stones, datable to the neolithic in the Western

Isles is profuse. No purpose is served by regurgitating here an empirical inventory of these various monuments.[14] Various corpora, relating to specific monument types, namely chambered cairns (Chrisp 1990; Henshall 1972:111-57, 429-30, 460-65, 495-534) and stone circles (Burl 1976:140-55, 357-58); or germane to specific areas, for example Barra (Branigan and Foster 1995:31-48) and the entire Western Isles (RCAHMS 1928); or focusing on particular research interests, for example archaeological astronomy (Ruggles 1984:75-120), fulfil adequately this service, and are readily available. Instead, the opportunity is taken here to discuss some interpretive issues arising from the nature of the monumental evidence. The appearance and development of a monumentality interpreted as performance locales to facilitate ritual practice, is explained as a consequence of changing conceptions of nature and landscape during the neolithic. The ritual efficacy and visual prominence of monumentality in the landscape are examined separately, with especial reference to chambered cairns, in sections 9.5.1. and 9.5.2. below. This imbalance of emphasis on chambered cairns is an inevitable consequence of successive investigations into these particular monuments, at the expense of other, equally interesting sites, for example stone circles, also embodying a megalithic architecture. However, the monumental complex at Callanais, and the prevalence of the numerous astronomical interpretations invoked to explain the stone circles, alignments and settings, are sufficiently intriguing to require especial discussion, pursued separately in section 9.5.3. below.

9.5.1. Chambered cairns as performance locales

The intellectual premises behind culture historical, processual, and post processual approaches to the interpretation of chambered cairns are critiqued adequately elsewhere (see Fraser 1996:4-46). However, the inadvertently disruptive effects of traditional architectural typologies require especial comment. A conventional emphasis on monumental typology, effectively treating sites lying in close proximity to one another as separate and unrelated entities, frequently precludes a holistic consideration of the various sites within a monumental complex (Bradley 1993:45-6, 95; Richards 1993c:146-47; Scott 1948:30). The architectural differences between sites lying immediately beside one another, for example Clettraval and Clettraval South, are employed to suggest a chronological discrepancy between them (eg. Scott 1935:480). Typology precludes the possibility of a relation between these sites and the standing stone lying between them. Similarly, the tendency to segregate, and then evaluate separately, the material culture and the skeletal remains characteristic of chambered cairns inadvertently frustrates the development of a cohesive understanding of the social practices they facilitated and legitimated, and which, in turn, demonstrated the ritual efficacy of the monumental architecture. An alternative conception of such monumentality is developed below.

Chambered cairns, expanding on a theme introduced earlier in chapter five, are interpreted as a monumental architecture designed to facilitate ritual performances germane to mortuary practices. The artefactual contents of these chambered cairns, comprising a miscellany of material culture stored, and selectively deposited, at varying locations in the interior, presumably accrued an enhanced symbolic potency due to storage in this special contextual milieu, and inclusion in the ritual practices enacted at these sites. That some of the bones recovered from these sites were probably conceptualised as ancestral symbols, rather than as disarticulated skeletal remains, opens the possibility that many of these chambered cairns were not employed directly in mortuary practices, but for alternative ritual concerns, relating, for example, to innovative conceptions of landscape, nature, kinship and ancestry (see Bradley 1993: *passim*; Thomas 1993a: 83-4; 1993b:389). At any rate, evidence for the exchange of human bones in parts of Europe, suggests that such materiality sustained a symbolism beyond that of the skeletal remains of a biological individual (see Bradley 1993:18-9). The traditional understanding of chambered cairns as communal mausoleum, their artefactual contents interpreted as grave goods to accompany the dead, is incompatible with the conception of monumentality endorsed below.

Unfortunately, space precludes a theoretical consideration of the social, structural, and ideological implications of a ritual practice. Admittedly, it is unsatisfactory to instigate an investigation into the original significance of chambered cairns with only a cursory reference to an arcane ritual practice. However, various informative theoretical explorations of ritual, developed within anthropology (eg. Geertz 1973; Lewis 1980; Turner 1967; 1977), and numerous derivative attempts to develop an archaeology of ritual, frequently based on the theoretical premises of the aforementioned citations, are readily available elsewhere (eg. Barrett 1994; Garwood *et al.* 1991; Shanks and Tilley 1982). At any rate, the concept of chambered cairns as architectures of performance, rather than as typological conundrums, is pursued below. This revised interpretation focuses on various architectural elements, for example the facade, the passage, the peristalith, and adjunct megalithic features, such as standing stones, that together comprise a chambered cairn. This study inevitably returns to Clettraval and Unival on North Uist, the only decently excavated cairns in the Western Isles, given the necessity of an accurate reportage on architectural detail.

The significance of bodily movement to an understanding of the ritual practices at chambered cairns in the Western Isles requires emphasis. The formative role of architecture in the manipulation of agency, the ability of a monumental materiality to intervene in, and interfere with, the direction, timing and co-ordination of bodily movement (Richards 1993c:148; Thomas 1993a:77-8), anticipates the formality of actions demanded of participants in the ritual practices enacted at these sites (Bradley 1993:2-3; cf. Thomas 1993a:79). It is possible to explain many of the structural features discernible on chambered cairns from the Western Isles as architectural mechanisms designed to facilitate and co-ordinate the prescribed actions of a ritual performance.

The vitiating sterility of typological debate regarding the structural heritage or relationships between the numerous architectural designs employed in the construction of chambered cairns, invites alternative approaches. To concentrate on ideological rather than empirical issues, emphasising ritual purpose, instead of typological identity, facilitates an innovative attitude to such monumentality. Two examples relating to sensory experiences indulged during the rituals enacted at these sites will suffice to demonstrate this point. The probable ritual importance of sunlight and fire, ways of illumination already saturated with a plethora of cultural meanings, as the only available sources of light to illume the proceedings inside the chamber, requires emphasis (Richards 1993c:157). Similarly, the importance of other senses, for example sound and smell, more able than sight perhaps to elicit the subtle evocations of symbolism integral to a successful ritual practice, also demands investigation (Fraser 1996:71; Richards 1993c:151). These phenomena are able to escape more readily the confines of the interior to instil the observers with the appropriate emotions and responses during ceremony. Indeed, the acoustic properties of the internal architecture of chambered cairns are claimed to create an especial resonance sympathetic to a ritual practice (A. Jones pers comm.).

9.5.1.1. Architecture as theatre

The narrow entrances, twisting passages, intervening septal slabs, low roofs and often cramped chambers of many chambered cairns in the Western Isles, conspired to create an architecture of inconvenience, in which a genuine effort was required to enter into, and proceed through the interior, to reach the innermost internal spaces of the monument. Certain features establish and maintain the interior of these chambered cairns as exclusive and recondite sanctums. Such architectural divisions incorporated a spatial dimension into the manner in which mortuary rituals were expressed (cf. Thomas 1988:548, 552). The ritual practices enacted inside these monuments were probably not visible, if not entirely unknowable, to the participants obliged to remain outside. Some of these points are elucidated more fully below.

The portal stones, usually positioned close together to define an extremely narrow, though seldom unusable, entrance (Henshall 1972:45), are frequently the tallest stones at the centre of a facade (Henshall 1972:43). Essentially, the facade, focusing movement towards its centre according to the escalating height of its constituent stones, *culminates in an entrance*. At cairns fronted by a facade, the shape of this structure is largely an irrelevance. It is the imposing tangible presence, rather than the abstract shape, of the facade that defines, indeed creates, the conception of a forecourt as an arena for performance. Indeed, the area circumscribed by the facade, as a stage for ritualised exhibitions, frequently extends beyond the immediate architectural extent of the facade, by drawing upon the effects of natural topography, to encompass a larger area (eg. Fraser 1996:85-7; cf. Bradley 1993:137). To characterise Unival, for example, as a chambered cairn with a facade, but not a forecourt, is a misnomer (*pace* Henshall 1972:147, 150). At this site, the facade projects, rather than encloses, a defined space readily identifiable as a forecourt.

Several features relating to the design of the passage intimate an architecture of performance.[15] Essentially, the passage, connecting the exterior entrance with the interior chamber, assumes a crucial importance in the architecture of chambered cairns. A complete traverse of the passage infers a successful transition of interstitial liminality. Movement along the passage seldom involves a direct linear progression. Instead, concessions of movement are required to negotiate the passage successfully. In several instances, at Bharpa Langass, Unival and Clettraval for example, the passage deliberately embodies a curvilinear or S-shaped plan, precluding a direct view into the chamber from outside the entrance (Scott 1935:487, 525). The changing dimensions of the passage, frequently increasing in width towards the chamber, as, for example, at Bharpa Langass and Clettraval (cf. Henshall 1972:133; Scott 1935:525), suggests a gradual accumulation of space, culminating in the chamber (cf. Armit 1996:71, 75-6; Scott 1942:303-04).[16] Similarly, the natural topography, presumably deliberately incorporated into the design of chambered cairns built on natural mounds, at Marrogh and Stiaraval for example, ensures movement along the passage involves an ascent to the chamber (cf. Henshall 1972:133).

The vestments within the interior of excavated cairns choreograph movement and co-ordinate depositional practices. Paving, frequently haphazardly or only partially installed, regularly forms the interior flooring of chambered cairns (Henshall 1972:57-8). Ceramic deposition at Clettraval and Unival respected the paving partially covering the interiors of the passage and chamber at both cairns. The internal cist structures within the chambers at Clettraval and Unival, both situated in the far left corner of the chamber, are comparable with similar features inside other chambered cairns, at Nether Largie in Argyll for example, and are preferably interpreted as ritual furniture, designed to accommodate interments (Henshall 1972:82, 83-5).

Excavations of chambered cairns in northern and western Scotland, usually focusing exclusively on the interior, seldom extended into the forecourt and around the exterior of the covering cairn. There is ample evidence from western and northern Scotland, at sites where excavation extended into areas around the monument, for architectural features and depositional practices indicative of ritual activity beyond the confines of the internal chambers.

The dry-stone rubble covering the chamber and passage at both Clettraval and Unival were more substantial on the downslope, compensating for the adverse contour of the immediate hillside, to form levelled platforms rather than amorphous cairns (see Scott 1948:11, 31, 48-9). Presumably, these highly visible platforms, interrupting the natural landscape in terms of both colour and contour, were employed as ostentatious arenas on which mortuary rituals were conducted.

At Clettraval, stone paving ran along the front of the facade, and extended outwards, roughly perpendicular to the facade, for at least 4 metres from the entrance to the east (see Scott 1935:490-91). Similarly, the peristalith at Clettraval effectively formed a path around the perimeter of the cairn (see Scott 1935:492-93, 527-28; 1948:48-9).[17] At Unival, the stone paving running along the facade and across, and indeed, into the entrance is preferably interpreted as an original feature, designed as a pathway along the front of the cairn, and leading into the entrance. At any rate, the careful construction and meagre size of this feature argue against its interpretation as blocking (Henshall 1972:150; *pace* Scott 1948:13). The design and position of the stone paving at these sites, variously defining prescribed paths of movement around the cairn, along the facade, towards the entrance, and, ultimately, into the interior, of the monument, suggests irresistibly an architecture of performance. Similarly, at Rudh' an Dunain on Skye, the only hebridean type cairn at which excavation was extended to include the forecourt, an artificially levelled stone setting, forming a small platform, was revealed in the centre of the forecourt (Henshall 1972:147; Scott 1932:197, Plate VI:210; 1934a:195-6). Again, this architectural feature, intimating a formal locale at which specific ritual practices were enacted, concerns movement (cf. Scott 1932:206; Armit 1996:72).

Solitary standing stones are positioned in close proximity to, and are presumably associated with, several chambered cairns, including Dun na Carnaich, Marrogh, Sig More and Unival in North Uist (see Henshall 1972:59, 98, 142, 150). The relation between the standing stone in close proximity to Clettraval and Clettraval South, lying roughly midway between these chambered cairns, is difficult to establish. The recurrence of such monoliths in the vicinity of chambered cairns, and the stone socket known from excavation of the forecourt at Cairnholy I in Galloway, suggest a ritual significance for the actual stones, and also, perhaps, for their instalment and eventual removal (see Henshall 1972:98). The stone paving surrounding the standing stone at Unival (Scott 1948:10-11) suggests submissions of a ritual nature occurred at this monolith. More significantly, perhaps, are the interpretive repercussions resonating from any discussion of these monoliths to an understanding of the chambered cairns beside which they are situated. Essentially, the presence of a related, but distinct, monumental locale emphasises the importance of landscape *between* these grandiose sites (cf. Bradley 1993:110, 233, 238; Fraser 1996:62-3), an issue more properly addressed in section 9.5.2. below.

9.5.1.2. Mortuary activity and depositional practices at chambered cairns

The diversity of ritual activities, suggested by a bewildering variety of mortuary practices (see Henshall 1972:78 *ff.*), probably attest to the use of these chambered cairns to fulfil specific ritual requirements germane to local communities over prolonged periods. No attempt is made here to reiterate or summate the specific details of the ritual practices proposed for Clettraval (Scott 1935:534-36), Unival (Scott 1948:22-4, 32-5), or other chambered cairns in the Western Isles (Henshall 1972:143-45). The complexity of mortuary activity and depositional practices at Clettraval and Unival, attributable to the intricacies of ritual conduct perpetrated at these sites (see Henshall 1972:79 *ff.*; Scott 1935:534-36; 1948:22-4, 32-5), and compounded by a palimpsest of activity during prolonged use, are a sobering reminder of the formative role, and ideological efficacy, of chambered cairns throughout the neolithic.

The tendency to interpret the artefactual contents of chambered cairns as grave goods, with the notable exception of deposits either preceding, or allegedly contemporary with, the construction of the monument (see Henshall 1972:164), requires redress. The manipulation and votive deposition of material culture at chambered cairns exemplified, and, consequently, reinforced, the ritual expediency of these sites (Bradley 1993: *passim*; Thomas 1993a:83, 92). The ceramic evidence, dealt with fully in chapter five, is excluded from the following consideration of depositional practices at these performance locales, in deference to other material culture resources. Artefact deposition, occurring both within and around chambered cairns, and variously preceding, contemporary with, and succeeding these sites, demonstrated the continuing allure of monumentality to facilitate a successful ritual practice. Such depositional practices incorporated numerous types of artefactual, faunal, and, presumably, floral remains, and even some pedological deposits.

The evidence suggesting the ritual deposition of many non-ceramic artefacts at chambered cairns is persuasive. A stone ball, evidently worked, from the chamber at Unival, was interpreted by Scott as a construction tool, ritually contaminated, too dangerous to remove after construction was completed, and left behind as a foundation deposit (Scott 1948:12, 29; Henshall 1972:156). Two stone balls and a split quartz pebble from Clettraval, deposited in a stone socket prior to the instalment of a facade stone, were interpreted as foundation deposits (Scott 1935:498, 515; 1948:29). The deliberate deposition and resultant contexts of these stone balls conforms with interpretations of these intriguing artefacts as prestige items or heirlooms, circulating as gifts in diffuse exchange networks (see Edmonds 1992:187-92; Marshall 1977:63). The pumice pendant from Unival (Scott 1948:29), pumice rubbing stone from Clettraval (Scott 1935:515; Scott 1948:30), and amorphous pumice lumps from other chambered cairns elsewhere in the Hebrides, for example Rudh' an Dunain on Skye (Armit 1996:72; Scott 1932:209-10; 1948:30), suggests the raw material, not simply the resultant artefactual form, was important (see Scott 1932:210). The deposition of at least one pumice rubbing stone in a chambered cairn recalls the contextual recurrence of axe polishers, another form of rubbing equipment, admittedly in a different raw material, in mortuary contexts, and may evoke a related nexus of meanings to the symbolic connotations envisaged between axes and death at varying points during the neolithic (see Taylor 1996:229 *ff.*; cf. Scott 1932:209). Several water worn quartz and jasper pebbles, all deliberately introduced, were recovered from various locations, suggesting intentional deposition, at both Clettraval and Rudh' an Dunain (Scott 1932:209; 1935:515-16).

Importantly, certain layers, particularly the black, organically enriched sterile layer, upon the floor of the interior of the chamber at Unival, and the lower layer at Clettraval, were probably deliberate deposits (cf. Henshall 1972:90, 148). Similar layers were a regular feature, forming either a floor level or a sealing layer, inside many chambered cairns (Henshall 1972:89-90). There is no reason, other than the obstinacy of empiricism, to suppose that depositional practices in chambered cairns incorporated only artefactual deposits, whilst excluding pedological ones. Indeed, several lenses of charcoal rich deposits within the upper layers in the chamber at Unival were interpreted as the contents of the cist dumped into the chamber during clearance of the former feature to accommodate successive interments (Scott 1948:12). Interestingly, a large hollow in the forecourt at Rubha an Dunain on Skye contained distinct deposits of soil and stones (Armit 1996:72).

It is, given the impressive architectural features that characterise the external appearance of the chambered cairn, foolish to preclude the possibility of depositional locales outside the internal chamber. The forecourt, an arena for performance projected by a facade, was perhaps an obvious focus for an ostentatious frenzy of deposition. Henshall, discussing clyde type chambered cairns, remarked:

> "It seems reasonable to find traces of external ceremonies at tombs with impressive facades" (1972:77; cf. Thomas 1993a:85).

This prescience assumes relevance for chambered cairns embodying different architectural traditions. At several sites, there was some evidence of activity in front of the facade, presumably motivated by ritual concerns, including, for example, erecting or dismantling stone settings, lighting fires, introducing earthen deposits, and depositing artefacts, including pottery, in the forecourts (Henshall 1972:77-8, 87-8). Unfortunately, the extent of excavation at Unival encompassed only the facade and not the envisaged forecourt (see Scott 1948, Figure 1: facing page 48, Plate II.2: following page 24). That the platform or paving surrounding the standing stone immediately to the south west of the cairn was devoid of artefactual deposits (Scott 1948:11), more likely demonstrates a proscription on depositional activities in this particular locale, rather than a total absence of depositional practices around the monument. At any rate, the reality of depositional practices outside the monument provides empirical confirmation of an artefactual presence not readily explained simply as grave goods. Sadly, later disturbance across much of the forecourt at Clettraval obliterated any trace of depositional practices in the affected areas (see Scott 1935:490). Interestingly, an eclectic variety of artefacts were deposited in the forecourt at Rubha an Dunain on Skye (Armit 1996:72).

9.5.2. Chambered cairns in the landscape

The presences of chambered cairns, effectively an imposition of monumentality in the landscape, indicated an alteration in the ways in which these locations, and the environs in which they were situated, were conceptualised. These architectures, representing a formal demarcation of specific locales, enabling the spatial differentiation of a wider landscape, suggest the further articulation of place, and the development of alternative means of understanding landscape (Thomas 1988:556; 1993a:81-2). The inevitable emphasis on the location of the monuments themselves obscures the significance of the nature of the landscape between them. The monuments, and the landscape in which they were interspersed, became comprehensible by an understanding of the experiences gradually accrued during the journeys repeatedly made across the landscape between these sites. These journeys were probably of prescribed order and calculated duration (cf. Bradley 1993; Fraser 1996).

Lived social space, realised through an active and continued agency, cannot be isolated for empirical study as a unitary tangible entity, because different conceptions of social space are invoked by social agents conducting various strategies of action to achieve specific aspirations (see Fraser 1996; Richards 1993c; Thomas 1993a; Werlen 1993). The essential premise of the following commentary is that a visual appreciation of landscape was crucial to interpretation at some sites. However, the dual concepts of nature and landscape were presumably realised during the neolithic in ways inconceivable to modern intellectual enquiry. The contemporary popular understanding of landscape as a pristine, but exploitable, natural resource, quantified by rational conceptions of distance and perspective, and variously exemplified by the sciences of ecology and cartography, represents a culturally specific symbolism of landscape. Presumably, the realisation of landscape as a topographical surface, bristling with natural resources amenable to development or exploitation, is peculiar to a moribund modernity. The following interpretation of chambered cairns in the landscape, identifying the changing relations between topography and resultant visibility, with respect to movement, inadvertently claims some universal significance to the modern conceptions of distance, perspective and observability. Attempts to develop an archaeology of agency and materiality necessarily rely upon conceptions of visibility and movement during explorations of landscape (Fraser 1996:71; cf. Bradley 1993:221-25).

The recognition of the natural as a cultural entity confuses archaeological studies of landscape seeking to elicit the significance of place, because the distinction made between a deliberate architecture, as monuments, and a natural architecture, as prominent aspects of topography, become entirely artificial. Indeed, it is possible that the concept of monumentality was recognised during the mesolithic. Shell middens, many datable to the mesolithic, are feasibly interpreted as an accumulated monumental architecture, rather than as incidental rubbish deposits in western Scotland (Pollard 1996:206). Indeed, shell middens, accumulating continuously through seasonal exploitation, possibly encapsulated social and economic strategies presaging a temporality and cosmology sympathetic to the adoption of ostensibly domestic resources, for symbolic purposes, in the late mesolithic and early neolithic (Jones 1996:292-93). Significantly, several chambered cairns were constructed directly above existing shell middens in western Scotland (Pollard 1996:204-05), suggesting the formal elaboration of locations previously exuding a symbolic or ritual importance (cf. Bradley 1993: 44; Thomas 1988:556). Natural topographical features, if suitably distinctive, are potentially considered monumental (cf. Bradley 1993:26, 29; Fraser 1996:89-94). It is plausible that certain monuments, given their longevity of use, their original builders long forgotten and resurrected in innumerable different guises many times over, were eventually indistinguishable, to the successive generations that used them, from other natural features in the landscape.

The opportunity was taken, during one of my many trips to the Western Isles, to visit as many neolithic and early bronze age sites as possible.[18] My rudimentary means of transport, cycling and walking, usually across desolate peat bogs to destinations frequently visible long before my actual arrival, afforded several unanticipated benefits germane to interpretation. When travelling by bicycle, progressing slowly against an unrelenting wind, across a frequently bleak landscape, the subtle nuances of topography, and the positioning of certain monuments in relation to the landscape, were experienced in a manner impossible if travelling by motor car. These impressions were accrued gradually, often formulated after several journeys along the same meandering roads, travelling between the various monuments. A general familiarity with the landscape was a necessary prerequisite to developing some degree of understanding of these sites (cf. Fraser 1996:64, 234). Some of these observations, more casual impressions than formal statements, are mentioned below, and, with respect to Callanais, in section 9.5.3. elsewhere below.

The manipulation of topography to accentuate the visibility, or exacerbate the scale, of many chambered cairns confirms the significance of the relation between monumentality and landscape (*pace* Henshall 1972:37; cf. Armit 1996:77). Indeed, there is some consistency in the positioning of chambered cairns on various islands in the Western Isles. The following assessment inevitably emphasises the chambered cairns clustered on North Uist, where the concentration of sites is probably genuine (Armit 1996:77-8). Many of these chambered cairns lie in upland locations, either on the slopes, shoulders or terraces of the imposing central hills (cf. Chrisp 1990:47-8), for example Marrogh and Airidh nan Seilicheag on Marrogh, and Buaile Maari on Maari, or atop natural mounds in the undulating, peat covered lowlands, for example Barp Hacklett near Carinish, Oban nam Fiadh on Craonaval, Bharpa nam Feannag (see Chrisp 1990:47), Stiaraval near Loch a'Bhursta, and Barp Frobost south of Reineval, the latter two on Benbecula and South Uist respectively. Similarly, in South Uist, some chambered cairns, for example Glac Hukarvat on Haarsal, and Reineval on Reineval, are situated on the low hills above the endless machair of the west coast. The conspicuous locations of many cairns was considered more an inevitable consequence of topography than the deliberate intention of the people responsible for the construction of these monuments (see Henshall 1972:123). Indeed, Henshall interpreted the location and overall distribution of chambered cairns in North Uist, allegedly situated beside pasture, as a function of economy (1972:116), and, implicitly, as an indication of territoriality (1972:124; cf. Davidson and Henshall 1989:14-15; Henshall and Ritchie 1995:76). Certainly, the chambered cairns on North Uist are apparently concentrated on areas of good drainage (see Chrisp 1990:65-6). Similarly, the concentration of chambered cairns on and around the Eye peninsula in Lewis, notable for its sedimentary geology, and the density of monuments on the west coast of Lewis near Bernera, notable for its fertility in relation to the surrounding landscape, was explained with reference to the inordinate productivity of the soil, and therefore allure to early farming communities, in these specific areas (Henshall 1972:120). The refutation of the once inviolate correlation between agriculture and monumentality means that another interpretation is required, other than that of economic expediency, to explain the position of chambered cairns in the landscape.

It is possible to explain the location of many sites with reference to bodily movement across the landscape on North Uist. Bharpa Langass, for example, on the north facing slope of Ben Langass, is situated precisely at a location which affords spectacular views to the east and west. When approached from the low lying undulating peat bog, characterising the central part of North Uist, to the east, the cairn, still in a good state of preservation, is visible from a considerable distance away, elevated on a distant hillside, as a stark silhouette against a receding western sky (cf. Armit 1996:70-1). Similarly, Striachclete, in the overland pass running between Ben Ernakater and Ben Aulasary, joining the north and south of the island, is positioned precisely in the location at which both the north and south west coasts of North Uist become visible simultaneously if approached from either the south or north respectively. Again, Unival, on a shoulder on the western slopes of Uneval, occupies precisely the location at which the entire south western part of the island becomes visible, if approached from downslope to the south east.[19] Similarly, Clettraval, on a terrace on the southern slopes of South Clettraval, is situated precisely in the location at which the St Kilda archipelago becomes visible, if approached from the east. These chambered cairns simultaneously occupy two apparently contradictory positions in the landscape. When viewed or approached from a distance, the monuments are visible on the horizon, on the periphery of the landscape. Alternatively, when viewed upon arrival at the site itself, these monuments, commanding extensive views encompassing vast tracts of land, sea and sky, are apparently at the centre of landscape. It is bodily movement, encapsulated by the physical exertion required to reach these monuments, that resolves the illusory contradiction of their dual position in the landscape. As the distance towards these sites decreases, and the time absorbed by the approach increases, the journey to these chambered cairns, achieving a gradual transition from periphery to centre, effectively intimates a landscape of denouement.

Chambered cairns lying atop natural mounds, or at the crest of short ridges, in the rolling landscape typifying much of the interior of North Uist, for example Barp Hacklett and Oban nam Fiadh, occupy locations similar to those of Bharpa Langass and Striachclete, because arrival at the former group of sites similarly involves an eventual, if less dramatic, denouement of landscape. The undulating moorland provides numerous platforms of topography from which a resolution of landscape becomes feasible. The vagaries of topography, obscuring and then revealing rocky outcrops, slopes, burns, and rolling tracts of peat bog, are evoked by the movement required by any journey towards these sites. Yet arrival at these chambered cairns suddenly transforms landscape from a series of fractured perspectives into a solitary uniform vista. Essentially, to arrive at these sites is to develop a clarity of landscape. The construction of these chambered cairns in positions confirming the inevitable totality of landscape augment, and further affirm, the previously recognised natural significance of these locations (cf. Bradley 1993:44; Fraser 1996:146-47). The extensive visibility afforded from these various sites was perhaps intended to demarcate perspectives and vistas encountered previously during journeys along well worn pathways, possibly of considerable antiquity, through the landscape (Bradley 1993:25). Alternatively, the totality of landscape accumulated during the experience of visiting these sites, and the extensive views available upon arrival at these monuments, possibly demonstrated the relation between the ancestors and the living (Fraser 1996:61).

The direction of approach is of fundamental relevance to this interpretation of chambered cairns. Essentially, the concept of an approach towards these sites culminating in an unravelling of landscape depends upon travelling along specific routes. The monumental architecture of these sites, or the natural topography surrounding them, frequently intimate the nature of these potential paths of movement. Both Bharpa Langass and Striachclete lie on hillsides overlooking natural routes across the interior of North Uist. Presumably, these separate sites were routinely approached from either side of these different passes. The east facing facade at Clettraval invites an approach from the east, along the plateau on which the monument is situated. Indeed, only arrival from the east facilitates the sudden appearance of St Kilda from behind the shoulder of the hillside.[20] The south east facing facade at Unival, inviting an approach from the south, ensures that the extensive views to the west and north west are not entirely visible until the shoulder of the hill on which the monument lies is finally reached. Indeed, the facade, following roughly the contour of the topography (see Scott 1948, Figure 1: facing page 48), dominates the shoulder of the hill when approached from the east. An approach to the monument, necessarily approached from down slope, requires an ascent to a facade always above the observer until the forecourt is reached.

Presumably, the various chambered cairns in North Uist situated on the coast, immediately beside the water, were originally located on shallow slopes running down to the coast, or, in the case of sites positioned beside tidal islands, overlooking shallow valleys. That it is impossible to accommodate these sites in the aforementioned interpretation of chambered cairns in the landscape presumably attests to the diversity of relations between monumentality, topography, and mortuary practices in the neolithic. At any rate, the inordinate scale of many of these monumental edifices, and the substantial labour requirements their construction involved, regardless of their relation to topography, require emphasis. Chambered cairns were frequently impressive, and presumably unique, structures in landscapes devoid of comparable monumental constructions (see Davidson and Henshall 1991:84-5). Certainly, the substantial drystone cairns surviving at the better preserved chambered cairns lend these monuments an impressive appearance (Henshall 1972:126).

The longevity of use discernible at these monuments, punctuated by successive episodes of construction, alteration, adaptation and embellishment of the architecture, attest to the ritual credibility and social integrity of these monuments in the neolithic and early bronze age. There is some evidence of earlier activity, whether genuine occupation residues or preparatory ritual practices, preceding the construction of chambered cairns, at the locations where they were subsequently built (see Henshall 1972:34, 87). The renovation and expansion of the architecture, admittedly based largely on monumental typology or allusions to a peculiar architecture, is attested at some cairns (see Henshall 1972:47-8, 57, 59-73, 140-41; Scott 1969:180-198). Successive episodes of depositional activity, punctuated by separate phases of structural refurbishment, apparently confirm the longevity of mortuary practices at many chambered cairns (Henshall 1972:90-91, 143-47). The blocking of the passages, entrances and forecourts is generally interpreted as the culmination, and indeed as confirmation, of the prolonged use of the interior of many chambered cairns (see Henshall 1972:147-50). That many chambered cairns became a focus for later mortuary activity, for example secondary interments (see Henshall 1972:58, 59, 142), or further monumental construction, for example the erection of standing stones and stone alignments in the immediate vicinity, suggests a durable, if altered, ritual importance, lasting across successive generations (see Davidson and Henshall 1991:85).

The discussion in this section, emphasising chambered cairns, has ignored totally other forms of megalithic architecture, particularly stone circles and solitary standing stones. Yet many of these sites occupy locations within the landscape relating to topography or other forms of monumentality. The stone circle Pobull

Fhinn, for example, lies on a natural terrace overlooking Loch Langass in North Uist (see Thom *et al.* 1980:311), in a position similar to that of many chambered cairns elsewhere on the island. Similarly, another stone circle, Sornach Coir Fhinn, embodies certain astronomical alignments, and the chambered cairns of Craonaval and Unival each form stark monumental silhouettes on the eastern and northern skylines respectively (see Thom 1967:131; Thom *et al.* 1980:313). The enigmatic megalithic structures occurring *exclusively* along a ridge between Glen Bretadale and Dun Ban on Barra, and embodying an architecture reminiscent of chambered cairns, are apparently devoid of any artefactual remains (see Branigan 1995b:176-83, Figures 5.11-13:177-79). These intriguing structures, defying classification within any existing monumental typologies, were interpreted as temporary mortuary repositories, possibly excarnation platforms, where corpses were interred until defleshed, and their bones removed for ceremony and deposition elsewhere (Branigan 1995c:201). One of these sites, T180, was excavated, and yielded two radiocarbon dates (see section 9.9), each forming a *terminus ante quem*, dating the structure to the late neolithic of early bronze age (Branigan 1995b:183).

9.5.3. A monumental landscape in West Lewis

Any pretence to study a neolithic of the Western Isles demands some mention of the concentration of monuments around East Loch Roag in west Lewis (see Figure 9.3). The density of monuments in this locality includes stone circles, stone alignments, chambered cairns, and, famously, the stone circle, avenue and radial alignments at the crofting township of Callanais. The nomenclature used to identify the numerous sites in the area, following Ponting and Ponting (1981:63; 1984b:3), and acknowledging the reservations of Burl (1979b:191; cf. Ponting and Ponting 1981: 63; 1984b:3), is taken from the original classification employed by Thom (see Thom 1967:126-28). The various sites selectively referred to in this section are, then, identified as Callanais I, II, III, IV and so on. Table 9.1 itemises the Gaelic place names displaced by this rather sterile terminology. Unsurprisingly, assuming precedence over equally interesting sites in the locality, the enormous monumental complex at Callanais township is

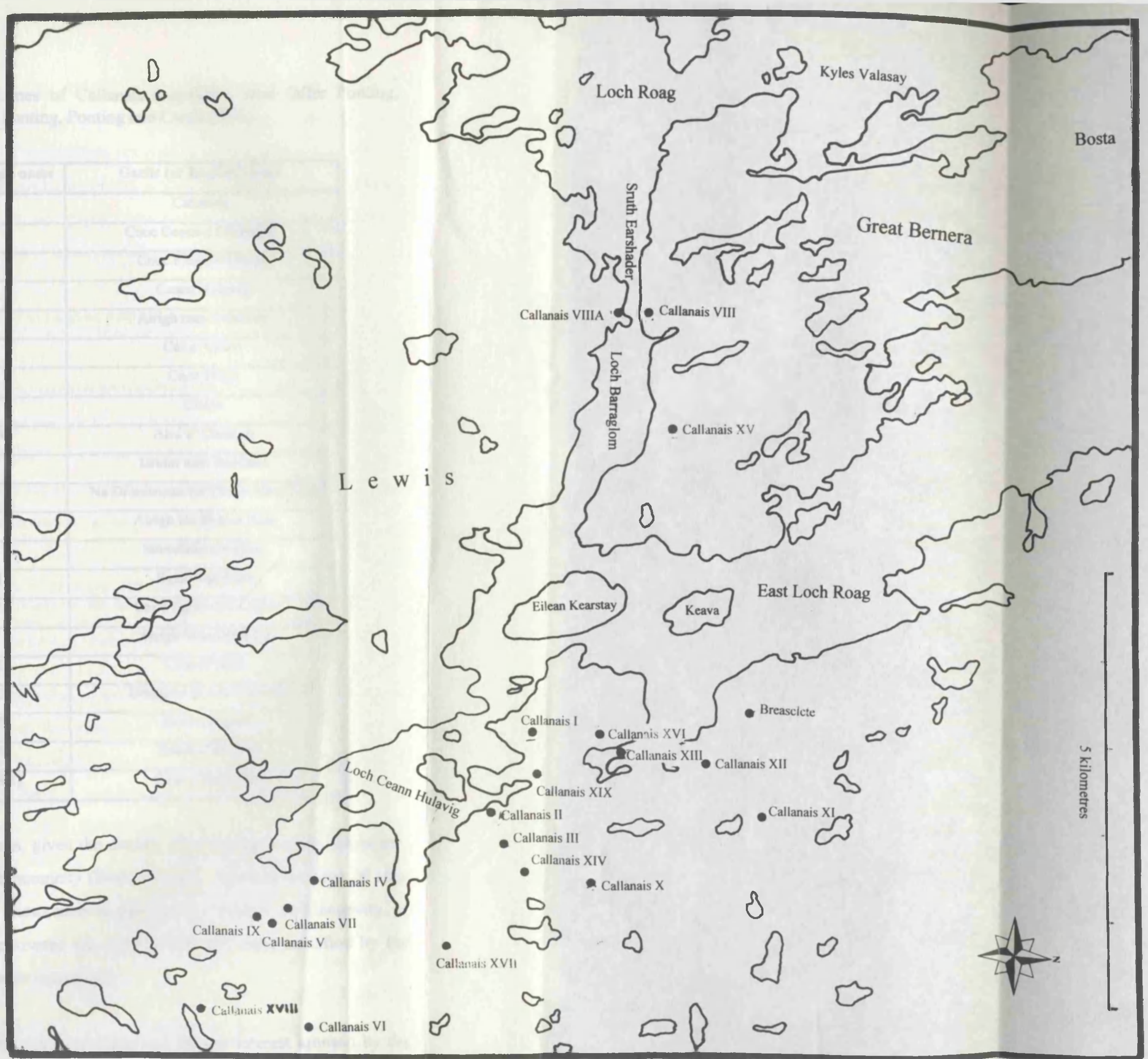


Figure 9.3.: Location and topography of stone settings and monuments around Callanais
(after Ponting and Ponting 1984b)

Table 9.1: Gaelic place names of Callanais megalithic sites (after Ponting, Ponting 1984b; Ponting, Ponting and Curtis 1976)

archaeological catalogue name	Gaelic (or English) name
Callanais I	Callanais
Callanais II	Cnoc Ceann a Ghàrraidh
Callanais III	Cnoc Fillibhir Bheag
Callanais IV	Ceann Hulavig
Callanais V	Airigh nam Bidearan
Callanais VI	Cùl a' Chleit
Callanais VII	Cnoc Dubh
Callanais VIII	Cleitir
Callanais VIIIA	Aird a' Chaolais
Callanais IX	Druim nam Bidearan
Callanais X	Na Dromannan (or Druim Nam Eun)
Callanais XI	Airigh Na Beinne Bige
Callanais XII	Stonefield (or Blair)
Callanais XIII	Sgeir Nan Each
Callanais XIV	Cnoc Sgeir na h-Uidhe
Callanais XV	Airigh Mhaoldònuich
Callanais XVI	Cliacabhaigh
Callanais XVII	Druim na h-Aon Chloich
Callanais XVIII	Loch Crogach
Callanais XVIII	Buaile Chruaidh
Breasclete (LWS 1)	Cnoc a Phrionnsa

labelled Callanais I. There is, given the density of monuments in the landscape, no reason to expect contemporaneity (Burl 1976:52). The concentration of sites in this part of West Lewis attests more to the efficacy, veracity, and longevity, of the varying beliefs that motivated the construction, and were modified by the existence, of these remarkable monuments.

The intensity of antiquarian, archaeological and literary interest aroused by the remarkable architecture of Callanais I over the last three centuries is considerable. Much recent archaeological research has focused on previous, largely antiquarian studies of this and other sites in the local landscape as a precursor to further research (eg. Ashmore 1984; Ponting and Ponting 1979; 1981b). Strangely, despite the existence of a landscape bristling with monumentality, an attitude of interpretive resignation, confessing to an inability to offer a satisfactory understanding of the evidence, recurs in the available literature. Armit, for example, recounting some early antiquarian speculation on druidic shenanigans at Callanais I, subsequently remarked:

> "Druids aside it is still hard to progress substantially from this analysis" (Armit 1996:82; cf. Ashmore 1984:21, 26; Burl 1976:154; 1979a:82, 100).

Typological comparison of the various architectural components of Callanais I, failing to inform upon the significance of the complex, merely defers meaningful explanation (eg. Armit 1996:82-3; Ashmore 1984:23-5; Burl 1976:143). Indeed, the failure to contemplate the significance, that is the specificity, of place, in the interpretation of Callanais I ensure continued bafflement:

> "It is impossible presently to determine why the Callanish area should have assumed such ritual significance in the Later Neolithic. On the basis of the somewhat earlier concentration of chambered tombs, North Uist might have seemed the most likely place for such a centre to arise" (Armit 1996:83).

However, the continuing endeavours of local archaeologists, exploring the astro-archaeological significance of the profusion of sites in the locality, form a notable exception to this explanatory indolence (eg. Curtis 1988; Curtis and Curtis 1994; Ponting 1988; Ponting and Ponting 1981a; 1981b; 1984a; 1984b; Ponting, Ponting and Curtis 1976; Schulz and Schulz 1990).[21] The following commentary, attempting to identify an interpretive potential with respect to these monuments, whilst incorporating many of the conclusions of this astro-archaeological research, prefers to emphasise the discursive experience of this architecture (cf. Bradley 1993:46-7, 61-2), and returns to those aspects of interpretation explored more fully, with reference to chambered cairns, in section 9.5.2. above. There is, inevitably, an undue emphasis on Callanais I in this cursory analysis.

The many laudatory statements on the megalithic splendour of Callanais I (eg. Burl 1976:148; Ritchie and Ritchie 1991:55; Somerville 1923:202), presenting the site as a holistic and unitary entity, impede an understanding of this architectural nexus as a composite monumentality, and, with some notable exceptions (eg. MacKenzie, W.M. 1904:189-93; Somerville 1912:37-46; Thom 1967; Ponting and Ponting 1984b; Ponting, Ponting and Curtis 1976), detract from the importance of the remaining megalithic sites in the immediate vicinity. Indeed, Burl, viewing Callanais I as a preconceived architecture, and remarking upon its: "...baroque design..." (1979a:111), interpreted the extant monumental complex as unfinished and incomplete (Burl 1976:153-55; 1979a:100). Indeed, its overall peculiarity of design was also attributable to the peripheral location of the Western Isles:

> "Born of this seclusion came a monument whose architecture made it as insular as the elongated island tombs of the Orkneys, its seeds gathered from distant sources, its conception nurtured in the long, uninterrupted days on the sea-wrapped Hebrides" (Burl 1976:155).

However, recent excavations, contradicting this view, have revealed a complicated and sporadic sequence of construction, refurbishment, alteration, and addition, stretching over generations, at this site (Ashmore 1981; 1984:30; cf. Ponting and Ponting 1984a:7, 19; Schulz and Schulz 1990:16-17). The architecture visible today, representing the eventual culmination of a series of successive, intermittent and multifarious episodes of use and adaptation of a developing architecture, encapsulates multiple phases (Ponting and Ponting 1981a:106; 1984a:40; 1984b:9; cf. Bradley 1993:57, 90, 98-104, 129). To recognise Callanais I as a composite architecture of structural diversity, rather than provoking further scrutiny of the actual design of the resultant monument, invites an evaluation of the significance of the location of the site within the wider topography. There are three obvious topographical features distinguishing the immediate locality of Callanais I from the surrounding landscape.

Firstly, Callanais I, *lying along a low ridge* beside East Loch Roag, enjoys a visual prominence and high degree of visibility in the surrounding landscape

(Ponting and Ponting 1984a:5; cf. Ashmore 1984:1). The extensive vista attainable from the site is impressive. Conversely, the site is clearly visible from, for example, Callanais III and IV, some distance away (Burl 1979a:108, 110). Secondly, moving through the avenue, between the circle stones, and alongside the southerly stone row, a journey that involves travelling down the entire ridge from north to south, the monument *appears to culminate in a natural rocky outcrop*, Cnoc an Tursa (cf. Ponting and Ponting 1984a:5; Thom 1967:123-24). That all stone alignments, with the exception of the southern row, at Callanais I terminate in a lateral 'blocking stone' suggests that the rocky outcrop itself served this purpose (Ponting and Ponting 1979; 1984a:12). It is not too fanciful to suppose that this natural prominence, precipitating the construction of a megalithic monumentality in the neolithic, enjoyed some especial symbolic significance in the preceding mesolithic (cf. Ponting and Ponting 1979). Indeed, excavation revealed a complex structural sequence on the platform beneath Cnoc an Tursa, incorporating various pits or ditch terminals, a coherent arrangement of post sockets, a ditch with multiple phases of post settings, and, finally, an ash and charcoal spread (Coles 1993:110-11; Coles and Rees 1994:96). Ceramics of indeterminate type were recovered from several of the aforementioned features (Coles and Rees 1994:96). Thirdly, the distant hills of south east Lewis and north Harris to the south *form a distinctive skyline* when viewed from this, rather than any other, part of west Lewis (Ponting 1988:426-27; Ponting and Ponting 1981a:78). The dark silhouettes of these faraway hills, including the distinctive notch where Glen Langadale passes between Teilesval and Mullach an Langa (Ponting and Ponting 1981a:78, 106), and the unusual anthropomorphic profile of the horizon, known locally as Cailleach na Mointeach, translating literally as 'the old woman of the moors' (Ponting 1988:426; Ponting and Ponting 1981a:78), coalesce into an imposing elemental landscape of overwhelming effect:

> "The waters of East Loch Roag, the mountains of Harris, the hills of Pairc and Uig and the vast open hemisphere of sky formed the backdrop for whatever ceremonies were performed here..." (Ponting and Ponting 1984a:5).

Callanais I is more a *particular place*, embellished by successive episodes of monumentality, than a preconceived megalithic edifice. The nature and scale of the monumental architecture evidently accentuated and further developed the existing symbolic significance of the location. Movement along the avenue, punctuated by negotiation of the especial space demarcated and enclosed by the circle stones, evidently culminated in an arrival at the natural outcrop of Cnoc an Tursa. The avenue facilitated the control, and effected the surveillance, of the discursive, if predictable, experiences excited by the ritual procedures enacted amongst the stones. Other avenues or alignments in the Western Isles, always undated and frequently ambiguous, may allude to similar motivations elsewhere (eg. Granville *et al.* 1986b).

The significance of the relations between the monumental architecture and the topography of the wider landscape have been both emphasised and obscured by the many astro-archaeological investigations into the site. These studies, variously identifying some persuasive, and many less plausible, solar, lunar and stellar alignments, frequently demonstrate the manner in which the spectacular effects of such astronomical phenomena, when viewed from various positions within Callanais I, are accentuated by salient topographical features in the wider landscape. The visual interplay between the sun, the moon, the circle stones, and the rugged southern skyline, seen from the northern end of the stone avenue, is notable (see Ponting 1988, Figure 19.4:428; Ponting and Ponting 1981a:77; 1984a:50-2; 1984b:9; cf. Schulz and Schulz 1990:30). Indeed, judging from the identifiable astronomical alignments, the majority of monuments around East Loch Roag evidently employed the lunar cycle as an experiential catalyst to bring ideological efficacy to the ritual practices enabled by, and enacted within, the domineering monumental architecture of these sites (cf. Ponting and Ponting 1981a:103-04).

The focus on abstract astronomical alignments invariably obscures crucial aspects regarding the position of the monuments with respect to the local micro-topography. Significantly, Callanais I, apparently surrounded by hills at varying distances on all sides, has the appearance of lying at the centre of a natural amphitheatre (see Schulz and Schulz 1990:24). It is preferable to interpret many of the architectural or topographical features of these sites with reference to performance rather than astronomy. The alignment of the avenue at Callanais I, for example, askew in relation to both the cardinal points and the remaining stone rows, is only puzzling when evaluated in the abstract, using esoteric astronomical or cartographical terms, in plan view. The orientation of the avenue and the continuing southerly stone row, each following the crest of the ridge on which the entire monument is aligned, are more readily understandable when assessed in relation to the local topography (*pace* Ponting and Ponting 1979; 1984a:12). Importantly, extensive views of the distinctive skyline to the south are obscured by Cnoc an Tursa, the rocky outcrop at the southern extremity of Callanais I (Ponting 1988:429). That extensive views, achievable simply by building the alignments: "...a few metres further west..." (Ponting 1988:429), were not pursued, suggests that positioning along the crest of the ridge was important. Essentially, the avenue and southern alignment each formally demarcate prescribed paths of movement, bestowing a high degree of prominence on the participants, by affording maximum visibility to any procession, along the top of the ridge. Witness of the more salient lunar alignments at Callanais I, only visible from specific places within the architectural complex, demands movement between the stones (see Ponting and Ponting 1984a:10). Importantly, there is a variety of evidence for paving at various locations around the site. Innes, in his excavation report, mentioned:

> "...a rough causewayed basement in which the circle stones were embedded..." (Innes 1858:111).

This paving, possibly encircling the stone circle, may have extended around the constituent monoliths of the central circle (Ponting and Ponting 1979; see Somerville 1912, Figure 2: following page 30), and possibly the area they enclosed (Ashmore 1984:28). The intrinsic design, and astronomical relations, of the monumental architecture of Callanais I suggest that the location was primarily an arena in which ritual performances relating to seasonal changes and life cycles were conducted (Ponting and Ponting 1984a:40).

Several other monumental sites in the locality either embody an architecture of performance or lie in notable locations. The interior of Callanais II, for example, containing either pits or post-holes, was probably cobbled, and circumscribed some four hearths, each containing a foundation of rounded pebbles, all imported from the coast, and artificially laid (Ellice 1860:202-03; Ponting and Ponting 1981a:90-1; 1984b:13). A megalithic cove enables a further concentration of space within the interior of Callanais III (Ponting and Ponting 1984b:16; Somerville 1912:39).Callanais VI, probably a ruinous chambered cairn, and lying on a knoll in rolling moorland, achieves a certain eminence over the monotony of the surrounding landscape (see Ponting and Ponting 1984b:25). Callanais VIII, a semicircular arrangement of standing stones, enclosed an artificially levelled cobbled platform (Curtis and Curtis 1988:32; 1989a:72). A 'patterned pot' was deposited beyond the cobbles, but within the space circumscribed by the stones (Curtis and Curtis 1988:32). Notably, the site is situated on a precipitous cliff edge overlooking the narrows at Sruth Earshader, an obvious crossing point between the island of Great Bernera and the mainland of Lewis (see Ponting and Ponting 1981a:102-03; 1984b:27-8). Callanais XI, now a solitary standing stone, but previously perhaps a more substantial megalithic complex, lies on a terrace with extensive views to the south, from which almost all other monuments in the area become visible (Ponting and Ponting 1981a:82-86; 1984b:32-4). Interestingly, Somerville remarked upon the imposing effect created by large boulders, presumably natural outcrops or glacial erratics, frequently lying against in skyline when observed from some of the Callanais sites (1912:43-5). It is not too fanciful to envisage these forbidding and outlandish features, effectively megaliths erected before time itself, enjoying some symbolic role in the ritual understandings evoked at these Callanais sites.

Specific relations, frequently relying on astronomical phenomena, are sometimes discernible between some of the many sites around East Loch Roag. Callanais I, for example, seen from Callanais III, becomes a confusing plethora of upright stones, grey monoliths suspended over the moor. The various circle stones of Callanais III are also interpretable as four stone rows aligned on Callanais II (Schulz and Schulz 1990:32). A variety of astronomical alignments, incorporating other monumental sites in the immediate vicinity, for example Callanais VI, are visible from Callanais II (Ponting and Ponting 1981a:91; 1984b:14). On occasion, the moon, rising above the horizon, appears from within the anthropomorphic skyline, when viewed along the potentially extensive stone alignment at Callanais V (see Ponting and Ponting 1981a:86-7; 1984b:23). Similarly, under certain conditions, the moon, after dipping below the horizon, reappears briefly in the distinctive notch of Glen Langadale, with Callanais IV in the foreground, when viewed from Callanais XVII (Ponting 1988:427; Ponting and Ponting 1981a:89-90; 1984b:41). A kerb cairn at Callanais, located some 1.5 kilometres to the north of Callanais I, was aligned upon, and within sight of, with the stone avenue at Callanais I (Neighbour 1996a:116).

These various *transitional* locations, rendered liminal either by physical movement or astronomical phenomena, recall the denouement of landscape allegedly encapsulated in the approaches to many chambered cairns in North Uist. A sense of arrival at these sites, a physical confrontation with a tactile monumentality, is accentuated by the transitions, enabled by such movement, in the wider landscape. This transformation confirms, and legitimates, the existence of the site in one, rather than another, specific location.

The dense, and probably genuine, concentration of monuments around East Loch Roag, although exacerbated by an inordinate degree of fieldwork in the area, attests to the importance of this local landscape during the neolithic and bronze age. The longevity and complexity of use of these sites, and the intricate relations between monumentality, topography and astronomy, suggest that ritual practices, involving a perplexing symbolism, were conducted across this landscape at, and between, these sites. Recent astro-archaeological approaches, focusing on the ideological efficacy, rather than abstract astronomical significance, of solar, lunar, and stellar phenomena in ritual practices, invite a re-evaluation of the monumentality in the landscape around East Loch Roag, so lavishly epitomised by Callanais I, from a phenomenological perspective. Unfortunately, such an investigation, though desirable, must necessarily be postponed in deference to relevance.

Interestingly, the structural sequences at the stone circles at Achmore and Druim Dubh, and the intriguing stone setting at Callanais VIII, include or culminate in the toppling of many of the standing stones (see Curtis and Curtis 1989b:72; 1990:49; 1992:84; 1996:99; Ponting and Ponting 1981c:50; 1984a:7).

9.6. Settlement in the neolithic and early bronze age of the Western Isles

The settlement archaeology of the Western Isles, revealing artefactual fecundity and structural complexity wherever excavation occurs, is generally recognised to hold a high research potential (eg. Kinnes 1985:27). The revised interpretation, or perhaps inadvertently definition, of the neolithic given in Section 9.2. above, demands, as a corollary, close scrutiny of the occupation evidence currently recognisable in the archaeological record, and a re-evaluation of archaeological expectations of the interpretive potential of settlement evidence as yet undiscovered.

9.6.1. The elusive nature of settlement evidence

Every archaeological account written earlier this century, adopting a culture historical perspective, quite reasonably attributed an absence of settlement during the neolithic to the convenient, if peculiar, historiographical phenomenon of negative evidence. The discovery of several field dykes and field systems preceding peat formation in various locations across Lewis alludes to settlement and economy, possibly dating to the neolithic and early bronze age, in circumstances of low archaeological visibility (Ashmore 1984:26). Indeed, the distribution of archaeological sites patently not of a domestic nature, for example chambered cairns or stone circles, were assumed to indicate the proximity and overall distribution of the accompanying settlements in which the people responsible for the construction and use of these ceremonial sites resided. Many commentators, either implicitly or explicitly, assumed the abundance of monumentality betrayed an unseen density of nearby settlement during the neolithic and early bronze age in the Western Isles (eg. Armit 1996:6, 65; Ashmore 1984:26; Henshall 1972:118, 123; Scott 1935:480).[22] The interpretation of megalithic mortuary structures as the territorial markers of separate kinship groups perpetrated the general equation between geographical location and economic resources (eg. Renfrew 1984:165-99; cf. Armit 1996:77; Chrisp 1990:62-3). The prominence of the monumental evidence, and the corresponding invisibility of the settlement evidence, an empirical circumstance frequently remarked upon in the Western Isles (eg. Armit 1990a:22; 1996:43, 56, 67; Ashmore 1984:26; Crawford 1978a:54; Foster 1995:97-8), makes a reliance on the former to identify the latter understandable. The discovery of a confusing amalgam of hearths, pits and post-holes at Bharpa Carinish (see Figure 9.4), immediately beside the chambered cairn of Caravat Barp, and in close proximity to a stone circle, provides an alluring glimpse of the juxtaposition of mortuary, ritual and, presumably, settlement evidence (see Crone 1993). Ironically, the cultural and chronological relations, if any, between the chambered cairn and the hearth complexes remain unknown (Crone 1993:380). At any rate, prudence demands recollection of the dangers of assuming a sedentary economy was a necessary prerequisite to the development of monumentality (see Bradley 1993:5-9). Such caution provides a point of departure for the following assessment of neolithic settlement.

The evanescence of settlement evidence datable to the neolithic is readily interpreted as a function of economic obligation and cultural preference. The mobility demanded by an economy which emphasised a continuing reliance on gathering, hunting, and foraging, augmented by domesticated resources, the latter included primarily for symbolic reasons, ensured contemporary settlement was

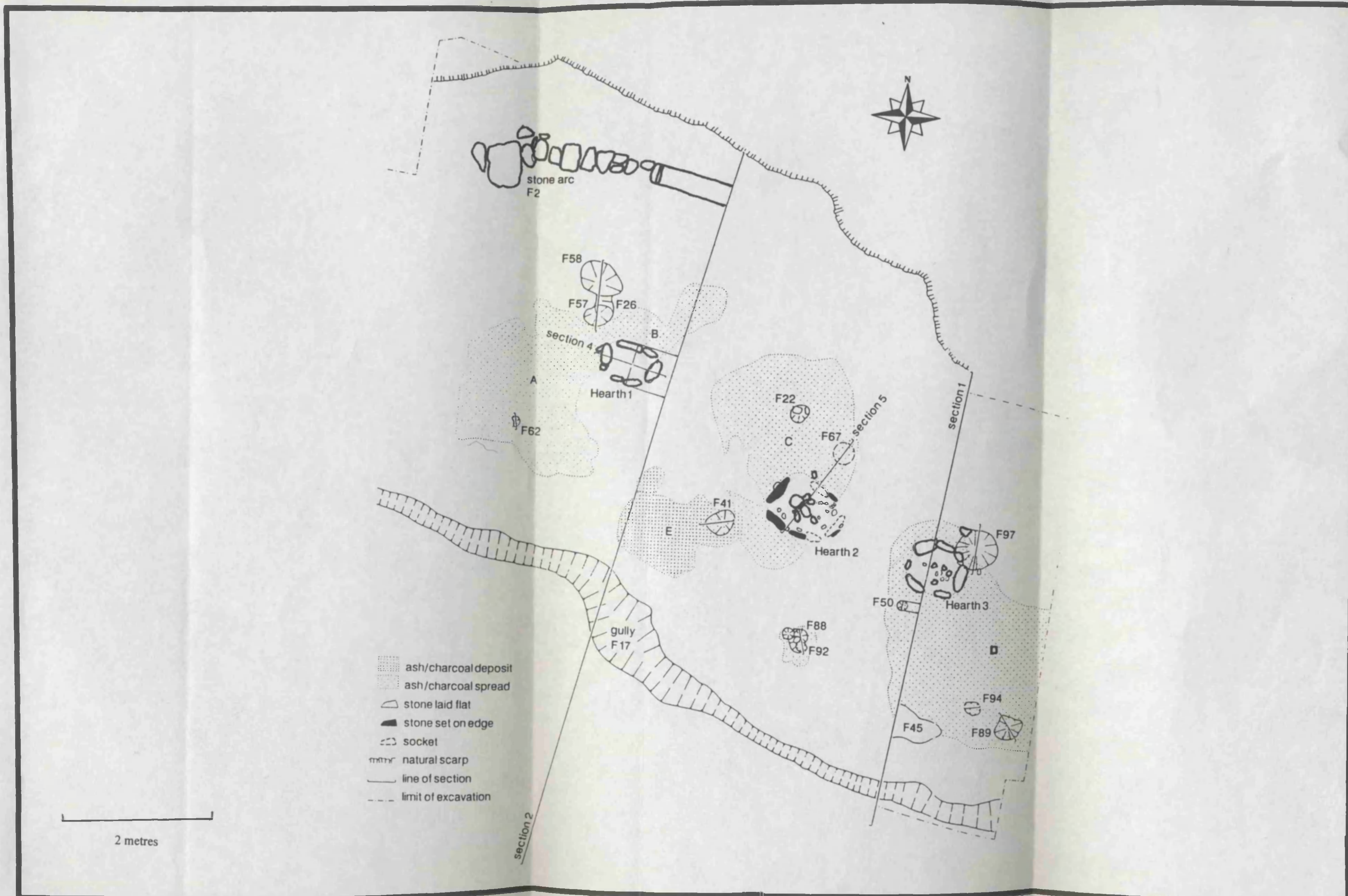


Figure 9.4.: Archaeology at Bharpa Carinish
(after Crone 1993, Figure 4:366)

characterised by flimsy and temporary structures, readily erected and dismantled without much inconvenience by incessantly transient populations. This plausible hypothesis explains why such structures have left little trace in the archaeological record (see Armit 1996:38-41; Armit and Finlayson 1996: *passim*).

9.6.2. A review of neolithic and early bronze age settlement in the Western Isles

The paucity of neolithic and early bronze age settlement in the Western Isles ensures that a review of the evidence is usually obliged to describe individual excavated sites rather than attempt synthesis (eg. Armit 1996:43-52). No attempt is made here to regurgitate the results, whether interim or final, of these excavations, because they are readily available elsewhere in the appropriate interim and excavation reports (eg. Armit 1986; 1987; 1988; 1990a; Crone 1993; Foster 1995). At any rate, detailed discussions of Eilean an Tighe, Northton, and Rubha an Udail Site 6 are found in chapters six, seven and eight respectively. In lieu of a descriptive inventory of the remaining settlement sites germane to this study, some general aspects of the evidence are discussed to convey something of its empirical nature. There is, consonant with contemporary theoretical desires, the expectation that the settlement evidence from the Western Isles will display distinctive regional characteristics (eg. Barclay 1996:60). Certainly, given the lacuna of existing evidence, the necessity for a complete review of neolithic settlement in the Western Isles is rather pressing (Armit 1986:4; 1987:7).

The sites generally accredited as settlements, and, incidentally, all containing early neolithic pottery, are sites T19, T26 and T26A at Allt Chrisal (known locally as Allt Easdeal) on Barra (Foster 1995); Eilean Domhnuill a Spionnaidh (Armit 1986; 1987; 1988; 1990a; 1992; 1996), Eilean an Tighe (Scott 1951a; *pace* Wardle 1992:63-4), Bharpa Carinish (Crone 1993), and Rubha an Udail Site 6 (Crawford 1996a; 1996b) on North Uist; Northton on Harris (Simpson 1966; 1976); and, admittedly on the basis of residual sherds of hebridean ware, possibly Pygmies Isle on Lewis (MacKenzie, W.C. 1905:252; Stevenson 1946:141). The discovery of allegedly domestic neolithic pottery during exploratory excavations at Kirkidale in South Locheynort suggests the presence of a neolithic settlement beneath later activity (see Moreland 1991:8-11; 1992:7-8; 1993:2). Sites dating to the later neolithic and early bronze age, and, interestingly, all containing beaker pottery, with many exhibiting a longevity, if not continuity, of occupation from the earlier neolithic, include the aforementioned sites at Allt Chrisal on Barra (see Figures 9.5-9.9), Northton on Harris, and Rubha an Udail Site 6 on North Uist, but also sites with exclusively beaker assemblages at Rosinish on Benbecula (Shepherd 1976; Shepherd and Tuckwell 1977b) and Dalmore on Lewis (Sharples 1984; Ponting and Ponting 1984c). Several settlement sites, dating to the neolithic and early bronze age, are located on the edge of the extensive machair running along the west coast of South Uist (see Parker-Pearson 1995:109-10; Sharples, *pers comm.*).

A distinctive, and infuriating, regional characteristic of much of the settlement evidence is the absence of coherent spatial patterning amongst the frequently vestigial structural remains at many sites (Armit 1996:55-6; Barclay 1996:70). This incoherence is attributable to the innate complexity of the archaeology, usually compounded by a longevity of occupation, and, subsequently, post-abandonment disturbance, at many sites. Such garbled remains were encountered at Eilean an Tighe (Scott 1951a), Eilean Domhnuill a Spionnaidh (see Armit 1990a; 1996:43-50), and Site T26A at Allt Chrisal. Indeed, the complexity of archaeology at the latter provoked an exasperated excavator to remark:

> "It appears not to be in the nature of the prehistoric people using this site to neatly leave the site undisturbed after each episode of activity or occupation, but to continually dump out hearth material and trample it about, knock out stonework from previous uses to re-use in some other activity and to cut and re-cut all kinds of gullies, post holes, hollows and pits" (Foster 1995:72-3).

The indeterminate nature of the neolithic structures, despite the evidence of phasing indicating successive occupations, at, for example, Bharpa Carinish on North Uist (Crone 1993:378) and Northton on Harris (Simpson 1976:221-22), precluded decisive conclusions regarding their original significance. The

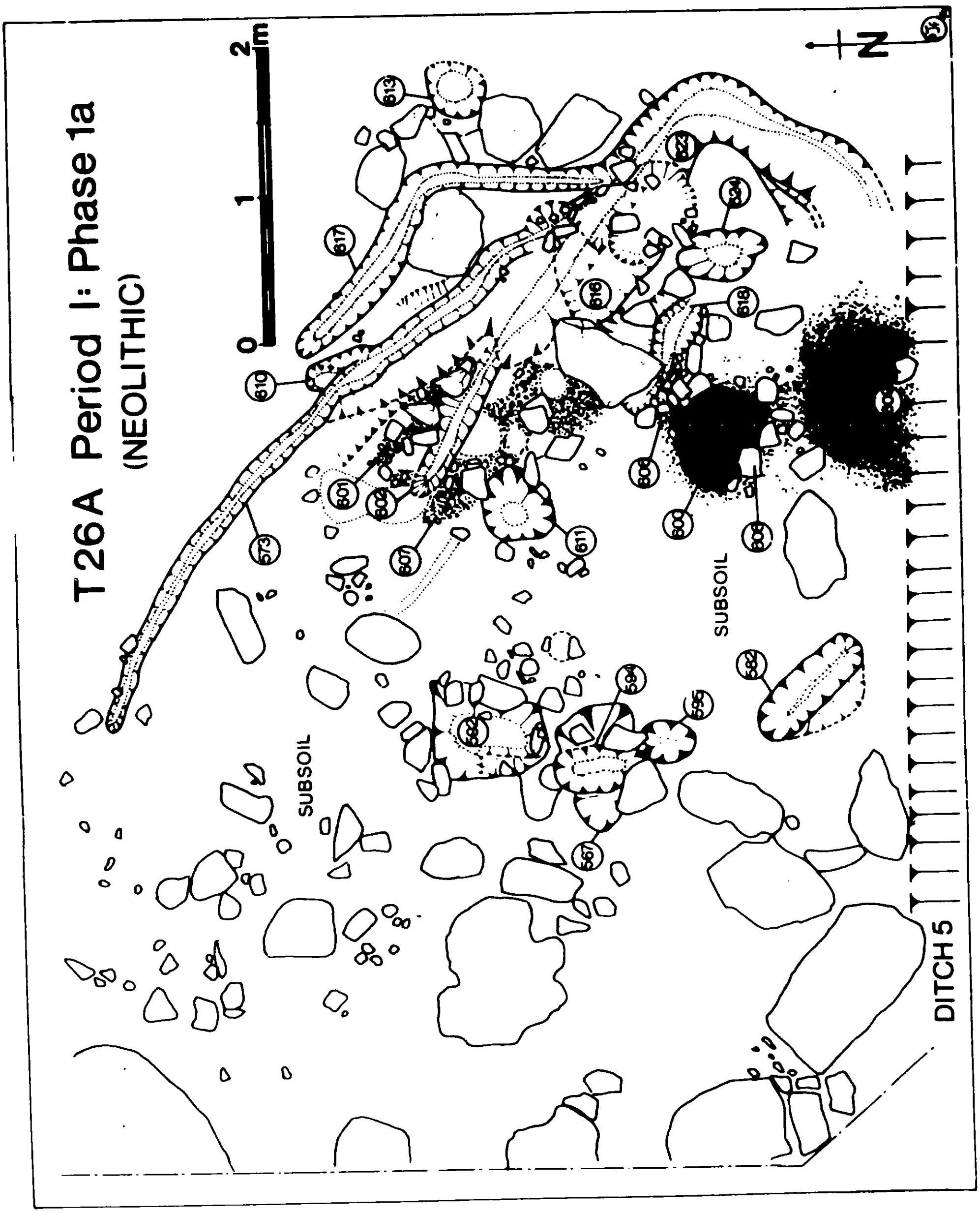


Figure 9.5.: Period 1 (phase 1A) neolithic features
at Site T26A at Allt Chrisal, Barra

(after Foster 1995, Figure 4.16:74)

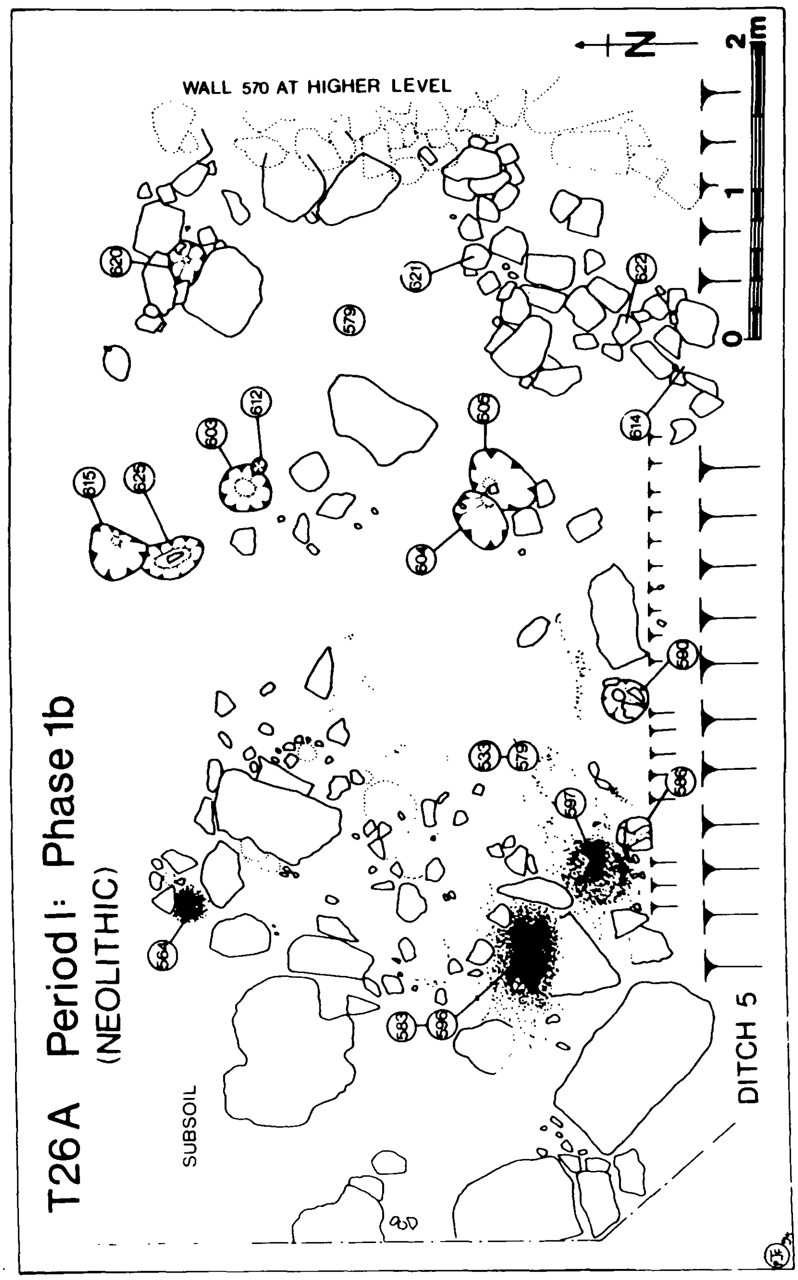


Figure 9.6.: Period 1 (phase 1B) neolithic features
at Site T26A at Allt Chrisal, Barra

(after Foster 1995, Figure 4.17:75)

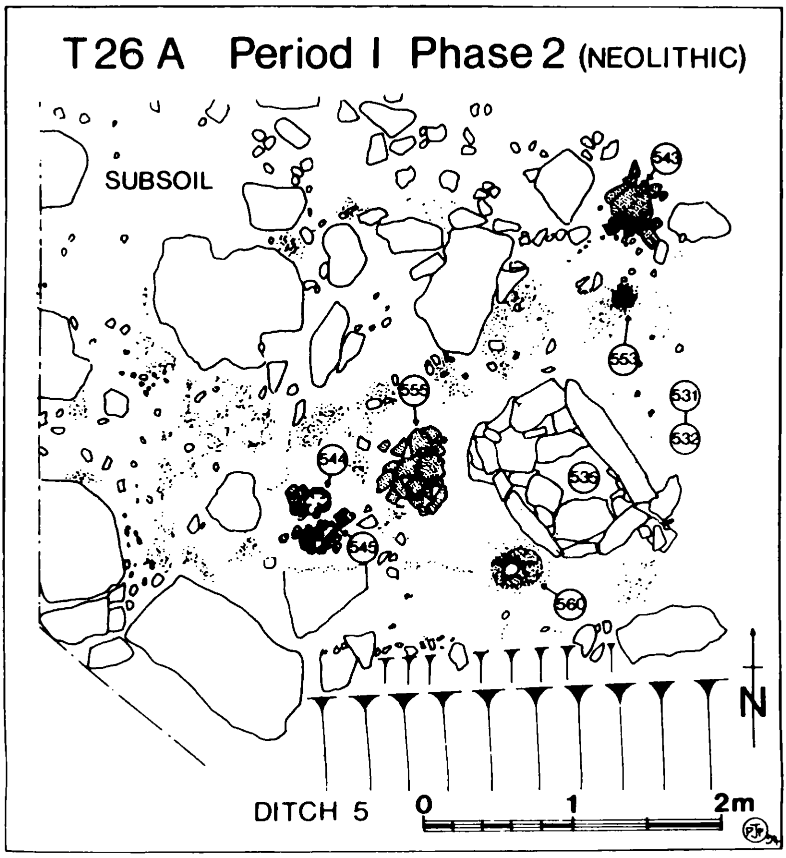
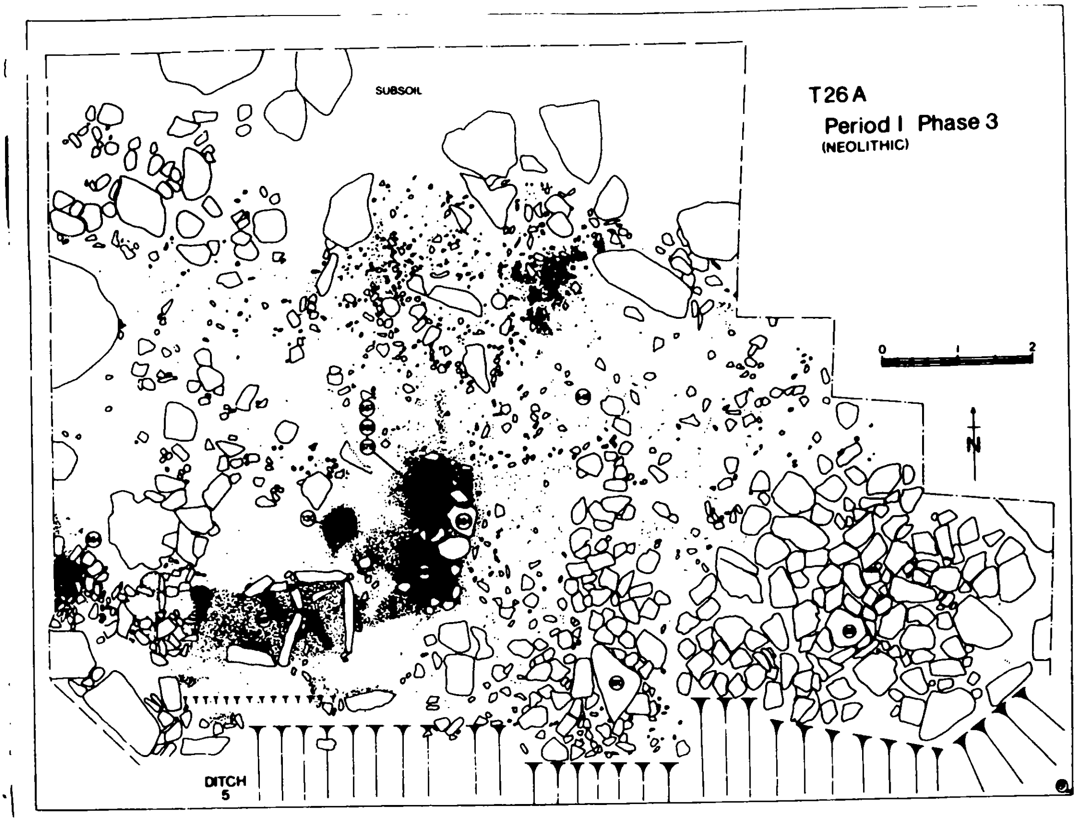


Figure 9.7.: Period 1 (phase 2) neolithic features at Site T26A at Allt Chrisal, Barra

(after Foster 1995, Figure 4.18:83)



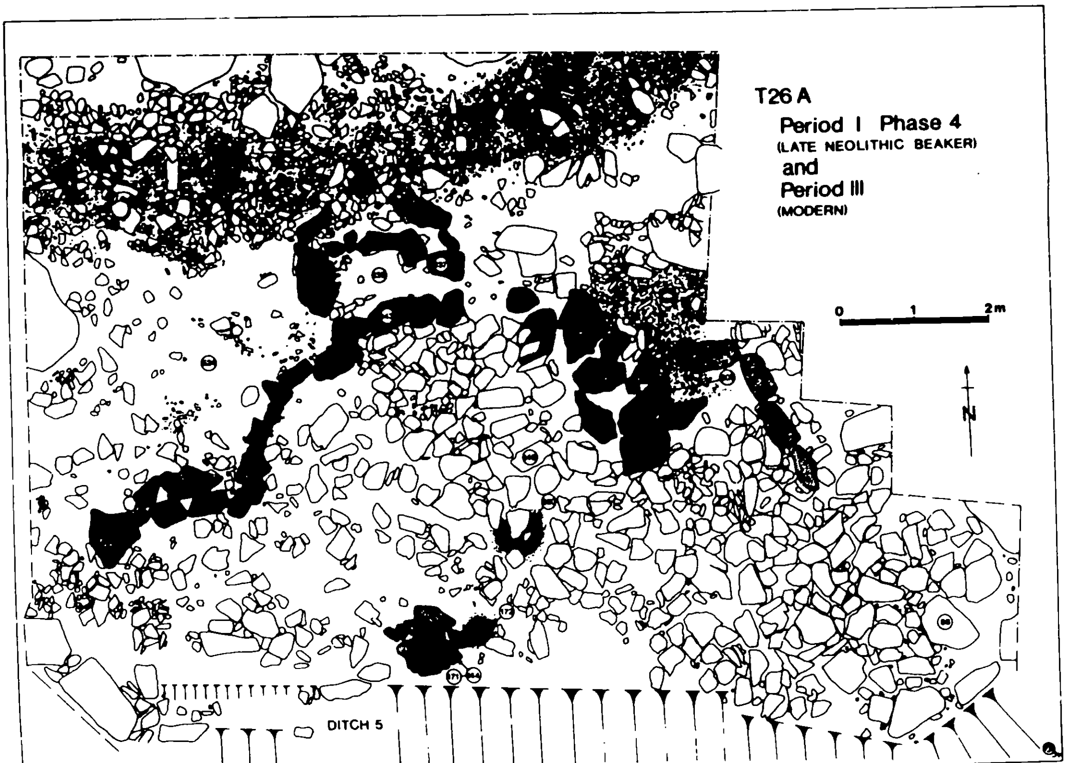


Figure 9.8.: Period 1 (phases 3 and 4) neolithic, late neolithic and beaker period features at Site T26A at Allt Chrisal, Barra

(after Foster 1995, Figures 4.19:86, 4.22:90)

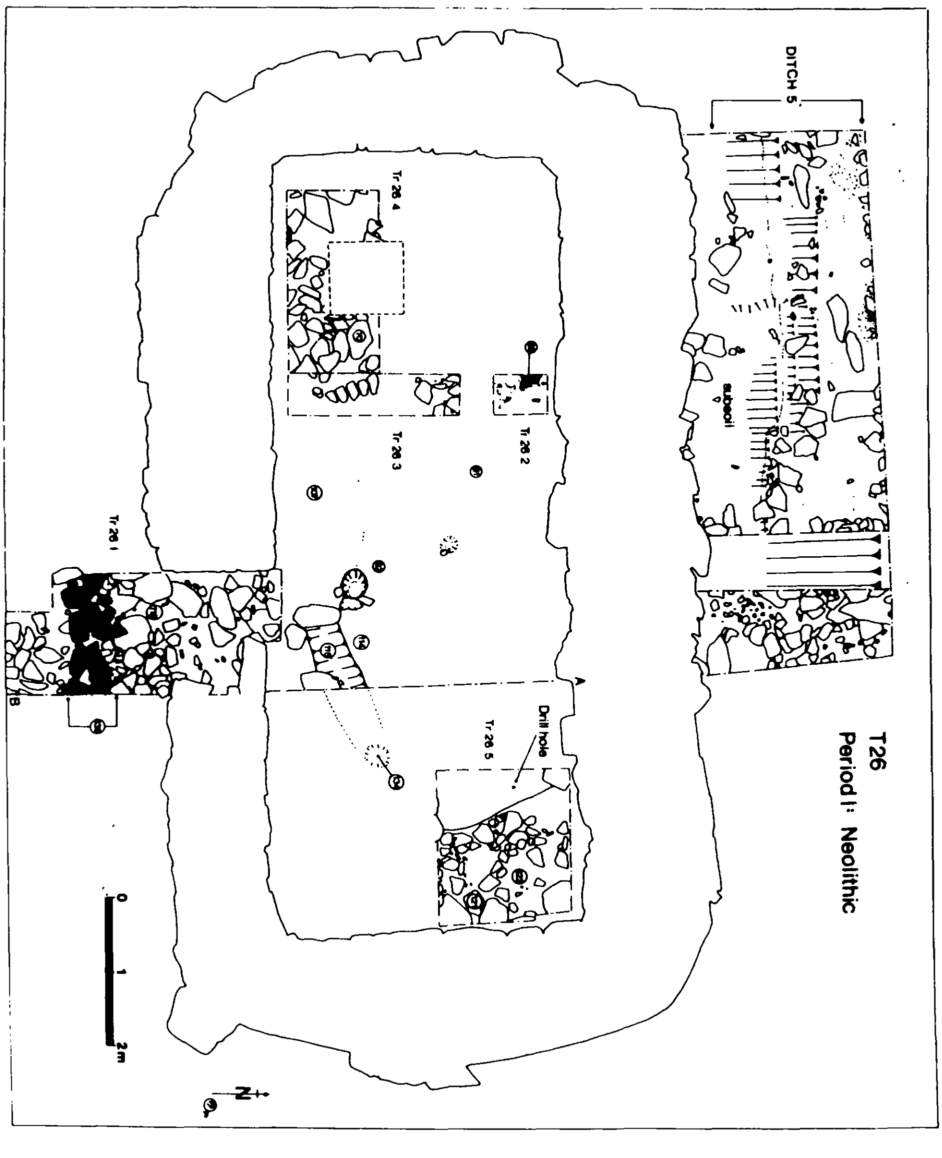


Figure 9.9.: Period 1 neolithic features at Site T26 at Allt Chrisal, Barra

(after Foster 1995, Figure 4.13:65)

ambiguity of the hearth complexes at Bharpa Carinish, for example, invited several contrasting explanations:

> "They could represent one of several possibilities; a short-lived transient settlement, the remains of a more substantial settlement, the temporary encampments of the tomb-builders or, as originally surmised, open hearths associated with the ceremonial use of the tomb" (Crone 1993:380; cf. Armit 1996:56).

The features and structures from the neolithic phases at Northton are similarly abstruse (see Simpson 1976:221-22; cf. McInnes 1971:115). However, in the absence of persuasive evidence to the contrary, and with a growing realisation that all potential settlement sites display a mutual incoherence of structural evidence (cf. Barclay 1996:60; Crone 1993:380), much of this archaeology is preferably interpreted as vestigial domestic activity by default.

The locations of currently identified neolithic settlement sites in the landscape are variable. Broadly, these sites, occurring on islets within lochs, in coastal locations subsequently inundated by machair, and beneath the ubiquitous peat growth within the interior, encompass the whole diversity of environmental niches found in the Western Isles. Although not wishing to impose a typology of settlement types on the available evidence, it is possible to identify certain correspondences of location, architecture, or accompanying material culture, between some of the aforementioned sites.

The similarities between the neolithic settlements of Eilean an Tighe and Eilean Domhnuill a Spionnaidh, consisting of identical locations on islets, and roughly comparable ceramic assemblages, are particularly conspicuous (Armit 1986:8; 1987:7; 1996:50). Similarly, the locations of Pygmies Isle, and the enigmatic structure known as The Gap (see Figure 9.10), each situated on a precipitous cliff edge at the Butt of Lewis and on St. Kilda respectively, are perhaps designed to achieve a similar effect (see Armit 1992:318; 1996:52; MacKenzie, W.C. 1905:250; Turner 1995:107). Affinities are also claimed between the platform

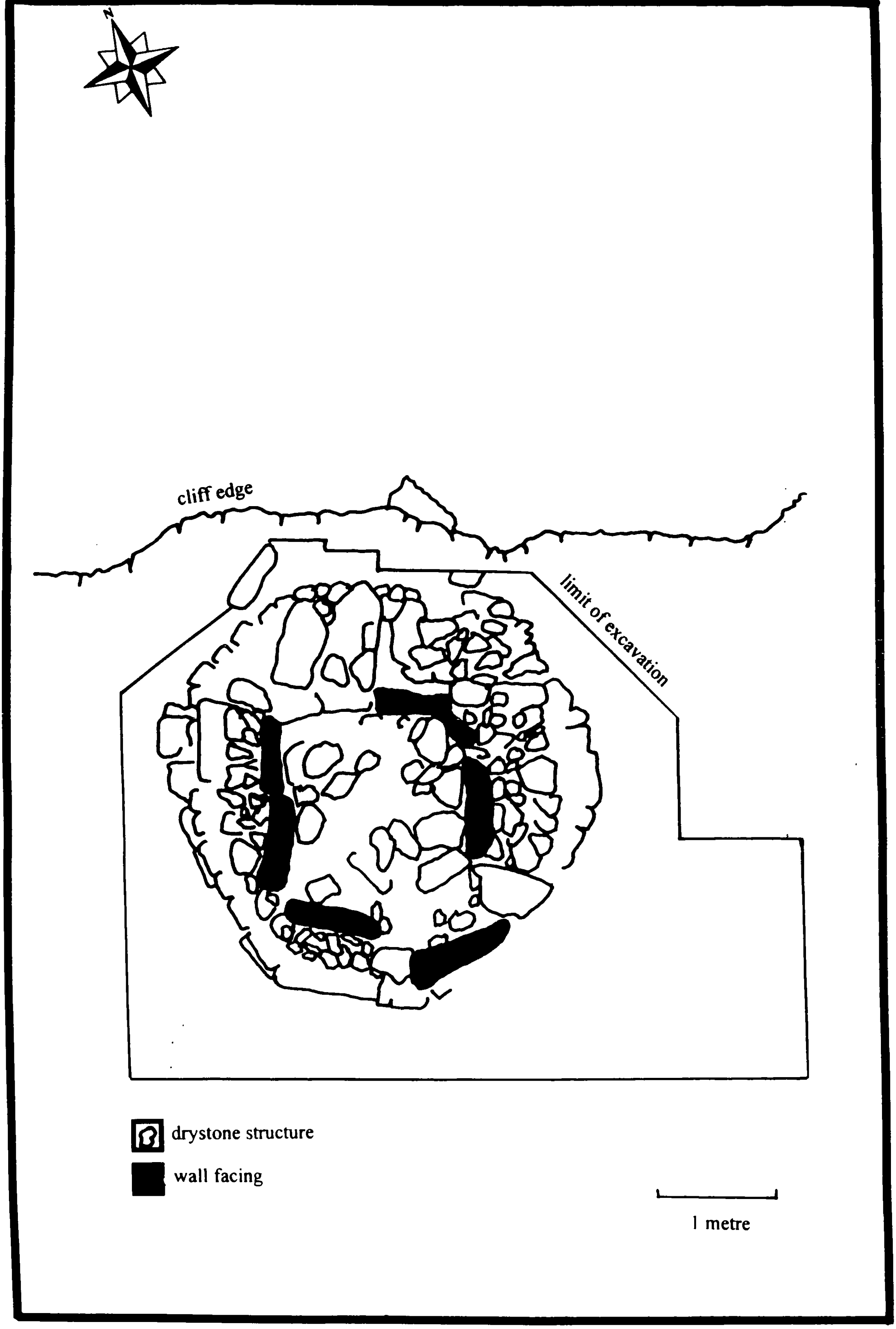


Figure 9.10.: The Gap, St. Kilda

(after Turner 1995, Figure 39:107)

settlement T26/26A at Allt Chrisal and the islet sites (see Branigan 1995c:199). According to Armit (1996:52-4), the distinctive location of these sites, removed from, but surrounded by, the natural world, possibly emphasised the difference between culture and nature, and encapsulated further the ideological precepts that defined a neolithic in the Western Isles. This suggestion, regardless of its veracity, is nonetheless valuable, because it interprets the especial location of these islets as significant in social and political terms. Any occupation of, or visitation to, these islet sites, as prestigious and conspicuous locations, was probably restricted, perhaps even temporary, and governed by, for example, kinship alliances, gift obligations, and feasting engagements. It is, following Armit (1996:52-4), entirely possible that these 'settlement' centres relied upon novel ideas of nature and culture, mediated by an innovative symbolism of domesticity, supplemented by access to considerable quantities of material culture, particularly ceramics, to accrue sustained political influence in the region. At Eilean Domhnuill a Spionnaidh, the discovery of many saddle querns, several incorporated into floors or walls (see Armit 1988:24), suggests more the integration of a domestic symbolism into the architectural fabric, than the reuse of old agricultural paraphernalia (*pace* Armit 1988:24; 1992:314-15). Similarly, the presence of stone balls, some of which were also incorporated into walls at this site (Armit 1988:24), recalls the depositional practices discussed with reference to chambered cairns in section 9.5.1.2. above. The nature of depositional practices, and the characteristics of the resultant artefactual assemblages, suggest that the interpretation of each islet site or platform settlement as the mundane domestic residence of an extended family is premature (see Armit 1990a:19-20). A domestic interpretation of Site T26/26A at Allt Chrisal is more plausible (see Branigan 1995c:201).

The social or symbolic significance of these islet locations may have originated in the mesolithic period. The longevity of the occupation at Eilean Domhnuill a Spionnaidh, demonstrated by an excavation which did not investigate the lower, waterlogged levels due to logistical and financial constraints (see Armit 1996:46, 62), may extend back into the fifth millennium BC. It is, at any rate, unlikely that these islet sites were merely conventional settlements.

The longevity of many settlement sites, including sites T26/T26A at Allt Chrisal, Eilean an Tighe, Eilean Domhnuill a Spionnaidh, Rubha an Udail Site 6, and Northton is attested by multiple phasing, and verified by the available radiocarbon dating (see section 9.9). That the islet site of Eilean Domhnuill a Spionnaidh is largely artificial, inadvertently enlarged by the continual deposition of allegedly domestic rubbish at the then periphery of the settlement (Armit 1987:20-1; 1996:46), provides a graphical illustration of such longevity (see Armit 1987:22; 1996:45).

Many other sites, contrasting markedly with the enduring sites discussed above, and including Bharpa Carinish (Armit 1996:55; *pace* Crone 1993:378-80) and the neolithic phases at Northton (Armit 1996:56; Simpson 1976:221-22, 226), are probably the remnants of improvised habitations, occupied temporarily by a transient people, following familiar routes, and exploiting specific, possibly seasonal, resources, in a contemporary landscape. These sites, though yielding a neolithic material culture, recall an economy more adeptly labelled mesolithic (Armit 1996:57; cf. Bonsall 1996:188). Indeed, the dispersed nature of the evidence at these sites, defying a conventional definition of an archaeological site, is reminiscent of the scattered evidence, dating to the mesolithic, from Kinloch in Rhum (Armit 1996:55, 57; see Wickham-Jones 1990). Armit, attempting to synthesise the settlement evidence, envisaged permanent residency, and even craft specialisation, at the grandiose islet sites, and temporary, seasonal habitation, at the remaining, largely ephemeral settlement sites (Armit 1992:316; 1996:57). Similarly, Sharples interpreted these especial islet locations as readily defended, and an indication of increasing competition between resident communities (1992:327). However, even the substantial structures containing beaker pottery at Northton and Dalmore were possibly occupied only on a seasonal basis (Armit 1996:92).

At many settlement sites, where the surviving structural remains demonstrate some degree of architectural and spatial coherence, there is some evidence for the existence of a standard house plan during the neolithic, and extending into the early bronze age. This enduring architecture comprised a sub-rectangular or oval arrangement of drystone walling, seldom more than a few courses high, either an original feature or a consequence of robbing, and enclosing an area between 4 and 7 m long and between 3 and 5 m wide. Importantly, there is no evidence of the raw materials or architectural design used to construct the upper walls or roofs of these buildings, due to the denuded nature of the surviving archaeology.

Certain structures at Eilean Domhnuill a Spionnaidh (Armit 1990a:4-12; 1996:48), Northton (Simpson 1966, 138, Figure 1:138; 1976:222-24, Figure 12.1:223), Rosinish (Shepherd 1976:212, Figure 11.4:215), Rubha an Udail Site 6 (Crawford 1996a:27-8; 1996b:92-4) and Dalmore (Sharples 1984:235) appear to share broad similarities of architecture. At Eilean Domhnuill a Spionnaidh a continuity of architecture spanning some eleven phases of occupation was discernible. The successive structures were consistently oval, or rectilinear with rounded corners, aligned to roughly the same axis, and enclosing a similar internal area (see Armit 1990a:4 *ff.*; Armit 1996:48). Structure II in the beaker I phase at Northton enclosed two occupation levels and retained an oval plan (Simpson 1966:138;1976:222). The remains of a drystone structure in a post-midden context at Rosinish:

> "...may have been similar in construction to the Northton Beaker house..." (Shepherd 1976:214; cf. Armit 1996:93).

Indeed, if the dilapidated nature of the structure at Rosinish is taken into account, its shape and dimensions are comparable to those of structure II at Northton. At Dalmore, excavations: "revealed a house with at least three phases..." (Sharples 1984:235) which: "...began as an oval structure..." (Sharples 1984:235), although subsequent alterations resulted in substantial adjustments to the architecture (Sharples 1984:235). The internal features of the building at Dalmore and structure II at Northton, in which hearth debris and a pit are juxtaposed, is notable (Armit 1996:92). The two intact drystone buildings, structures DJ and DH, in the neolithic phase at Rubha an Udail Site 6, each displayed an oval plan. Indeed, the numerous similarities of design displayed by structures DJ and DH at Rubha an Udail Site 6, both of which conform to an oval or heel-shaped plan, exemplify a standard domestic architecture in the neolithic of the Western Isles:

"...assuming the structures to be identical, an almost total composite picture (in ground plan terms) can be built up of houses of the Late Neolithic... ...in this area" (Crawford 1981:4).

Finally, Cowie (1987:62) mentioned an eroded structure at Barvas Sands, subsequently modified, displaying several episodes of occupation, but the exact nature of this architecture remains obscure.

It is possible, admittedly relying heavily on negative evidence, to extend the aforementioned concept of a standard domestic architecture to sites where the surviving evidence is especially meagre. The three hearth complexes, incorporating shallow pits and sporadic post-holes, at Bharpa Carinish are, according to the excavator, preferably interpreted as the remnants of the superimposed interiors of successive houses, the external walls of which no longer survive, similar to those known from Eilean an Tighe and Eilean Domhnuill a Spionnaidh nearby (Crone 1993:379). Crone envisaged a house, some 6 or 7 m long by 4 or 5 m wide, centred around hearth complex 1, and positioned on the terrace on which this feature was located (1993:379). This interpretation, though speculative, remains plausible.

The chronology of these structures extends across the neolithic and early bronze age. The continuity of architecture at Eilean Domhnuill a Spionnaidh, mentioned previously, conveys something of the tenacity of this structural design. Indeed, the excavator of the site is compelled to mention this architectural longevity, identifying similarities between buildings apparently separated by a millennia:

"The settlement at Northton, in particular, seems closely related to the much earlier settlement at Eilean Domhnuill [a Spionnaidh], down to the details of house form and size, despite the differences of location and the intervening centuries" (Armit 1996:94).

Importantly, radiocarbon dates suggest the distinction between neolithic and beaker ceramics is, in chronological terms anyway, unhelpful. Structures DJ and DH in the 'neolithic' phase at Rubha an Udail Site 6 in the Udal and structure II in the 'beaker I' phase at Northton are apparently contemporary. Two radiocarbon dates for the neolithic phase at Rubha an Udail Site 6, taken from samples of carbonised wood in the hearth of neolithic structure DJ (Crawford 1980:4; 1981:4), compare favourably with the solitary date available for the earlier beaker phase at Northton, taken from animal bone at an unspecified location in the appropriate occupation level (see Burleigh *et al.* 1973:61).[23] The presence of at least one beaker from a floor level in structure DH at Rubha an Udail Site 6, confirms some degree of chronological compatibility. The apparent chronological discrepancy between neolithic and beaker ceramics relies on the traditional assumption that these different pottery styles, which together allegedly encapsulate a fundamental cultural dichotomy, each represent separate temporal periods. Unfortunately, due to the lack of properly published excavations, it is not always possible to ascertain the relation between the structural remains and the contexts in which the ceramics or radiocarbon dated samples occur. The relevant structure at Rosinish, for example, seemingly lies in a post-midden, and therefore post-beaker, context (Shepherd 1976:214). Ambiguity assails the chronology of a neolithic settlement architecture. Ultimately, the significance of these architectural similarities remains necessarily moot. The interpretive value of a comparison of building plans, an exercise conceptualising this architecture in an abstract form probably meaningless to the inhabitants of these dwellings, is questionable.

The nature of the evidence at Eilean Domhnuill a Spionnaidh demands further scrutiny, despite a general reluctance in this Section towards mere description, due to the excavator's controversial interpretation of the final phase of occupation (see Figures 9.11-9.12). The two contiguous drystone buildings, initially interpreted as post-medieval (Armit 1986:7; 1987:10-11, 13, Figure.

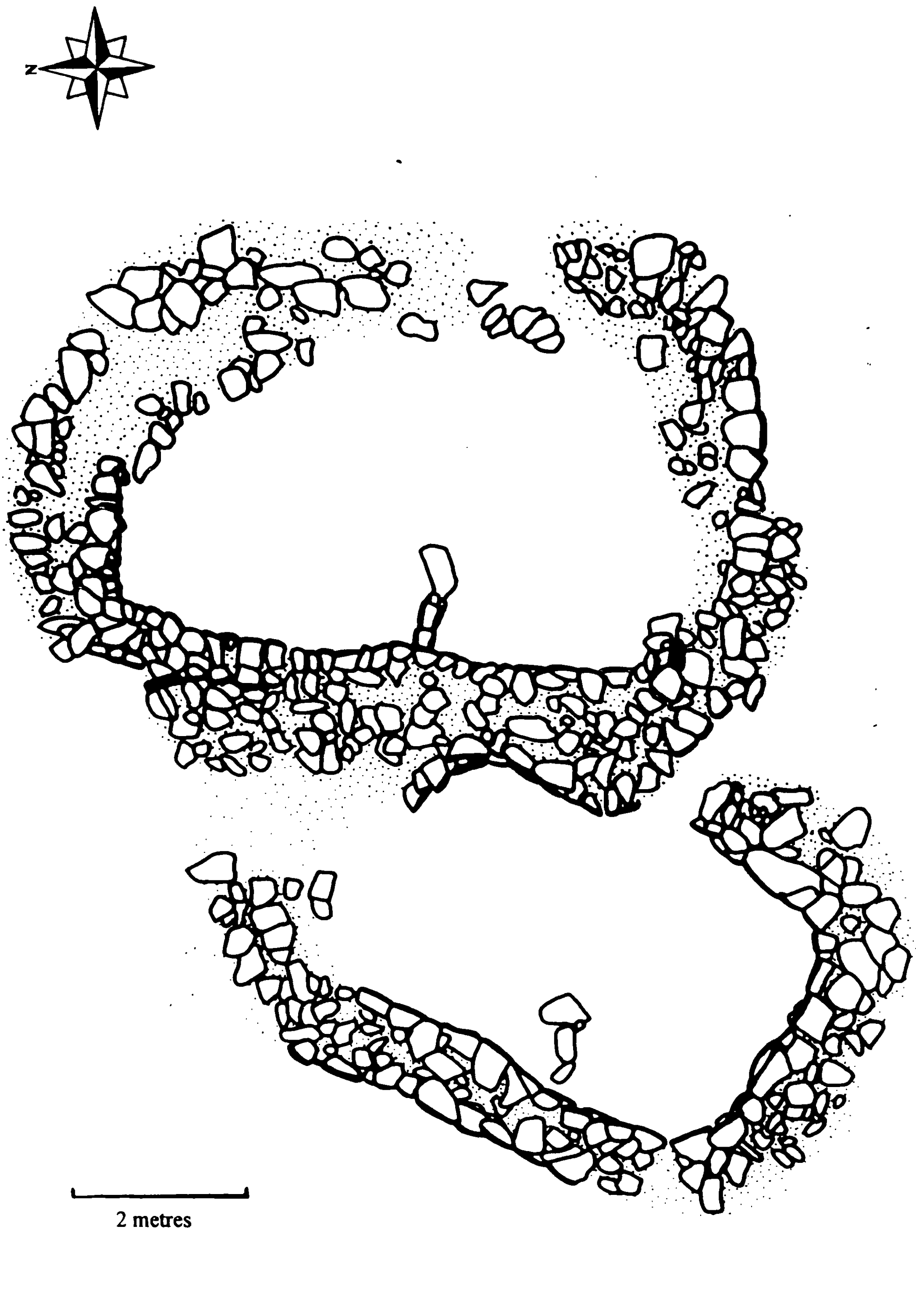


Figure 9.11.: The final phase of occupation (phase 1)
at Eilean Domhnuill a Spionnaidh

(after Armit 1996, Figure 4.5a:51)

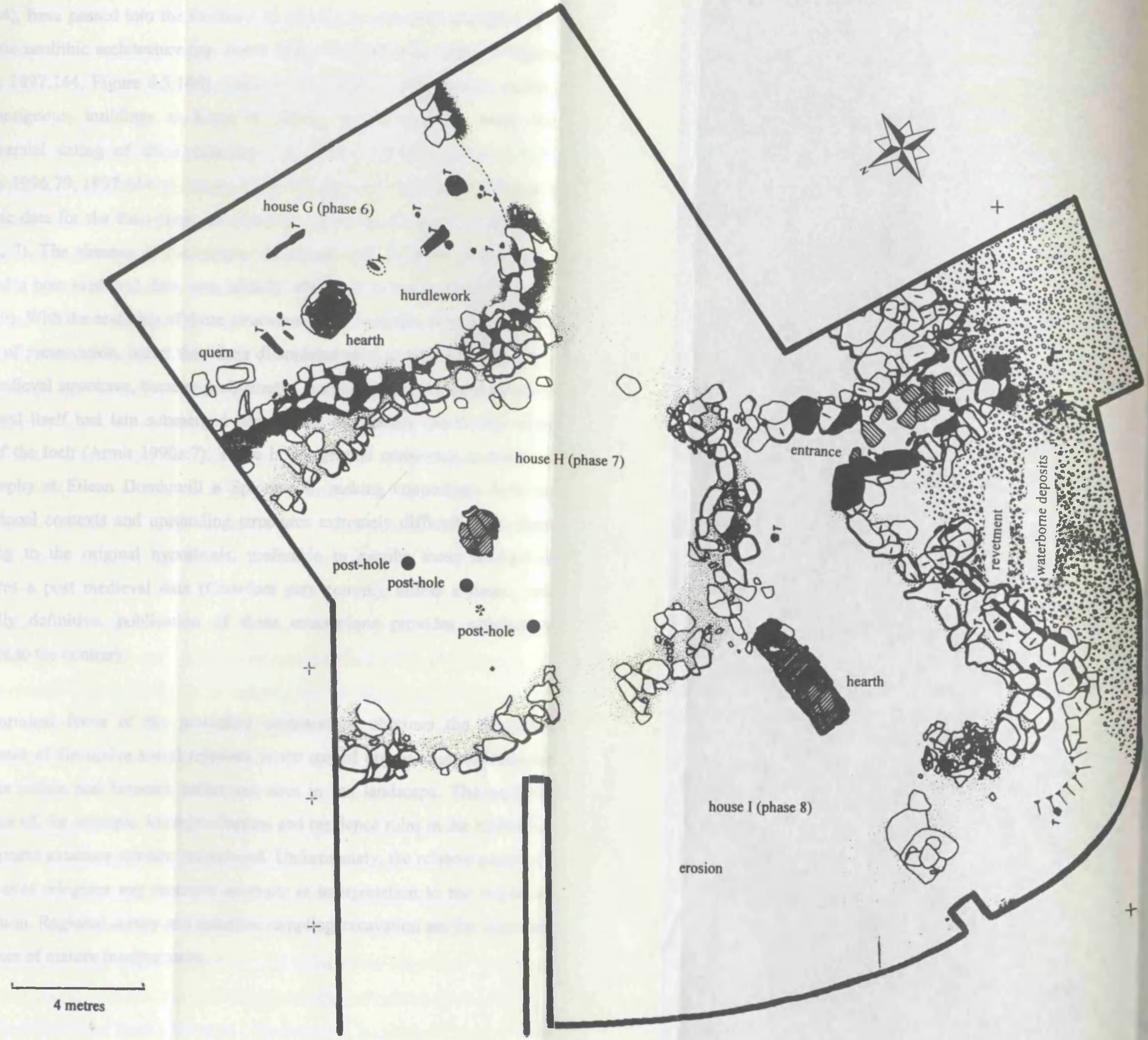


Figure 9.12.: Structural evidence collating phases 6 to 8 at Eilean Domhnuill a Spionnaidh
(after Armit 1996, Figure 4.4:49)

3:12), and subsequently re-interpreted as neolithic (Armit 1988:5, 7, Figure 3:6; 1990a:4), have passed into the literature as excellently preserved examples of a domestic neolithic architecture (eg. Armit 1996:43-50; Barclay 1996:70, Figure 5.5:73; 1997:144, Figure 8.5:146). Vacuous comparisons with vaguely similar, but contiguous, buildings at Knap of Howar are invoked to justify the controversial dating of these structures (eg. Armit 1996:50, Figure 4.5:51; Barclay 1996:70; 1997:144-45). None of the five reasons posited to substantiate a neolithic date for the final phase structures is especially convincing (see Armit 1988:5, 7). The absence of stratigraphy associated with these structures, when afforded a post medieval date, was initially attributed to stone robbing (Armit 1987:10). With the re-dating of these structures to the neolithic, their exceptional degree of preservation, rather than their dilapidated state as recently abandoned post medieval structures, became problematic. Armit argued that, until recently, the island itself had lain submerged beneath the continually fluctuating water level of the loch (Armit 1990a:7). There is, by general consensus, a dearth of stratigraphy at Eilean Domhnuill a Spionnaidh, making connections between depositional contexts and upstanding structures extremely difficult. It is, then, reverting to the original hypothesis, preferable to ascribe these contiguous structures a post medieval date (Crawford pers comm.), unless a future, and hopefully definitive, publication of these excavations provides satisfactory evidence to the contrary.

The empirical focus of the preceding commentary obscures the formative importance of discursive social relations to the spatial organisation of domestic practices within and between settlement sites in the landscape. The potential relevance of, for example, kinship relations and residence rules in the realisation of settlement structure remains unexplored. Unfortunately, the relative paucity of known sites relegates any tentative attempts at interpretation to the realms of speculation. Regional survey and selective sampling excavation are the necessary precursors of mature interpretation.

9.7. An economy of the neolithic of the Western Isles

The inadequacy of traditional conceptions of the neolithic, as a function of an agrarian economy, is obvious in a region where a continuing reliance on the exploitation of marine and littoral environments seems likely (cf. Armit and Finlayson 1996: *passim*; Kinnes 1985:18-20). The familiarity of the material culture and monumental architecture that are the symptoms of the neolithic and early bronze age in the Western Isles, does not demand the existence of a traditional sedentary economy, exemplified by arable farming and permanent settlement, as a corollary (cf. Bradley 1993:9). The ascendance of a revised conception of the neolithic, with an emphasis on a pastoral economy and mobility of settlement, provides some degree of equivalence with a neolithic and early bronze age economy envisaged in the Western Isles. At any rate, subsistence strategies during the neolithic and early bronze age presumably relied upon diverse resources, derived from the exploitation of different environmental niches. Crucially, the presence of traits more usually interpreted as evidence of agriculture is probably as much an indication of their symbolic, as economic, importance in the neolithic, and even the early bronze age.

Unfortunately, the nature of much of the evidence readily interpreted as signifying aspects of economy, is either uncontextualised or unpublished, and, as such, precludes any meaningful assessment of its significance. By way of example, the general absence of faunal remains from many sites beyond the machair, including Eilean an Tighe and Site 26/26A at Allt Chrisal, and the unpublished nature of the surviving faunal evidence from sites on the machair, including Rubha an Udail Site 6 and Northton, denies the opportunity to investigate the importance of animal husbandry to then contemporary economy. However, the predominance of ovicaprid and cattle, and the relative paucity of pig, are variously attested at Northton, Eilean Domhnuill a Spionnaidh, and Rubha an Udail Site 6 (Armit 1996:64). A reliance on negative evidence to postulate economic circumstance betrays the largely self inflicted poverty of the archaeological record. Scott (1951a:16), for example, interpreted the abundance of highly decorated pottery at Eilean an Tighe as an indication of a fecund neolithic economy in the region. However, a dearth of information about the composition or contexts of faunal assemblages, make references to economy premature. The assumption that these faunal remains are domestic rubbish, the casually discarded residues of food preparation and consumption, is unwise. Indeed, the indulgence in materiality during the neolithic, exemplified by the gargantuan ceramic assemblages from alleged domestic sites, suggests a populace, supported by a healthy subsistence economy, more interested in the accumulation of social prestige through, for example, feasting. The following commentary is more a compendium of previously published remarks, many of them casual, usually speculative asides, based on specific sites.

Sites on the machair, usually incorporating sizeable middens allegedly containing the detritus of subsistence strategies, also suggest an economy based more on pastoralism than sedentism. At Northton, pastoralism (Evans 1971:13, 22; Simpson 1976:226) and the regular utilisation of marine resources (Simpson 1976:224; Harrison 1980:100) were postulated to explain the intermittent occupation and seasonal exploitation envisaged at this site (Armit 1996:90; Bamford 1982:53; Simpson 1971:146). The absence of grain impressions in the pottery assemblage from Northton, possibly alluding to a pastoral rather than arable economy conforms with this scenario (Evans 1971a:22). By contrast, the cultivation marks at Rosinish suggest a stable farmstead, permanently occupied, and supported by an arable economy (Harrison 1980:100). Indeed, Harrison, proposing a diversity of economy, envisaged:

> "...self-sufficient hamlets with a variety of local economies designed to suit their own particular needs..." (1980:102).

However, a literal interpretation of the economic evidence is perhaps unwise, until the contents of the middens at these various sites have been fully examined. The significance of the plough marks at Rosinish on Benbecula (Armit 1996:93; Shepherd and Tuckwell 1977a:18; 1977b: *passim*), at Rubha an Udail Site 6 on North Uist (Crawford 1996a:25-6), at Callanais I (Armit 1996:83; Ashmore

1981:49; Ponting and Ponting 1984a:7) and at nearby kerb cairns at Callanais (Neighbour 1996a:117; 1996b:112) and Cnip (Close-Brooks 1995:256-57, 266), whether motivated by esoteric symbolic concerns with the concept of domesticity, or merely representing the mundane remnants of subsistence farming, necessarily remain obscure (*pace* Kinnes 1985:31). Similarly, the significance of the partition, perhaps the enclosure, of land at Rosinish (Shepherd and Tuckwell 1977b: *passim*), readily paralleled at Links of Noltland on Westray in Orkney (Clarke and Sharples 1985:73, 75), and of the various field dykes and field systems known from below the peat in Lewis, some of which possibly date to the neolithic (Ashmore 1984:26), remains unknown. There is some evidence for the occasional burning of moorland, to improve coarse grazing, at Sheshader in Lewis before the late 2nd millennium BC (Newell 1988:89).[24] Such increasing intensity of land management, exemplified by enclosure, for example, suggests a continuing expansion of settlement into the 2nd millennium BC (Cowie and Shepherd 1997:165).

Meagre faunal assemblages, surviving only as calcined bone, and some floral evidence, derived from macro-floral charcoal fragments (or else recovered during sampling on modern excavations), are known from sites in the peat inundated interior, including Eilean an Tighe, Bharpa Carinish and Eilean Domhnuill a Spionnaidh on North Uist. Red deer, sheep, goats, and cattle were all introduced into the Western Isles by people at varying times during the past (Armit 1990a:19; 1996:31). Burnt bone and burnt marine shell, all from indeterminate species, were recovered from Bharpa Carinish, suggesting a comprehensive exploitation of the nearby coastal environment (Crone 1993:378, cf. Armit 1996:31-2). The absence of evidence for exploitation of marine resources elsewhere in the Western Isles is unlikely to reflect original economic circumstances (Armit 1996:64). Cereals, namely naked six row barley and emmer, and crab apple and hazelnut fragments were recovered from Bharpa Carinish (Boardman 1993:375; Crone 1993:378). There is, however, no evidence for grain impressions on the pottery from Northton (Armit 1996:90).

The various sites mentioned above provide tantalising glimpses of neolithic and early bronze age economies in the Western Isles. The *economic* significance of the categories of archaeological evidence so readily taken to signify subsistence remains indeterminate. The mere presence of such evidence is, in the absence of quantitative evaluation and measured interpretation, insufficient grounds on which to estimate its contribution towards subsistence. Yet the mixture of domestic and wild species, whether faunal and floral, from many of the aforementioned sites, conforms with the revised conception of a neolithic economy advanced in this section (see Armit 1996:62-5; Boardman 1993:376; Crone 1993:378; cf. Jones 1996:297-98; Kinnes 1985:29-30). As a coda to this altogether vacuous section, it is tempting, if futile, to imagine that the relict landscapes almost certainly insulated beneath the peat throughout the Hebrides contain field systems dating from the neolithic and early bronze age (cf. Ashmore 1984:26).

9.8. A neolithic of the Western Isles in a regional perspective

A corollary of the restricted focus of this research is the general failure to mention empirical evidence germane to the topic of study from elsewhere in northern and western Scotland. Occasional references in previous chapters to ceramics or chambered cairns from elsewhere in Ireland or Britain were motivated more by interpretive desires than empirical concerns. In an attempt to rectify the impression of the Western Isles as a remote and isolated archipelago during the neolithic, it is necessary to situate the study area within a wider regional context:

> "...we must try to think in terms of an island-centred geography where travel by sea was of prime importance and where modern political perceptions were simply irrelevant... Archaeology shows up paths of prehistoric communication which emphasise the Atlantic connection. Cultural traits, for example megalithic tombs, spread along the Atlantic coasts of Europe. Links varied through time and in various periods we must consider communications and possible cultural connections which Ireland, with France and England, the Isle of Man, with the Northern Isles and Scandinavia; links such as these perhaps outweighed the communications routes with which we are most familiar today..." (Armit 1996:6, Figure 1.6.:7; cf. Scott, W.L. 1942:305-06).

Yet the notion of the Western Isles as an marginal dependency remains implicit in the literature. Bizarrely, the quality of much of the pottery in early neolithic assemblages from the Western Isles precludes the possibility of local invention:

> "The earliest pottery from the settlement at Allt Chrisal, however, is part of an already well established repertoire and reflects the work of experienced potters... Similar pottery is recorded from other sites in the Outer Hebrides... ...and the relative uniformity of this early pottery suggests that it, and probably the people who made it, were introduced to the islands from elsewhere" (Branigan 1995c:199).

The numerous islands of the Inner Hebrides provide, in both artefactual and architectural terms, an obvious source of comparable material. The chambered cairn at Rubha an Dunain (Armit 1996:72-4; Scott 1932; Henshall 1972:485-88), on the west coast of Skye, with a ceramic assemblage and monumental architecture readily paralleled in the Western Isles, is a suitable example of the prevalence of comparable material from elsewhere along the northern and western coasts. More generally, the use of raw material from the same sources, where detectable, and the similarities of style between the resultant artefacts, betray a wider dispersal of cultural influence. The following selection of artefactual anecdotes, relating to either of these aspects of contact, are intended to convey something of extensive interaction network in which many neolithic communities in the Western Isles were probably enmeshed.

The distances over which raw materials were procured, and the dispersed nature of exchange networks, probably encompassed much of Ireland and northern and western Britain, including the Western Isles (Sheridan 1985:179-80). It is, however, unlikely that people travelled, often over considerable distances, to raw material sources to exploit them personally (*pace* Sheridan 1986:29; 1992:201). Instead, the finished artefacts, and also the raw materials, were probably circulated in diffuse, but extensive, exchange networks, and carried, as gifts, to locations far removed from the source of their original extraction or manufacture. Much of this material culture were probably regarded as exotic artefactual delicacies, because the distant origins of this materiality was almost certainly emphasised during exchange. Population movement, then, incorporating the transportation of material culture, by riverine and maritime routes, particularly in the relatively sheltered coastal waters of western Britain, during the neolithic, seems likely (Scott 1951b: *passim*; Whittle 1977:82).

Petrological analyses, as mentioned previously in section 9.4.3. above, suggest the local manufacture of ceramics in Ireland and Britain during the neolithic. That specific ceramic styles are discernible, and that plausible stylistic connections between them are identifiable, conveys the basic reality that the ceramic evidence displays *structure*. Indeed, despite its overwhelmingly local production, this dispersal of stylistic consistency in pottery, over much of Ireland and Britain, suggests an intensity of contact between communities separated by often considerable distances that is frequently overlooked in the archaeological literature. The numerous stylistic similarities discernible in the ceramic evidence from western Scotland, western England, and Ireland, including, for example, the stylistic connections between hembury ware in southern Britain and plain deep, lugged bowls in western Scotland, the stylistic equivalence of ballyalton bowls in Ireland and beacharra bowls in western Scotland, the similarities between hebridean ware from the Western Isles and pottery from Portstewart in northern Ireland, and also from the Isle of Man, suggest extensive cultural contact and movement along the western seaboard during the neolithic (see Bersu 1947, Plate XXVI: following page 164; Bruce, Megaw and Megaw 1947:159, Plate XXIV: following page 158; Megaw and Simpson 1961:71-2; Piggott 1954:348; Scott 1951b:64; Sheridan 1995:8). There is a tendency for stylistic comparisons to become facetious, as successive vessels, each similar to the preceding example, gradually come to resemble only vaguely the original styles under scrutiny. Yet the caprice of equating ceramics from Ireland, the Isle of Man, or the Northern Isles, with those from the Western Isles is justifiable given the overt similarities of style exhibited between these various areas. Other artefact types, made from raw materials derived from more readily identifiable sources, provide confirmation of the cosmopolitan connections enjoyed by the inhabitants of northern and western Scotland during the neolithic.

Some twelve axes or axe fragments, made from porcellanite (Group IX) sourced to Antrim in northern Ireland, are known from the Western Isles (Armit 1996:61; Sheridan 1986:26; 1992:201). The stone axe, and accompanying wooden shaft, from Shulishader, at Point, on the Eye Peninsula in Lewis, is probably a porcellanite from northern Ireland (Ponting and Ponting 1984a:17; Sheridan 1986:25; 1992:198, 200). An axe hammer recovered from below the peat at Knock in Lewis was apparently manufactured from a quartz porphyry unique to Shetland (see Gibson, W.J. 1934:430-32). A polished axe from Eilean Domhnuill a Spionnaidh, made from a greenstone unknown in the region, was definitely imported into the Western Isles (Armit 1988:26). Material from other sources is also known from the Western Isles. A cushion macehead from Knock in Lewis, for example, was manufactured from a hornfels (Group XXIV) sourced to Creag na Caillich, near Killin in Perthshire (Ritchie, R. 1992:220; Sheridan 1992:197). A hoard of five stone axes from Balallan in Lewis, three made from gneiss, presumably of local origin, but the remaining two made from rock sourced to either Killin (Group XXIV) or Great Langdale (Group VI) attest to the circulation of artefacts, if not people, across long distances (see Cowie, T. 1981:50; Ponting and Ponting 1984a:17; Sheridan 1986:29; 1992:201). Similarly, the discovery of lithics manufactured from baked shale at Callanais, Dalmore, Northton and elsewhere in Lewis, ultimately derived from a source on Skye (Armit 1996:61; Wickham-Jones 1986:7; Ponting 1984c:235; 1988:432; Ponting and Ponting 1984a:17, 21), alludes to a degree of maritime contact otherwise obscured in the literature (see Ponting and Ponting 1984a:21). Similarly, the presence of pitchstone from Arran on neolithic sites in the Western Isles (Armit 1996:59, 61), at Barnhouse on Mainland in Orkney (Richards 1990:308), and the presence of bloodstone from Mull throughout western Scotland (Armit 1996:38), alludes to the presence of extensive contacts along the Atlantic coast during the mesolithic and neolithic. The recovery of pitchstone from Arran, and possibly Eigg, bloodstone from Rum, and porcellanite from northern Ireland, at Allt Chrisal amply demonstrates the pervasive nature of these contacts (Sheridan and Addison 1995:137; Wickham-Jones 1995:136).

9.9. A chronology for the neolithic of the Western Isles

The curious disregard for chronology in this research is more a reflection of empirical circumstance than theoretical negligence. An ineffectual temporal control over the evidence, in both artefactual and structural terms, precludes the development of a satisfactory chronology of the neolithic in the Western Isles. The absence of stratified sequences, verified by chronometric dating, due largely to either the intrinsic nature of the archaeological evidence, the circumstances of discovery, or even the methods of excavation, conspire to impede an understanding of artefactual sequences, monument use, and settlement history.[25] Occasional, and invariably solitary, radiocarbon dates, whilst providing some degree of interpretive solace, fail to clarify the chronological relations between the various facets of the evidence. Table 9.2. below provides an inventory of the available radiocarbon dates from the Western Isles relevant to this research. This ambiguity of chronology is compounded by the unavailability of evidence from a plethora of unpublished excavations. Ultimately, the dating of artefacts and monuments in the Western Isles relies upon correlation with similar, dated evidence from elsewhere in Ireland and Britain. Yet any ceramic sequence for Scotland, necessarily based on unreliable sequences extrapolated from chambered cairns, or imported from elsewhere, usually southern Britain, is manifestly unsatisfactory (Kinnes 1985:18). The following discussion attempts to ascertain the significance and implications of the dates itemised in Table 9.2. with respect to a ceramic sequence and settlement history for the neolithic in the Western Isles.

Kinnes, writing in the early 1980s, lamented the absence of a neolithic ceramic sequence for the Western Isles (1985:22), and, more generally, remarked upon the tendency for radiocarbon assays from Scotland to confirm a general progression, rather than elucidate a detailed stylistic sequence, from early to late neolithic styles, in northern Britain (see Kinnes 1985:22). Traditional typologies in the Western Isles retain an informal interpretive currency in lieu of a secure or comprehensive radiocarbon chronology (eg. Foster 1995:50). Admittedly, the

Table 9.2.: radiocarbon dates relating to the neolithic of the Western Isles[26]

site	context description	uncalibrated (BP) radiocarbon date	laboratory code	sample type	calibrated date (BC) expressed at 2σ range of confidence	references
Bharpa Carinish, North Uist	spread overlying hearth 2	5520 ± 90[27]	GU-2669	charcoal	4700 BC (1.00) 4050 BC	Armit 1996:238; Crone 1993:369-70
Bharpa Carinish, North Uist	spread overlying hearth 1	4490 ± 50	GU-2458	charcoal	3360 BC (0.99) 3030 BC 2960 BC (0.01) 2940 BC	Armit 1996:238; Crone 1993:369-70
Bharpa Carinish, North Uist	spread overlying hearth 3	4430 ± 100	GU-2671	charcoal	3370 BC (1.00) 2890 BC	Armit 1996:238
Bharpa Carinish, North Uist	deposit in natural hollow beside hearth 2	4370 ± 50	GU-2670	charcoal]	3300 BC (0.06) 3240 BC 3110 BC (0.94) 2900 BC	Armit 1996:238; Crone 1993:369-70
Bharpa Carinish, North Uist	pit cut by hearth 3	4280 ± 130	GU-2672	charcoal	3350 BC (1.00) 2500 BC	Armit 1996:238; Crone 1993:369-70
Site T26A, Allt Chrisal (phase I), Barra	possible post-hole	4820 ± 60	GU-3922	wood (birch)	3780 BC (0.05) 3740 BC 3710 BC (0.90) 3500 BC 3420 BC (0.05) 3380 BC	Foster 1995:52; Gibson 1995:114-15
Site T26A, Allt Chrisal (phase I), Barra	possible pottery kiln	4700 ± 100	GU-3467	wood (birch)	3800 BC (1.00) 3100 BC	Foster 1995:51; Gibson 1995a:114-15
Site T26A, Allt Chrisal (phase I), Barra	soil deposit	4470 ± 60	GU-3923	wood (birch)	3350 BC (0.91) 3020 BC 2990 BC (0.09) 2930 BC	Foster 1995:51-2; Gibson 1995:114-15
Shulishader, Lewis	axe haft, isolated find in peat	4470 ± 95	OxA 3537	wood, possibly	3500 BC (1.00) 2900 BC	Armit 1996:61, 238; Crone 1993:369-70

site	context description	uncalibrated (BP) radiocarbon date	laboratory code	sample type	calibrated date (BC) expressed at 2σ range of confidence	references
				hawthorn		
Northton (neolithic II), Harris	occupation horizon	4411 ± 79	BM-705	bone	3340 BC (1.00) 2910 BC	Armit 1996:238; Burleigh et al. 1973:61; Simpson 1976:222
Northton (beaker I), Harris	occupation horizon	3604 ± 70	BM-706	bone	2190 BC (1.00) 1760 BC	Armit 1996:239; Burleigh et al. 1973:61; Simpson 1976:226
Northton (beaker II), Harris	occupation horizon	3481 ± 54	BM-707	bone	1950 BC (1.00) 1680 BC	Armit 1996:239; Burleigh et al. 1973:61; Simpson 1976:226
Paible, Lewis	midden	4060 ± 135	GU 1088	shell	2950 BC (1.00) 2200 BC	Armit 1996:239
Rosinish (beaker phase), Benbecula	old land surface	3920 ± 55	GU-1065	shell	2580 BC (0.98) 2280 BC 2240 BC (0.02) 2210 BC	Armit 1996:239; Shepherd and Tuckwell 1977b:112
Rosinish (beaker phase), Benbecula	primary midden	3850 ± 75	GU-1064	shell	2600 BC (1.00) 2000 BC	Armit 1996:239; Shepherd and Tuckwell 1977b:112
Kinloch, Rhum	deposit of rock debris within peat infill of old watercourse	3890 ± 65	GU-2042	wood	2580 BC (0.05) 2530 BC 2510 BC (0.94) 2190 BC 2160 BC (0.01) 2140 BC	Cook and Scott 1990, 135, Table 22:134; Wickham-Jones 1990: 47
Rubha an Udail Site 6, North Uist	hearth in structure DJ	3720 ± 40	Q-3054	carbonised wood	2290 BC (1.00) 2030 BC	Crawford 1981:4
Rubha an Udail Site 6, North Uist	hearth in structure DJ	3710 ± 50	Q-3055	carbonised wood	2290 BC (1.00) 1970 BC	Crawford 1981:4
Rubha an Udail Site 6, North	unknown deposit	3430 ± 85	Q-1458	human bone	1960 BC (1.00) 1520 BC	Crawford and Switsur 1977, Table 1:135

site	context description	uncalibrated (BP) radiocarbon date	laboratory code	sample type	calibrated date (BC) expressed at 2σ range of confidence	references
Uist						
Rubha an Udail Site 6, North Uist	inhumation under kerb cairn in phase B	3425 ± 80	Q-1478	unknown sample	1940 BC (1.00) 1520 BC	Armit 1996:240; see Section 8.3.2.4
Rubha an Udail Site 3, North Uist	unknown deposit	3560 ± 100	Q-1134	indeterminate bone	2200 BC (1.00) 1650 BC	Armit 1996:239; Crawford and Switsur 1977, Table 1:135
Rubha an Udail Site 3, North Uist	unknown deposit	3470 ± 120	Q-1133	marine shell	2150 BC (1.00) 1500 BC	Armit 1996:240; Crawford and Switsur 1977, Table 1:135
Cnip, Lewis	inurned cremation	3410 ± 55	GU-1174	human bone	1890 BC (0.98) 1600 BC 1560 BC (0.02) 1530 BC	Armit 1996:240; Close-Brooks 1995:263, 268
Cnip, Uig, Lewis	stone cist inhumation	3360 ± 50	GU-3488	human bone	1870 BC (0.02) 1840 BC 1770 BC (0.98) 1520 BC	Armit 1996:240; Dunwell et al. 1995:284
Site T180, Glen Bretadale, Barra	base of the overlying peat	not available	GU 3393	decayed organic matter	1608 - 1462 BC (expressed at 1σ level of confidence)	Branigan 1995b:183
Site T180, Glen Bretadale, Barra	base of the overlying peat	not available	GU 3436	decayed organic matter	1938 - 1776 BC (expressed at 1σ level of confidence)	Branigan 1995b:183

ceramic sequence at Eilean an Tighe, which underlay the traditional typology of neolithic pottery in the Western Isles, is explicitly discredited, but on stratigraphic, rather than typological, grounds (see Armit 1986:8; 1996:50, 57). The depositional sequences at Clettraval and Unival, other than confirming a general progression from hebridean ware to beaker ware or grooved ware respectively, are of limited interpretive value, especially given the likelihood of disturbed contexts in such chambered cairns (Henshall 1972:164-65; Kinnes 1985:17). Similarly, the ceramic sequence at Northton, encapsulating a progression from hebridean wares to beaker wares, regurgitates only familiar circumstance (Kinnes 1985:16). The ceramic sequence discernible at Rubha an Udail Site 6, containing predominantly undiagnostic styles, fails to clarify this unsatisfactory situation.

A traditional ceramic sequence, relying variously on typology, stratigraphy and association, is no longer tenable (see Scott 1942:302). Indeed, the stylistic and contextual evidence, and any accompanying radiocarbon dates, from recently excavated sites in the Western Isles, intimate the longevity and contemporaneity of ceramic styles. This evidence, instead of establishing an inviolate typological sequence, queries the universal application of the typological method in archaeology. Brown, arguing on stylistic grounds, suggested that hebridean ware, usually confined to the early neolithic, remained in use into the late neolithic (Brown nd.).[28] The contextual proximity, if not demonstrable stratigraphic contemporaneity, of undecorated pottery, hebridean ware and unstan ware at Eilean Domhnuill a Spionnaidh (Armit 1988:20; Brown nd.), Allt Chrisal (Gibson 1995a:114; Foster 1995:73, 81) and Northton (Simpson 1976:222) suggest the chronological durability and concurrence of these diverse ceramic styles. Radiocarbon dates from Allt Chrisal, reasonably interpreted, intimate the longevity and contemporaneity of different ceramic styles, lasting nearly a millennium:

> "These dates, then, combined with the frequent contextual association and general stratigraphic contemporaneity of the different ceramic elements within the assemblage tend to support the co-existence , longevity and contemporaneity of the

undecorated, incised, impressed and Unstan wares that make up the Hebridean assemblages" (Gibson 1995a:115).

The coeval nature of many of these ceramic styles in the Western Isles, confirmed by radiocarbon dating, was actually anticipated previously using conventional dating methods (McInnes 1969:21).

Similarly, the BM radiocarbon programme, dating fine beakers, inferred that the numerous styles made familiar in various typologies were largely contemporary (see Ambers *et. al.* 1992; Kinnes *et. al.* 1991). These results, whilst demonstrating the durability of many styles, also imply that, in many instances, stylistic difference is no longer necessarily explained as a consequence of chronological variation.

The radiocarbon dates relating to reputed settlement evidence, already identified as neolithic on the basis of the accompanying artefactual assemblages, merely confirm such a date (see Table 9.2). There are no radiocarbon dates from Eilean an Tighe, Clettraval or Unival, all excavated long before the advent of radiocarbon dating, and none currently available from Eilean Domhnuill a Spionnaidh (see Armit 1996:46). The absence of beaker pottery from the Eilean an Tighe assemblage alludes to either site abandonment or changing depositional practices (Brown nd.; Henshall nd.). The eclectic styles from Clettraval and Unival the merely attests to the *relative* longevity of use of chambered cairns.

9.10. A conclusion

A neolithic of the Western Isles, consisting of a critical engagement with the evidence, is an attempt to realise, *by* writing rather than *in* writing, an alternative history of the period between 4000 and 1700 BC in this particular region. Indeed, the discoveries made during the course of this research are more interpretive than descriptive, more conceptual than empirical. That no profound arguments or fundamental reflections are paraded by way of conclusion reflects a desire to avoid summation as a series of aphorisms, apparently correcting the now seemingly obvious fallacies of preceding research. Instead, the opportunity is taken to finish with a derisory notice of some relevance to this work...

It is customary, in a concluding statement, to endorse some profundity or other, to grasp momentarily a vulgar eloquence, in an attempt to elicit a memorable literary flourish by way of finale. A sentimental observation on the intellectual benevolence of archaeology, rejuvenating a decrepit past to invigorate a dull present, would seem appropriate. Unfortunately, etiquette curtails any inclination to proselytise some of the more vacuous theoretical aphorisms. The graceful rush to embrace the possibility, more precisely the potential, of a multiplicity of pasts, and the unseemly retreat to escape the implications, more precisely the potential, of the relativism such plurality intimates, make a mockery of an archaeological practice that allegedly aspires to moral authority and political integrity. Ultimately, archaeologists are neither willing nor, it seems, able to accept responsibility for the pasts they create, or more accurately, for their failure to create the pasts they have not created . If irony, expressed as wry hypocrisy, is permissible, the preceding chapters are a fine example of a body of research that bemoans the many interpretive fallacies of culture historicism, or whatever, but is unable to escape the confines of an archaeological practice predicated on these same intellectual principles. The recourse to a traditional methodological regime, effectively a series of regulations invoked to control the manner in which the archaeological record is interpreted, and therefore guarantee the ontological integrity of the past as past, betrays a reluctance to concede the absurdity of the original aspirations of archaeology.[29] That this body of research is obliged to indulge in a perusal of rim profiles, or compile an inventory of comparable ceramic styles, even though these results arguably mean nothing, attests not to the tenacity of traditional interpretive paradigms, but rather to the continuity, indeed the necessity, of the same methodology that sustains all allegedly good archaeological practice. For it is this methodology that perpetuates the pretence of the archaeological record, apparently an empirical resource, as the supposedly tangible authority that affords archaeologists a credibility and superiority of knowledge denied to others who venture alternative interpretations of the past. It is for this reason that the archaeological record, excavated so meticulously, hoarded so jealously, studied so methodically, guarded so carefully, is largely inaccessible. If the aridity of the past is preserved, the certainty of its interpretation is guaranteed. It is to such splendid futility, and the arrogance behind the anxiety, that this research, another contribution to this desiccated past, is indifferently dedicated.

[1] The neolithic ceramics from Kinloch on Rhum, from deposits almost certainly later than the surrounding mesolithic contexts (see Wickham-Jones 1990:42, 46-7, 128-29, Illustration 16:43), are not readily interpreted as evidence of a precocious ceramic tradition, developing in the transition between the mesolithic and neolithic periods (contra Armit 1996:36,41; Armit and Finlayson 1992:668-69; 1995:270; 1996:281-83). Indeed, if a single date is permissible, the solitary radiocarbon date associated with the pottery, 3890 ± 65 BP (GU-2042), is sufficiently late to suggest redeposition of these early neolithic ceramics within a late neolithic context (see Kemp 1990:130; Wickham-Jones 1990:128-29).

[2] The high quality of many early neolithic vessels, difficult to reconcile with the absence of a mature ceramic tradition in Ireland and Britain, ensures that the practical and technical skills germane to the manufacture of pottery are usually assumed to derive from the continent (eg. Darvill 1987:49; Herne 1988:25, 26; Kinnes 1988:4). Certainly, the social and ideological motivations behind the adoption of pottery probably originated in continental Europe, there is no reason to suppose that the necessary technological knowledge was similarly acquired under the tutelage of distant potters. It is probable that vessels were not fired until the art of forming, at both the clayware and leatherhard stages, was mastered. The wasters from initial, presumably unsuccessful, attempts at firing were probably deposited differently from vessels adequately fired and subsequently used. It is perfectly possible that wasters are poorly represented, and seldom recognised anyway, in the archaeological record. Essentially, the mysterious absence from the archaeological record of bungled attempts at forming and firing early neolithic pottery are more likely a consequence of the nature of ceramic manufacture, the resultant casual disposal of wasters, and the difficulty of distinguishing such wasters, when they are recovered, from successfully fired vessels.

[3] Many of these supposed functional advantages, relating to ceramic ethno-archaeological reportage from the Americas, Africa and Asia, continents with climates very different from that of temperate Europe, frequently refer to the manner in which ceramics facilitate the alleviation of previously prohibitive environmental constraints. The relevance of many of these advantages, in regions with a temperate climate, is questionable. The most obvious example of this incongruity is the frequently made assertion that ceramics, allowing water to remain cool by steady evaporation, are ideal for water storage (eg. Arnold, D. 1985:144). That such a generalisation does not extend into northern and western Scotland, even during the allegedly more ameliorative climate of the neolithic, is a reasonable assumption.

[4] The concept of ethnicity, currently attracting considerable attention in various disciplines, including anthropology and archaeology, enjoys an alarming relevance in contemporary society, given its apparently formative role in many recent social upheavals and political conflicts. Unfortunately, many archaeological studies employ the concept of ethnicity to revamp the fatigued notion of an archaeological culture. Attempts to recognise the influence of ethnicity in the archaeological record are obliged to assume that material culture reflects those forms of social identity akin to ethnic identity. This use of ethnicity as a unitary and unifying concept, involving a direct equation between the innate style of material culture and social identity, is simple to the point of vulgarity. Essentially, this use of the concept of ethnicity conveniently defers any rethink of the manner in which social identity and organisation are recognised in the archaeological record.

[5] The presence of rock inclusions, from a source in south west Cornwall, and shell inclusions, possibly from the Bath-Frome region, in the fabrics of early neolithic pottery from numerous, widely dispersed sites in southern England, confirmed either the importation of raw materials, or, more probably, the exchange of finished vessels during the neolithic (see Peacock 1969:145ff; Smith 1974:108-11; Whittle 1977:77, 79, 81-2, 89, 95). Similarly, the marine shell inclusions in carrowkeel ware, from Tara, Loughcrew and Carrowkeel in Ireland, and the depositional circumstances at the latter, suggest the importation of raw material from a coastal source a minimum of twenty kilometres away (Sheridan 1985:169, 170-71). More tenuously, the

movement of ceramics is also, in some instances, suggested by a stylistic analysis. A beaker from Glenforsa in Mull, for example, is sufficiently distinctive, in terms of both style and quality, to merit consideration as objects included in exchange (Burgess 1980:267).

[6] Experimental attempts at firing within negative features are not always successful (eg. O Dulaing 1992:12). However, this is more likely a consequence of operational inexperience than technological impossibility.

[7] This stylistic complexity is usually explained as an insular peculiarity, and stylistic comparisons seldom extend beyond the confines of the Western Isles, partly because the nebulous category of hebridean ware conceals more variability than it reveals (cf. Armit 1987:25; 1996:59).

[8] Certain grooved ware rims from Orkney, for example scalloped and notched forms, are entirely impractical, and suggest that the vessels on which they occur were employed for some special purpose (MacSween 1992:270).

[9] Interestingly, miniature vessels were also employed, admittedly in an overtly sepulchral capacity, at Ballateare on the Isle of Man, where the large jars bear an uncanny resemblance to many vessels from western and northern Scotland (see Bersu 1947:167, Figure 4:166).

[10] Regrettably, tales of archaeological risqué are always consigned to the fringes of the discipline. Unsurprisingly, a utilitarian interpretation of the ceramic phalli from Eilean Domhnuill a Spionnaidh is nowhere forthcoming, if only because the objects in question are rather small. These objects do, however, suggest that circumcision, as a form of body adornment, was not unknown during the neolithic.

[11] Strangely, the vessel styles from which these sherds derived, unmentioned in these unpublished specialist reports, remain obscure.

[12] The relation between the animal bones and ash rich deposits also recovered during the partial and exploratory excavation of an already disturbed site is uncertain (see MacKenzie, W.C. 1905:252).

[13] The capacity of stone axes to encapsulate symbolic meaning are discussed elsewhere (eg. Taylor 1996).

[14] The careful compilation of corpora, relating to specific types of archaeological evidence, and the judicious interpretation of the resultant catalogue, is no longer regarded as an magnanimous intellectual enterprise, due to the development of computerised data storage of the archaeological record in Sites and Monuments Records. The exhaustive description that characterises any archaeological inventory no longer holds the same interpretive acuity due to changes in the theoretical priorities of a contemporary archaeological practice.

[15] The imbricated orthostats that form the chamber of clyde cairns, including Clettraval and Geirisclett in North Uist, are more appropriately conceptualised as a passage, than as contiguous compartments, particularly in cases where the compartments become increasingly larger further inside the chamber (Henshall 1972:49; Scott, J.G. 1969:201). Indeed, the innermost compartment at Clettraval, contrasting markedly with the architecture typical of other clyde cairns, is the largest of the contiguous compartments in the chamber (Scott, J.G. 1969:201; Scott, W.L. 1935:485).

[16] The interior at Clettraval is preferably interpreted as a passage, gradually increasing in size, rather than as a series of contiguous compartments (Scott, W.L. 1942:303-04).

[17] Scott emphasised the symbolic capacity of the peristalith, as a boundary enclosing a sacred space, at Rudh' an Dunain on Skye (1934a:198).

[18] Chrisp provides a comprehensive description, but rather abstract interpretation, of the prominence and visibility of all definite or possible chambered cairns on North Uist (1990).

[19] Thom, incorporating Unival into a nexus of astronomical alignments, considered the monument: "...one of the most important sites in Britain..." due to its astronomical salience (1967:131-33).

[20] The splendid views towards St. Kilda from Clettraval are acknowledged, if not entirely explained, by Harman (1997:56-8). Thom mentions other megalithic sites in the Western Isles apparently embodying a visual relationship with St. Kilda (1967:129).

[21] Ashmore (1984:21-3) and Ponting and Ponting (1984a:47-9) review successive attempts to interpret the monumental complex at Callanais I from an astronomical perspective

[22] Only Crawford cautioned against assuming the overt sepulchral evidence reflected directly the locations of an arcane settlement evidence (1978a:54). However, both Armit (1996:77-8) and Sharples (1992:326) argued that the concentration of chambered cairns on North Uist was genuine, and not a reflection of relative density of adjunct settlement.

[23] The two Rubha an Udail Site 6 dates are 3720 BP +/- 40 (Q-3054) and 3710 BP +/- 50 (Q-3055) (Crawford 1981:4); the Northton date is 3604 BP +/- 70 (BM-706) (Burleigh *et al.* 1973:61).

[24] A radiocarbon date, taken from directly beneath the drystone wall, of 2900 ± 100 bp, provides a calibrated date range of 1400 BC to 850 BC, expressed at a 2σ level of confidence (see Newell 198:89).

[25] The three dates for the occupation horizons at Northton, articulating a coherent sequence to confirm the integrity of the stratigraphy and situate the material culture within a secure, if general, chronological framework, are perhaps an exception (see Burleigh *et al.* 1973:61).

[26] The three radiocarbon dates from Site T26/26A at Allt Chrisal are possibly presented as already calibrated, although this remains unclear. The radiocarbon dates from Site T180 at Glen Bretadale are only presented as date ranges expressed at the 1σ range of confidence (Branigan 1995:183). The calibrated date range quoted in Table 9.1. is taken directly from the calibrated date ranges given in Foster (1995:51). Unfortunately, the calibration methods employed remain unmentioned in the excavation reports.

[27] This radiocarbon date, nonsensical in relation to the remaining dates relating to this feature, is interpreted as a statistical aberration by the excavator (Crone 1993:369-70).

[28] Admittedly, the stylistic comparisons drawn to facilitate this interpretation are controversial.

[29] Sadly, many people working within archaeology are happy to ignore attempts to theorise archaeological practice, and the many inventions of the past such contemporary social practice sustains. It remains feasible, indeed fashionable, to endorse wholeheartedly the bastion of empiricism on which archaeology is founded, and forge a successful career in the discipline, working obliviously to any theoretical scrutiny of the past. This disregard for new developments (the noun 'discovery' reserved for more tangible developments) is presumably more a symptom of professional indolence than intellectual atavism.

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Appendices

A.1. Appendix one: vessel code concordance

The following tables provide a concordance of the various classification systems used in earlier, largely published work, to label the vessels from the assemblages analysed in the current research. There is usually a close correspondence between these various classification schemes, except where commentators disagree on the veracity of certain vessel reconstructions. The decision to develop a completely new series of labels with which to identify the vessels from the assemblages under scrutiny, affords a coherence to this body of research, but inevitably leads to duplication of previous classifications. These tables are essential, firstly, to facilitate the identification of the vessels mentioned in the text in sources properly published, and, secondly, to allow subsequently a critical examination of the arguments developed in the preceding chapters. Unfortunately, due to confusion regarding museum catalogue numbers, where vessels originally thought to be missing were located subsequently, and also because of the inadvertent duplication of museum catalogue numbers, demanding a re-evaluation of vessel groups *after* the assignation of vessel codes, ensure that the vessel codes used to identify discrete vessels in the assemblage from Eilean an Tighe, are not always sequential. Consequently, the absence of 'E2' from Table A.1.3. below is not an inadvertent admission, but merely an indication that there is no vessel identified as 'E2'. Obviously, this unfortunate, if unavoidable, circumstance, does not interfere with the interpretation of the assemblage, for each vessel code, always referring to a specific vessel, remains unique.

Table A.1.1.: vessel concordance for the ceramic assemblage from Clettraval

vessel code	Henshall (1972)	Scott (1935)	NMS cat. (EO)
C1	24	IC4	500p
C2	24	IC3	500p
C2	24	IC4	500p
C3			500p
C3	11	IB7	494
C4			500p
C4	11	IB7	494
C4	20	IB10	500p
C4	25	IB3	496
C5		IB	500n
C5	2	IB6	500n
C5	28	IB5	500d
C5	28	IIB4	500h
C5	28	IVB2	500n
C6	30	IIB1	500e
C7			494
C7	11	IB7	494
C7?			500p
C7?	11	IB7	494
C8			500p
C9	31	IIIB1	500k
C10			500p
C11			500p
C12			500p
C13			500p
C14			500p
C15			500p
C16			500p
C17			500p
C18			500p
C18	30	IIB1	500e
C19			500p
C20			500p
C21			500p
C22			500p
C23			500p
C24			500p
C25			494
C26	11	IB7	494
C27	14	IB8	1499
C28	11	IB7	494

vessel code	Henshall (1972)	Scott (1935)	NMS cat. (EO)
C29			500p
C30	26	IB1	500a
C31	15	IB8	1499
C31	15	IB8	499
C32	25	IB3	496
C33	17	IB4	500c
C33	17	IIB2	500f
C33	17	IIB3	500g
C33?			494
C33?	11	IB7	494
C34	18	IC3	493c
C35	29	IB5	500d
C36	34	IC3	493c
C37	12	VIC1	497
C38	9	VC2	495
C38?	11	IB7	494
C39	7	VC1	490
C40	13	IVB1	500m
C41	16	IIIC3	493b
C42	6	IIIC2	487
C43	10	IIIC1	485
C44	19	IIIB2	500l
C45	4	IIC2	491
C46	8	IIC1	489
C47	27	IIB7	500j
C48	23	IIB6	498
C49	22	IIB5	500i
C50	1	IC2	486
C51	3	IC1	492
C52	5	IB9	488
C53	2	IB6	493a
C54	27	IB2	500b
C55	33	IB12	493c
C56	32	IB11	500p

Table A.1.2.: vessel concordance for the ceramic assemblage from Unival

vessel code	Scott (1948)	Henshall (1972)	NMS cat. (EO)
U1	1	4	852
U2	2	9	859
U3	3	6	854
U4	4	10	860
U5	5	5	853
U6	6	11	861
U7	7	8	857
U8	8	3	851
U9	9	2	850
U10	10	13	863
U11	11	12	862
U12	12	7	855
U12?	12	7	855
U13	13	1	849
U14	51	14	858

vessel code	Scott (1948)	Henshall (1972)	NMS cat. (EO)
U15	52	15	866
U16	-	-	865
U16	53	16	864
U17	12	7	855
U17	14	17	856
U18	14	18	856
U19	-	-	865
U19	53	22	865
U20	-	-	865
U21	-	-	865
U22	-	-	865
U23			856
U24	-	19	868
U25		20	868
U26		21	867

Table A.1.3.: vessel concordance for the ceramic assemblage from Eilean an Tighe

vessel code	NMS cat. (EOA)	Scott (1951)
n/a	409/1	
n/a	409/2	
n/a	409/3	
n/a	409/4	
n/a	409/5	
E1	90	2.40, Figure 9
E3	92	
E3	93	2.8, Figure 9
E4	94	Z.38, Figure 7
E5	95	X.27, Figure 5
E6	96	
E7	97	
E8	98	
E9	99	XI.38, Figure 5
E10	100	Z21, Figure 7
E11	101	Z23, Figure 7
E11	101/1	Z23, Figure 7
E11	101/2	Z23, Figure 7
E12	102	X34, Figure 5
E12	102/1	X34, Figure 5
E12	102/2	X34, Figure 5
E12	102/3	X34, Figure 5
E13	103	
E14	104	
E15	105	
E16	106	Y51, Figure 6
E17	21	W3, Figure 5
E17	21/1	W3, Figure 5
E17	21/2	W3, Figure 5
E17	21/3	W3, Figure 5
E18	22	Y69, Figure 6
E19	23	
E19	333/33	
E20	26	Y22, Figure 6
E20	26/1	
E20	26/2	
E21	24	
E22	25	Y1.92, Figure 5
E23	27	
E24	28	
E25	29	Z.36, Figure 7
E26	30	
E27	31	
E28	32	
E29	33	
E30	34	W18, Figure 5?
E31	35	
E32	63	X24, Figure 5

vessel code	NMS cat. (EOA)	Scott (1951)
E32	63/1	X24, Figure 5
E32	63/2	X24, Figure 5
E32	63/3	X24, Figure 5
E32	63/4	X24, Figure 5
E32	63/5	X24, Figure 5
E32	63/5/1	X24, Figure 5
E32	63/5/2	X24, Figure 5
E33	84	X1.51, Figure 5
E34	85	X.4, Figure 5
E35	86	
E36	87	Z.18, Figure 7
E37	88	
E38	89	
E39	402	
E39	402/1	
E39	402/2	
E39	402/3	
E39	402/4	
E39	402/5	
E39	402/6	
E39	402/7	
E40	405	
E40	405/1	
E40	405/2	
E40	405/3	
E40	405/4	
E40	405/5	
E40	405/6	
E41	401	
E41	401/1	
E41	401/2	
E41	401/3	
E42	403	
E42	403/1	
E42	403/2	
E42	403/3	
E43	404	
E43	404/1	
E43	404/2	
E44	137	Y14, Figure 6
E45	138	Z16, Figure 7
E45	138/1	Z16, Figure 7
E45	138/2	Z16, Figure 7
E45	138/3	Z16, Figure 7
E45	138/4	Z16, Figure 7
E45	138/5	Z16, Figure 7
E46	139	
E47	140	

vessel code	NMS cat. (EOA)	Scott (1951)
E48	141	
E49	124	Y8, Figure 6
E50	125	09, Figure 7
E50	125/1	09, Figure 7
E50	125/2	09, Figure 7
E50	125/3	09, Figure 7
E50	125/4	09, Figure 7
E51	126	
E52	127	
E53	128	
E54	181	042, Figure 7
E54	181/1	042, Figure 7
E54	181/2	042, Figure 7
E55	182	Y68, Figure 6
E56	183	
E57	184	Y53, Figure 6
E58	185/1	Y65, Figure 6
E58	185/2	Y65, Figure 6
E58	185/3	Y65, Figure 6
E59	187/1	1.4, Plate V
E59	187/2	1.4, Plate V
E60	188	
E61	189	
E62	190	Z28, Figure 7
E63	191	VI.1, Figure 8
E64	192	
E65	193	
E66	194	
E67	195	
E68	36	
E69	37	
E70	38	
E71	39	I.13, Figure 8
E71	39/1	I.13, Figure 8
E71	39/2	I.13, Figure 8
E72	40	
E73	41	
E74	42	2.27, Figure 9
E74	43	Y.49, Figure 6
E75	44	X3, Figure 5
E75	44/1	X3, Figure 5
E75	44/2	X3, Figure 5
E76	45	Y25, Figure 6
E77	46	
E78	47	
E79	48	
E80	49	Y7, Figure 6
E81	50	Y20, Figure 6
E81	50/1	Y20, Figure 6
E81	50/2	Y20, Figure 6
E82	51	
E83	70	

vessel code	NMS cat. (EOA)	Scott (1951)
E84	71	
E85	72	
E86	73	
E87	75	
E88	76	
E88	76/1	
E88	76/2	
E88	76/3	
E89	77	
E90	78	
E91	79	
E92	80	0.31, Figure 7
E93	81	
E94	82	
E95	2	
E96	3	
E97	4	
E98	5	
E99	6	
E100	7	VI.12, Figure 8
E101	8	2.18, Figure 9
E102	9	1.5, Plate V
E103	10	Y9, Figure 6
E104	11	
E105	12/1	
E105	12/2	
E106	13	
E107	14	
E108	16	
E109	17	
E110	18	
E111	176	X35, Figure 5
E112	177	043, Figure 7
E113	178	W11, Figure 5
E114	179	
E115	180	Z39, Figure 7
E115	180/1	Z39, Figure 7
E115	180/2	Z39, Figure 7
E115	180/3	Z39, Figure 7
E115	180/4	Z39, Figure 7
E115	180/5	Z39, Figure 7
E116	376/1	1.33, Figure 8
E116	376/2/15	1.33, Figure 8
E116	376/2/16	1.33, Figure 8
E116	376/2/17	1.33, Figure 8
E116	376/2/18	1.33, Figure 8
E116	376/2/19	1.33, Figure 8
E116	376/2/20	1.33, Figure 8
E116	376/2/21	1.33, Figure 8
E116	376/2/22	1.33, Figure 8
E116	376/2/23	1.33, Figure 8
E116	376/2/24	1.33, Figure 8

vessel code	NMS cat. (EOA)	Scott (1951)
E116	376/2/25	1.33, Figure 8
E116	376/2/27	1.33, Figure 8
E116	376/2/28	1.33, Figure 8
E116	376/2/29	1.33, Figure 8
E116	376/2/30	1.33, Figure 8
E116	376/2/35	1.33, Figure 8
E116	376/2/36	1.33, Figure 8
E116	376/2/37	1.33, Figure 8
E116	376/2/38	1.33, Figure 8
E116	376/2/39	1.33, Figure 8
E116	376/2/40	1.33, Figure 8
E116	376/2/41	1.33, Figure 8
E116	376/2/42	1.33, Figure 8
E116	376/2/43	1.33, Figure 8
E116	376/2/44	1.33, Figure 8
E116	376/2/45	1.33, Figure 8
E116	376/2/46	1.33, Figure 8
E116	376/2/47	1.33, Figure 8
E116	376/2/48	1.33, Figure 8
E116	376/2/49	1.33, Figure 8
E116	376/2/50	1.33, Figure 8
E116	376/2/51	1.33, Figure 8
E116	376/3/1	1.33, Figure 8
E116	376/3/2	1.33, Figure 8
E116	376/3/3	1.33, Figure 8
E116	376/3/4	1.33, Figure 8
E116	376/4/1	1.33, Figure 8
E116	376/4/2	1.33, Figure 8
E116	376/8/1	1.33, Figure 8
E116	376/8/2	1.33, Figure 8
E116	376/8/3	1.33, Figure 8
E116	376/8/4	1.33, Figure 8
E116	376/8/5	1.33, Figure 8
E116	376/8/6	1.33, Figure 8
E116	376/8/7	1.33, Figure 8
E116	376/8/8	1.33, Figure 8
E116	376/8/9	1.33, Figure 8
E119	376/5	
E120	376/6	
E121	376/7	
E123	376/2/2	
E123	376/2/2/1	
E123	376/2/2/2	
E124	376/2/1	
E124	376/2/1/1	
E124	376/2/1/2	
E125	376/2/3	
E125	376/2/3/1	
E125	376/2/3/2	
E125	376/2/3/3	
E126	376/2/4	
E126	376/2/4/1	

vessel code	NMS cat. (EOA)	Scott (1951)
E126	376/2/4/2	
E127	376/2/5	
E127	376/2/5/1	
E127	376/2/5/2	
E132	376/2/6	
E132	376/2/6/1	
E132	376/2/6/2	
E133	376/2/7	
E133	376/2/7/1	
E133	376/2/7/2	
E133	376/2/7/3	
E134	376/2/8	
E135	376/2/9	
E136	376/2/10	
E137	376/2/11	
E138	376/2/12	
E139	376/2/13	
E140	376/2/14	
E141	15	
E142	338	
E152	376/2/26	
E157	376/2/31	
E158	376/2/32	
E159	376/2/33	
E160	376/2/34	
E162	386	
E163	387	
E164	388	
E165	389	
E166	390	
E167	391	
E168	393	
E169	394	
E170	396	
E171	395	
E172	397	
E173	333/1	
E174	333/2	
E175	333/3	
E176	333/4	
E177	333/5	
E178	333/6	
E179	333/7	
E180	333/8	
E181	333/9	
E182	333/10	
E183	333/11	
E184	333/12	
E185	333/14	
E186	333/15	
E187	333/16	
E188	333/17	

vessel code	NMS cat. (EOA)	Scott (1951)
E189	333/18	
E190	333/19	
E191	333/20	
E192	333/21	
E193	333/22	
E194	333/23	
E195	333/24	
E196	333/25	
E197	333/26	
E198	333/27	
E199	333/28	
E200	333/29	
E201	333/30	
E202	333/31	
E203	333/32	
E204	333/34	
E205	333/35	
E206	333/36	
E207	333/37	
E208	333/38	
E209	333/39	
E210	333/40	
E211	333/41	
E212	333/42	
E213	333/43	
E214	333/44	
E215	333/45	
E216	333/46	
E217	333/47	
E218	333/48	
E219	333/49	
E220	333/50	
E221	333/51	
E222	333/52	
E223	333/53	
E224	333/54	
E225	333/55	
E226	333/56	
E227	333/57	
E228	333/58	
E229	333/59	
E230	333/61	
E231	333/62	
E232	333/63	
E232	333/74	
E233	348	
E234	349	
E234	349/1	
E234	349/2	
E234	349/3	
E235	333/66	
E236	351/1	

vessel code	NMS cat. (EOA)	Scott (1951)
E237	351/2	
E238	333/69	
E238	351/3	
E238	352/1	
E238	366/12	
E239	351/4	
E240	351/5	
E241	351/6	
E242	351/7	
E243	351/8	
E244	351/9	
E246	352/2	
E247	352/3	
E248	352/4	
E249	352/5	
E250	353/1	
E251	353/2	
E252	352/6	
E253	365/1	
E254	365/2	
E255	365/3	
E256	365/4	
E257	365/5	
E258	365/6	
E259	365/7	
E260	365/8	
E261	367/1	
E262	367/2	
E263	367/3	
E264	367/4	
E265	367/5	
E266	367/6	
E267	367/7	
E268	367/8	
E269	367/9	
E270	344/1	
E270	344/1/1	
E270	344/1/2	
E270	344/2	
E270	344/3	
E273	344/4	
E274	344/5	
E275	346/1	
E276	346/2	
E277	346/3	
E277	346/4	
E279	346/5	
E280	346/6	
E281	346/7	
E282	346/8	
E283	346/9	
E284	366/1	

vessel code	NMS cat. (EOA)	Scott (1951)
E285	366/2	
E286	366/3	
E287	366/4	
E288	366/5	
E289	366/6	
E290	366/7	
E291	366/8	
E292	366/9	
E293	366/10	
E294	366/11	
E296	258	W23, Figure 5
E297	259	
E298	260	
E299	261	
E300	262	
E301	263	
E302	264	Y.11, Figure 6
E303	265	X1.52, Figure 5
E304	266	
E305	267	
E306	268	
E307	269	X1.45, Figure 5
E308	270	W.20, Figure 5
E309	271	
E310	272	X1.43, Figure 5
E311	273	
E312	274	
E313	275	
E314	328/1	
E314	328/19	
E315	328/2	
E316	328/3	
E317	328/4	
E318	328/5	
E319	328/6	
E320	328/7	
E321	328/8	
E322	328/9	
E323	328/10	
E324	328/11	
E325	328/12	
E325?	328/18	
E326	328/13	
E327	328/14	
E328	328/15	
E329	328/16	
E330	315/81	
E330	328/17	
E331	83	X.23, Figure 5
E331?	333/13	
E332	328/20	
E333	328/21	

vessel code	NMS cat. (EOA)	Scott (1951)
E334	328/22	
E335	328/23	
E336	328/24	
E337	328/25	
E338	328/26	
E339	328/27	
E340	328/28	
E341	328/29	
E342	328/30	
E343	328/31	
E344	328/32	
E345	328/33	
E346	328/34	
E347	328/35	
E348	328/36	
E349	328/37	
E350	328/38	
E351	328/39	
E352	328/40	
E353	328/41	
E354	328/42	
E355	328/43	
E356	328/44	
E357	328/45	
E358	328/46	
E359	328/47	
E360	328/48	
E361	328/49	
E362	328/50	
E363	328/51	
E364	328/52	
E365	328/53	
E366	328/54	
E367	328/55	
E368	328/56	
E369	328/57	
E370	328/58	
E371	328/59	
E372	328/60	
E373	328/61	
E374	328/62	
E375	378/1	
E376	378/2	
E377	378/3	
E378	378/4	
E379	379/1	
E379	379/2	
E379	379/3	
E382	379/4	
E383	186	Y64, Figure 6
E383	186/1	Y64, Figure 6
E383	186/2	Y64, Figure 6

vessel code	NMS cat. (EOA)	Scott (1951)
E383	186/3	Y64, Figure 6
E384	15/1	
E384	15/2	
E384	15/2/1	
E384	15/2/2	
E384	15/3	
E387	239/1	01, Figure 7
E387	239/1/1	01, Figure 7
E387	239/1/2	01, Figure 7
E387	239/2	01, Figure 7
E387	239/2/1	01, Figure 7
E387	239/2/2	01, Figure 7
E389	240	0.17, Figure 7
E389	240/1	0.17, Figure 7
E389	240/2	0.17, Figure 7
E389	240/3	0.17, Figure 7
E390	245	1.30, Figure 8
E390	245/1	1.30, Figure 8
E390	245/2	1.30, Figure 8
E390	245/3	1.30, Figure 8
E390	245/4	1.30, Figure 8
E391	246	Z14, Figure 7
E392	247	Z44, Figure 7
E392	247/1	Z44, Figure 7
E392	247/2	Z44, Figure 7
E393	248	Z13, Figure 7
E394	129	
E395	130	
E396	131	
E397	132	XI.53, Figure 5
E398	133	W16, Figure 5
E398	133/1	W16, Figure 5
E398	133/2	W16, Figure 5
E399	134	Y.34, Figure 6
E400	135	
E401	136/1	
E402	136/2	1.9, Figure 8
E402	136/2/1	1.9, Figure 8
E402	136/2/2	1.9, Figure 8
E402	136/2/3	1.9, Figure 8
E402	136/2/4	1.9, Figure 8
E402	136/2/5	1.9, Figure 8
E403	250	Y1.93, Figure 5
E403	250/1	Y1.93, Figure 5
E403	250/2	Y1.93, Figure 5
E404	251	W21, Figure 5
E404	251/1	W21, Figure 5
E404	251/2	W21, Figure 5
E405	252	
E406	253	Y21, Figure 6
E407	254/1	Y24, Figure 6
E408	254/2	

vessel code	NMS cat. (EOA)	Scott (1951)
E409	255	
E410	256	
E411	257	
E412	227	045, Figure 7
E413	228	
E414	229	06, Figure 7
E415	230	
E416	231	
E417	232	
E418	233	
E419	234	
E420	235	
E421	236	I.15, Figure 8
E422	237	Z15, Figure 7
E422	237/1	Z15, Figure 7
E422	237/2	Z15, Figure 7
E422	345/6	
E423	209	0.21a, Figure 7
E424	210	
E425	211	
E426	212	
E427	213	
E428	214	
E429	215	
E430	216	
E431	217	
E432	218	Y67, Figure 6
E433	219	Z27, Figure 7
E434	220	
E435	221	
E436	222	
E437	223	
E438	224	
E439	225	
E440	107	
E441	108	1.32, Figure 8
E442	109	X30, Figure 5
E442	109/1	
E442	109/2	
E443	110	
E444	111	
E445	112	Y23, Figure 6
E446	113/1	Y29, Figure 6
E446	113/2	XI.66, Figure 5
E447	114	X2, Figure 5
E448	115	Y3, Figure 6
E448	115/1	Y3, Figure 6
E448	115/2	Y3, Figure 6
E448	115/3	Y3, Figure 6
E449	142	2.6, Figure 9
E449	142/1	2.6, Figure 9
E449	142/2	2.6, Figure 9

vessel code	NMS cat. (EOA)	Scott (1951)
E449	142/3	2.6, Figure 9
E449	142/4	2.6, Figure 9
E451	143	018, Figure 7
E452	144	
E453	145	Z22, Figure 7
E454	146	XI.71, Figure 5
E455	147/1	Y60, Figure 6
E455?	147/2	Y60, Figure 6
E457	150	YI.91, Figure 5
E457	150/1	YI.91, Figure 5
E457	150/2	YI.91, Figure 5
E457	150/3	YI.91, Figure 5
E458	151	W4, Figure 5
E458	151/1	W4, Figure 5
E458	151/2	W4, Figure 5
E458	151/3	W4, Figure 5
E459	165	044, Figure 7
E460	166	2.13, Figure 9
E461	167	
E462	168	
E462	168/1	
E462	168/2	
E463	169	
E464	170	
E465	171	Y77, Figure 6
E465	171/1	Y77, Figure 6
E465	171/2	Y77, Figure 6
E466	172	Y66, Figure 6
E466	172/1	Y66, Figure 6
E466	172/2	Y66, Figure 6
E467	173	Z29, Figure 7
E468	174	036, Figure 7
E469	175/1	
E469	175/2	
E469	175/2/1	
E469	175/2/2	
E471	52	
E472	53	
E473	54	
E474	55	XI.41, Figure 5
E475	56	
E476	57	
E477	58	
E478	59	
E479	60	W2, Figure 5
E480	61	
E480	61/1	
E480	61/2	
E481	62	
E482	65	
E483	66	
E484	67	XI.44, Figure 5

vessel code	NMS cat. (EOA)	Scott (1951)
E485	68	
E486	153	XI.57, Figure 5
E487	154	
E488	155	
E489	156	
E490	157	
E491	158	
E492	159	
E493	160	
E494	161	
E495	162	XI.70, Figure 5
E496	163	
E496	163/1	
E496	163/2	
E497	164	
E498	241	0.39, Figure 7
E499	242	1.19, Figure 8
E500	243	1.3, Figure 8
E501	116/1	Y19, Figure 6
E501	116/2	Y19, Figure 6
E501	116/3	Y19, Figure 6
E501	116/4	Y19, Figure 6
E505	118	2.28, Figure 9
E506	119	2.25, Figure 9
E507	120	
E508	121	
E509	122	
E510	123	
E511	GT293	
E512	GT294/1	
E512	GT294/2	
E512	GT294/3	
E512	GT294/4	
E513	GT297	
E514	GT296	
E514	GT298	
E516	GT295/1	
E517	GT295/2	
E518	GT295/3	
E520	GT299	
E521	GT300	
E522	GT301	
E523	GT302	
E524	GT303	
E525	GT304	
E526	GT305	
E527	GT306/1	
E528	GT306/2	
E529	GT307	
E530	GT308	
E531	GT309	
E532	GT310	

vessel code	NMS cat. (EOA)	Scott (1951)
E533	GT311	
E534	GT312/1	
E535	GT312/2	
E536	GS4	
E536	GT313	
E537	GT324	
E538	GT325	
E539	GT326	
E540	GT327	
E541	GT328	
E542	340/2	
E543	316	Z.7, Figure 7
E544	317	
E545	318	
E546	319	
E547	320	
E548	321	
E549	322	
E550	323	
E551	324	
E552	325	
E553	326	
E554	327	
E555	329	
E555	329/1	
E555	329/2	
E556	330	
E557	331	
E558	332	
E559	196	XI.72, Figure 5
E560	197/1	
E560	197/2	
E561	198	0.11, Figure 7
E562	199	
E563	200	
E564	201	0.15, Figure 7
E565	203	034, Figure 7
E566	204	
E567	205	
E568	206	
E569	1338	
E569	207	
E569	398/64	
E570	208	X33, Figure 5
E571	277	
E572	278	
E573	279	
E574	280	
E575	282	0.87, Figure 7
E575	282/1	0.87, Figure 7
E575	282/2	0.87, Figure 7
E576	283	0.40, Figure 7

vessel code	NMS cat. (EOA)	Scott (1951)
E577	284	
E578	285	0.21, Figure 7
E579	286	1.7, Figure 8
E580	287	
E581	288	1.12, Figure 8
E582	289	0.7, Figure 7
E583	290	Z.5, Figure 7
E583	290/1	Z.5, Figure 7
E583	290/2	Z.5, Figure 7
E586	291	1.4, Figure 8
E587	292	
E588	293	
E589	294	
E590	295/1	2.4, Plate V
E590	295/2	2.4, Plate V
E590	295/2/1	2.4, Plate V
E590	295/2/2	2.4, Plate V
E591	296	
E592	297	
E593	298	
E594	345/1	
E595	345/2	
E596	345/3	
E597	345/4	
E598	345/5	
E600	345/7	
E601	345/8	
E602	345/9	
E602	345/9/1	
E602	345/9/2	
E603	334/1	
E604	334/2	
E605	334/3	
E606	335/1	
E607	335/2	
E608	335/3	
E609	335/4	
E610	336	
E611	337	
E612	339	
E613	340	
E613	341	
E615	342/2	
E615	342/3	
E615?	342/1	
E618	343/1	
E619	343/2	
E620	368/1	
E621	368/2	
E622	368/3	
E623	368/4	
E624	368/5	

vessel code	NMS cat. (EOA)	Scott (1951)
E625	368/6	
E626	368/7	
E627	368/8	
E628	368/9	
E629	368/10	
E630	369/1	
E631	369/2	
E632	369/3	
E633	369/4	
E634	369/5	
E635	299	
E635	299/1	
E635	299/2	
E636	300	
E637	301	
E638	302	
E639	303	
E640	304	
E641	305	
E642	306	
E643	307	
E644	308	
E645	309	
E646	310	
E647	311	
E647	311/1	
E647	311/2	
E647	311/3	
E648	312	
E649	313	
E650	314	
E651	GT341	
E652	GT342	
E653	GT343	
E654	GT344	
E655	GT345	
E656	GT348/1	
E657	GT348/2	
E658	GT348/3	
E659	GT348/4	
E661	GS5	
E662	GS6	
E663	GS7	
E664	GS8	
E665	GS9	
E666	GS10	
E667	GS11	
E668	GS12	
E669	GT349	
E670	GT350	
E671	GT351/1	
E672	GT351/2	

vessel code	NMS cat. (EOA)	Scott (1951)
E673	GT351/3	
E674	GT351/4	
E675	GT351/5	
E676	GT351/6	
E677	GT352	
E678	GT352/1	
E679	GT352/3	
E680	GT314	
E681	GT315	
E682	GT316	
E683	GT317	
E684	GT318	
E685	GT319	
E686	GT320	
E687	GT321	
E688	GT322/1	
E689	GT322/2	
E690	GT323/1	
E691	GT323/2	
E692	406/1	
E692	406/1/1	
E692	406/1/2	
E692	406/1/3	
E692	406/1/4	
E693	406/2	
E694	406/3	
E695	406/4	
E696	406/5	
E697	406/6	
E697	406/6/1	
E697	406/6/2	
E698	406/7	
E698	406/7/1	
E698	406/7/2	
E698	406/7/3	
E698	406/7/4	
E698	406/7/5	
E698	406/7/6	
E699	385/1	
E699	385/2	
E699	385/3	
E699	385/5	
E702	385/4	
E704	385/6	
E705	385/7	
E706	380	2.1, Plate V
E707	382	2.3, Plate V
E708	383	
E709	384/1	
E710	384/2	
E711	1376/1	
E711	1376/1/1	

vessel code	NMS cat. (EOA)	Scott (1951)
E711	1376/1/10	
E711	1376/1/11	
E711	1376/1/12	
E711	1376/1/13	
E711	1376/1/14	
E711	1376/1/15	
E711	1376/1/16	
E711	1376/1/17	
E711	1376/1/2	
E711	1376/1/3	
E711	1376/1/4	
E711	1376/1/5	
E711	1376/1/6	
E711	1376/1/7	
E711	1376/1/8	
E711	1376/1/9	
E712	1376/2	
E712	1376/2/1	
E712	1376/2/2	
E712	1376/2/3	
E712	1376/2/4	
E712	1376/2/5	
E712	1376/2/6	
E712	1376/2/7	
E712	1376/2/8	
E712	1376/2/9	
E713	1376/3	
E713	1376/3/1	
E713	1376/3/10	
E713	1376/3/2	
E713	1376/3/3	
E713	1376/3/4	
E713	1376/3/5	
E713	1376/3/6	
E713	1376/3/7	
E713	1376/3/8	
E713	1376/3/9	
E714	1376/4	
E714	1376/4/1	
E714	1376/4/2	
E714	1376/4/3	
E714	1376/4/4	
E714	1376/4/5	
E714	1376/4/6	
E715	1376/5	
E715	1376/5/1	
E715	1376/5/2	
E715	1376/5/3	
E715	1376/5/4	
E715	1376/5/5	
E715	1376/5/6	
E715	1376/5/7	

vessel code	NMS cat. (EOA)	Scott (1951)
E715	1376/5/8	
E715	1376/5/9	
E716	148	YI.99, Figure 5
E716	148/1	YI.99, Figure 5
E716	148/10	YI.99, Figure 5
E716	148/11	YI.99, Figure 5
E716	148/12	YI.99, Figure 5
E716	148/2	YI.99, Figure 5
E716	148/3	YI.99, Figure 5
E716	148/4	YI.99, Figure 5
E716	148/5	YI.99, Figure 5
E716	148/6	YI.99, Figure 5
E716	148/7	YI.99, Figure 5
E716	148/8	YI.99, Figure 5
E716	148/9	YI.99, Figure 5
E717	363/1	
E717	363/2	
E717	363/3	
E717	363/4	
E717	363/4/1	
E717	363/4/2	
E721	364/1	
E722	364/11	
E722	364/2	
E722	364/8	
E723	364/3	
E723	364/4	
E723	364/6	
E723	364/7	
E725	364/5	
E729	364/9	
E730	364/10	
E732	1236	
E733	113	
E734	249/1	1.10, Figure 8
E734	249/1/1	1.10, Figure 8
E734	249/1/2	1.10, Figure 8
E734	249/2	1.10, Figure 8
E734	249/2/1	1.10, Figure 8
E734	249/2/2	1.10, Figure 8
E734	249/2/3	1.10, Figure 8
E734	249/3	1.10, Figure 8
E734	249/3/1	1.10, Figure 8
E734	249/3/2	1.10, Figure 8
E734	249/4	1.10, Figure 8
E734	249/4/1	1.10, Figure 8
E734	249/4/2	1.10, Figure 8
E734	249/5	1.10, Figure 8
E734	249/5/1	1.10, Figure 8
E734	249/5/2	1.10, Figure 8
E734	249/6	1.10, Figure 8
E740	249/7	

vessel code	NMS cat. (EOA)	Scott (1951)
E741	249/8	
E742	408/1	
E743	408/2	
E744	408/3	
E745	408/4	
E746	408/5	
E747	408/6	
E748	408/7	
E749	408/8	
E749	408/8/1	
E749	408/8/2	
E750	408/9	
E751	408/10	
E752	408/11	
E753	408/12	
E754	408/13	
E755	408/14	
E756	408/15	
E757	408/16	
E758	408/17	
E758	408/17/1	
E758	408/17/2	
E759	408/18	
E760	408/19	
E761	408/20	
E762	408/21	
E763	408/22	
E764	408/23	
E765	408/24	
E766	408/25	
E767	408/26	
E768	408/27	
E769	408/28	
E770	408/29	
E771	408/30	
E772	408/31	
E773	408/32	
E774	377/1	
E775	377/2	
E776	377/3	
E776	377/6	
E776	377/6/1	
E776	377/6/2	
E776	377/6/3	
E777	377/4	
E777	377/4/1	
E777	377/4/2	
E777	377/5	
E777	377/5/1	
E777	377/5/2	
E780	377/7	
E780	377/7/1	

vessel code	NMS cat. (EOA)	Scott (1951)
E780	377/7/2	
E780	377/7/3	
E781	399/1	
E872	399/2	
E873	399/3	
E874	399/4	
E875	399/5	
E876	399/6	
E877	399/7	
E878	399/8	
E878	399/9	
E880	399/10	
E880	399/13	
E880	399/16	
E880	399/20	
E881	399/11	
E882	399/12	
E884	399/14	
E885	399/15	
E887	399/17	
E888	399/18	
E889	399/19	
E891	399/21	
E892	399/22	
E893	315/1	
E894	315/2	
E895	315/3	
E896	315/4	
E897	315/5	
E898	315/6	
E899	315/7	
E900	315/8	
E901	315/9	
E902	315/10	
E903	315/11	
E904	315/12	
E905	315/13	
E906	315/14	
E907	315/15	
E908	315/16	
E909	315/17	
E910	315/18	
E911	315/19	
E912	315/20	
E913	315/21	
E914	315/22	
E915	315/23	
E916	315/24	
E917	315/25	
E918	315/26	
E919	315/27	
E920	315/28	

vessel code	NMS cat. (EOA)	Scott (1951)
E921	315/29	
E922	315/30	
E923	315/31	
E924	315/32	
E925	315/33	
E926	315/34	
E927	315/35	
E928	315/36	
E929	315/37	
E930	315/38	
E931	315/39	
E932	315/40	
E933	315/41	
E934	315/42	
E935	315/43	
E936	315/44	
E937	315/45	
E938	315/46	
E939	315/47	
E940	315/48	
E941	315/49	
E942	315/50	
E943	315/51	
E944	315/52	
E945	315/53	
E946	315/54	
E947	315/55	
E948	315/56	
E949	315/57	
E950	315/58	
E950	315/84	
E950	315/90	
E951	315/59	
E952	315/60	
E953	315/61	
E954	315/62	
E955	315/63	
E956	315/64	
E957	315/65	
E958	315/66	
E959	315/67	
E960	315/68	
E961	315/69	
E962	315/70	
E963	315/71	
E964	315/72	
E965	315/73	
E966	315/74	
E967	315/75	
E968	315/76	
E969	315/77	
E970	315/78	

vessel code	NMS cat. (EOA)	Scott (1951)
E971	315/79	
E972	315/80	
E974	315/82	
E975	315/83	
E977	315/85	
E978	315/86	
E979	315/87	
E980	315/88	
E981	315/89	
E983	315/91	
E984	315/92	
E985	315/93	
E986	315/94	
E987	315/95	
E988	354/1	
E988	354/3	
E988	354/5	
E988?	354/2	
E988?	354/4	
E993	354/6	
E994	355	
E995	356	
E996	357	
E997	358/1	
E998	358/2	
E999	359/1	
E999	359/2	
E1001	360/1	
E1002	360/2	
E1003	360/3	
E1004	360/4	
E1004	360/7	
E1005	360/5	
E1006	360/6	
E1008	360/8	
E1009	360/9	
E1010	361	1.2, Plate V
E1010	361/1	1.2, Plate V
E1010	361/2	1.2, Plate V
E1011	362/1	
E1012	362/2	
E1012	362/3	
E1014	400/1	
E1015	400/2	
E1016	400/3	
E1017	400/4	
E1018	400/5	
E1019	400/6	
E1020	400/7	
E1021	400/8	
E1022	400/9	
E1023	400/10	

vessel code	NMS cat. (EOA)	Scott (1951)
E1024	400/11	
E1025	400/12	
E1026	400/13	
E1027	400/14	
E1028	400/15	
E1029	400/16	
E1030	400/17	
E1031	400/18	
E1032	400/19	
E1033	400/20	
E1034	400/21	
E1035	400/22	
E1036	400/23	
E1037	400/24	
E1038	400/25	
E1039	370/1	
E1040	370/2	
E1041	370/3	
E1042	370/4	
E1042	370/5	
E1042	370/7	
E1042	370/8	
E1042	370/9	
E1044	370/6	
E1048	370/10	
E1049	371	
E1050	372	
E1051	373/1	
E1052	373/2	
E1053	374	
E1054	375	
E1055	407/1	
E1056	407/2	
E1057	407/3	
E1058	407/4	
E1059	407/5	
E1060	407/6	
E1061	407/7	
E1062	407/8	
E1063	407/9	
E1064	407/10	
E1065	407/11	
E1066	407/12	
E1067	407/13	
E1068	407/14	
E1069	407/15	
E1070	407/16	
E1071	407/17	
E1072	407/18	
E1073	407/19	
E1074	407/20	
E1075	407/21	
E1076	407/22	
E1077	407/23	
E1078	407/24	
E1079	407/25	
E1080	407/26	
E1081	407/27	
E1082	407/28	
E1083	407/29	
E1084	407/30	
E1085	407/31	
E1086	407/32	
E1087	407/33	
E1088	407/34	
E1089	407/35	
E1090	407/36	
E1091	407/37	
E1092	407/38	
E1093	407/39	
E1095	407/40/1	
E1096	407/40/2	
E1097	407/41	
E1098	407/42	
E1099	407/43	
E1100	407/44	
E1101	407/45	
E1102	407/46	
E1103	407/47	
E1104	407/48	
E1105	407/49	
E1106	407/50	
E1107	407/51	
E1108	407/52	
E1109	407/53	
E1110	407/54	
E1111	407/55	
E1112	407/56	
E1113	407/57	
E1114	407/58	
E1115	407/59	
E1116	407/60	
E1117	407/61	
E1118	407/62	
E1119	407/63	
E1120	407/64	
E1121	407/65	
E1122	407/66	
E1123	407/67	
E1124	407/68	
E1125	407/69	
E1126	407/70	
E1127	407/71	
E1128	407/72	

vessel code	NMS cat. (EOA)	Scott (1951)
E1128	407/72/1	
E1128	407/72/2	
E1129	407/73	
E1130	407/74	
E1131	407/75	
E1132	407/76	
E1133	407/77	
E1134	407/78	
E1135	407/79	
E1136	407/80	
E1137	407/81	
E1138	407/82	
E1139	407/83	
E1140	407/84	
E1141	407/85	
E1142	407/86	
E1143	407/87	
E1144	407/88	
E1145	407/89	
E1146	407/90	
E1147	407/91	
E1148	407/92	
E1149	407/93	
E1150	407/94	
E1151	407/95	
E1152	407/96	
E1152	407/96/1	
E1152	407/96/2	
E1153	407/97	
E1154	407/98	
E1155	407/99	
E1156	407/100	
E1157	407/101	
E1158	407/102	
E1158	407/102/1	
E1158	407/102/2	
E1159	407/103	
E1160	407/104	
E1161	407/105	
E1162	407/106	
E1163	407/107	
E1164	407/108	
E1165	407/109	
E1166	407/110	
E1167	407/111	
E1168	407/112	
E1169	407/113	
E1170	407/114	
E1171	407/115	
E1172	407/116	
E1173	407/117	
E1174	407/118	

vessel code	NMS cat. (EOA)	Scott (1951)
E1175	407/119	
E1176	407/120	
E1177	407/121	
E1178	407/122	
E1179	407/123	
E1180	407/124	
E1181	407/125	
E1182	407/126	
E1183	407/127	
E1184	407/128	
E1185	407/129	
E1186	407/130	
E1187	407/131	
E1188	407/132	
E1189	407/133	
E1190	407/134	
E1191	407/135	
E1192	407/136	
E1193	407/137	
E1194	407/138	
E1195	407/139	
E1196	407/140	
E1197	407/141	
E1198	407/142	
E1198	407/142/1	
E1198	407/142/2	
E1199	407/143	
E1200	407/144	
E1201	407/145	
E1202	407/146	
E1203	407/147	
E1204	407/148	
E1205	407/149	
E1206	407/150	
E1207	407/151	
E1208	407/152	
E1209	407/153	
E1210	407/154	
E1211	407/155	
E1212	407/156	
E1213	407/157	
E1214	407/158	
E1215	407/159	
E1216	407/160	
E1217	407/161	
E1218	407/162	
E1219	407/163	
E1220	407/164	
E1221	407/165	
E1222	407/166	
E1223	407/167	
E1224	407/168	

vessel code	NMS cat. (EOA)	Scott (1951)
E1225	407/169	
E1226	407/170	
E1227	407/171	
E1228	407/172	
E1229	407/173	
E1230	407/174	
E1231	407/175	
E1232	407/176	
E1233	407/177	
E1234	407/178	
E1235	407/179	
E1236	407/180	
E1237	407/181	
E1238	407/182	
E1239	407/183	
E1240	407/184	
E1241	407/185	
E1242	407/186	
E1243	407/187	
E1244	407/188	
E1245	407/189	
E1246	407/190	
E1247	407/191	
E1248	407/192	
E1249	407/193	
E1250	407/194	
E1251	407/195	
E1252	407/196	
E1253	407/197	
E1254	407/198	
E1255	407/199	
E1256	407/200	
E1257	407/201	
E1259	407/203	
E1260	407/204	
E1261	407/205	
E1262	407/206	
E1262	407/206/1	
E1262	407/206/2	
E1263	407/207	
E1263	407/207/1	
E1263	407/207/2	
E1264	407/208	
E1265	407/209	
E1266	407/210	
E1267	407/211	
E1268	407/212	
E1269	407/213	
E1270	407/214	
E1271	407/215	
E1272	407/216	
E1273	407/217	

vessel code	NMS cat. (EOA)	Scott (1951)
E1274	407/218	
E1275	407/219	
E1276	407/220	
E1277	407/221	
E1278	407/222	
E1279	407/223	
E1280	407/224	
E1281	407/225	
E1282	407/226	
E1283	407/227	
E1284	407/228	
E1285	407/229	
E1285	407/229/1	
E1285	407/229/2	
E1286	407/230	
E1286	407/230/1	
E1286	407/230/2	
E1287	407/231	
E1288	407/232	
E1289	407/233	
E1290	407/234	
E1290	407/234/1	
E1290	407/234/2	
E1291	407/235	
E1292	407/236	
E1293	407/237	
E1294	407/238	
E1295	407/239	
E1296	407/240	
E1297	407/241	
E1298	407/242	
E1299	407/243	
E1300	407/244	
E1301	407/245	
E1302	407/246	
E1303	407/247	
E1303	407/247/1	
E1303	407/247/2	
E1304	407/248	
E1305	407/249	
E1306	407/250	
E1307	407/251	
E1308	407/252	
E1309	407/253	
E1310	407/254	
E1311	407/255	
E1312	407/256	
E1313	398/1	
E1314	398/2	
E1315	398/3	
E1316	398/4	
E1317	398/5	

vessel code	NMS cat. (EOA)	Scott (1951)
E1318	398/6	
E1319	398/7	
E1320	398/8	
E1321	398/9	
E1322	398/10	
E1323	398/11	
E1324	398/12	
E1325	398/13	
E1326	398/14	
E1327	398/15	
E1328	398/16	
E1329	398/17	
E1330	398/18	
E1331	398/19	
E1332	398/20	
E1333	398/21	
E1334	398/22	
E1335	398/23	
E1336	398/24	
E1337	398/25	
E1338	398/26	
E1339	398/27	
E1340	398/28	
E1341	398/29	
E1342	398/30	
E1343	398/31	
E1344	398/32	
E1345	398/33	
E1346	398/34	
E1347	398/35	
E1348	398/36	
E1349	398/37	
E1350	398/38	
E1351	398/39	
E1352	398/40	
E1353	398/41	
E1354	398/42	
E1355	398/43	
E1356	398/44	
E1357	398/45	
E1358	398/46	
E1359	398/47	
E1360	398/48	
E1361	398/49	
E1362	398/50	
E1363	398/51	
E1364	398/52	
E1365	398/53	
E1366	398/54	
E1367	398/55	
E1368	398/56	
E1369	398/57	

vessel code	NMS cat. (EOA)	Scott (1951)
E1370	398/58	
E1371	398/59	
E1372	398/60	
E1373	398/61	
E1374	398/62	
E1375	398/63	
E1377	398/65	
E1378	398/66	
E1379	398/67	
E1380	398/68	
E1381	398/69	
E1382	398/70	
E1383	398/71	
E1384	398/72	
E1385	398/73	
E1386	398/74	
E1387	398/75	
E1388	398/76	
E1389	398/77	
E1390	398/78	
E1391	398/79	
E1392	398/80	
E1393	398/81	
E1394	398/82	
E1395	398/83	
E1396	398/84	
E1397	398/85	
E1398	398/86	
E1399	398/87	
E1400	398/88	
E1401	398/89	
E1402	398/90	
E1403	398/91	
E1404	398/92	
E1405	398/93	
E1406	398/94	
E1407	398/95	
E1408	398/96	
E1409	398/97	
E1410	398/98	
E1411	398/99	
E1412	398/100	
E1413	398/101	
E1414	398/102	
E1415	398/103	
E1416	398/104	
E1417	398/105	
E1418	398/106	
E1419	398/107	
E1420	398/108	
E1421	398/109	
E1422	398/110	

vessel code	NMS cat. (EOA)	Scott (1951)
E1423	398/111	
E1424	398/112	
E1425	398/113	
E1426	398/114	
E1427	398/115	
E1428	398/116	
E1429	398/117	
E1430	398/118	
E1431	398/119	
E1432	398/120	
E1433	398/121	
E1434	398/122	
E1435	398/123	
E1436	398/124	
E1437	398/125	
E1438	398/126	
E1439	398/127	
E1440	398/128	
E1441	398/129	
E1442	398/130	
E1443	398/131	
E1444	398/132	
E1445	398/133	
E1446	398/134	
E1447	398/135	
E1448	398/136	
E1449	398/137	
E1450	398/138	
E1451	398/139	
E1452	398/140	
E1453	398/141	
E1454	398/142	
E1455	398/143	
E1456	398/144	
E1457	398/145	
E1458	398/146	
E1459	398/147	
E1460	398/148	
E1461	398/149	
E1462	398/150	
E1463	398/151	
E1464	398/152	
E1465	398/153	
E1466	398/154	
E1467	398/155	
E1468	398/156	
E1469	398/157	
E1470	398/158	
E1471	398/159	
E1472	398/160	
E1473	398/161	
E1474	398/162	

vessel code	NMS cat. (EOA)	Scott (1951)
E1475	398/163	
E1476	398/164	
E1477	398/165	
E1478	398/166	
E1479	398/167	
E1480	398/168	
E1481	398/169	
E1482	398/170	
E1483	398/171	
E1484	398/172	
E1485	398/173	
E1486	398/174	
E1487	398/175	
E1488	398/176	
E1489	398/177	
E1490	398/178	
E1491	398/179	
E1492	398/180	
E1493	398/181	
E1494	398/182	
E1495	398/183	
E1496	398/184	
E1497	398/185	
E1498	398/186	
E1499	398/187	
E1500	398/188	
E1501	398/189	
E1502	398/190	
E1503	398/191	
E1504	398/192	
E1505	398/193	
E1506	398/194	
E1507	398/195	
E1508	398/196	
E1509	398/197	
E1510	398/198	
E1511	398/199	
E1512	398/200	
E1513	398/201	
E1514	398/202	
E1515	398/203	
E1516	398/204	
E1517	398/205	
E1518	398/206	
E1519	398/207	
E1520	398/208	
E1521	398/209	
E1522	398/210	
E1523	398/211	
E1524	398/212	
E1525	398/213	
E1526	398/214	

vessel code	NMS cat. (EOA)	Scott (1951)
E1527	398/215	
E1528	398/216	
E1529	398/217	
E1530	398/218	
E1531	398/219	
E1532	398/220	
E1533	398/221	
E1534	398/222	
E1535	398/223	
E1536	398/224	
E1537	398/225	
E1538	398/226	
E1539	398/227	
E1540	398/228	
E1541	398/229	
E1542	398/230	
E1543	398/231	
E1544	398/232	
E1545	398/233	
E1546	398/234	
E1547	398/235	
E1548	398/236	
E1549	398/237	
E1550	398/238	
E1551	398/239	
E1552	398/240	
E1553	398/241	
E1554	398/242	
E1555	398/243	
E1556	398/244	
E1557	398/245	
E1558	398/246	
E1559	398/247	
E1560	398/248	
E1561	398/249	
E1562	398/250	
E1563	398/251	
E1564	398/252	
E1565	398/253	
E1566	398/254	
E1567	398/255	
E1568	398/256	
E1569	398/257	
E1570	398/258	
E1571	398/259	
E1572	398/260	
E1573	398/261	
E1574	398/262	
E1575	398/263	
E1576	398/264	
E1577	398/265	
E1578	398/266	

vessel code	NMS cat. (EOA)	Scott (1951)
E1578	398/266/1	
E1578	398/266/2	
E1579	398/267	
E1580	398/268	
E1581	398/269	
E1582	398/270	
E1583	398/271	
E1584	398/272	
E1585	398/273	
E1586	398/274	
E1587	398/275	
E1588	398/276	
E1589	398/277	
E1590	398/278	
E1591	398/279	
E1592	398/280	
E1593	398/281	
E1594	398/282	
E1595	398/283	
E1596	398/284	
E1597	398/285	
E1598	398/286	
E1599	398/287	
E1600	398/288	
E1601	398/289	
E1602	398/290	
E1603	398/291	
E1604	398/292	
E1605	398/293	
E1606	398/294	
E1607	398/295	
E1608	398/296	
E1609	398/297	
E1610	398/298	
E1611	398/299	
E1612	398/300	
E1613	398/301	
E1614	398/302	
E1615	398/303	
E1616	398/304	
E1617	398/305	
E1618	398/306	
E1619	398/307	
E1620	398/308	
E1621	398/309	
E1622	398/310	
E1623	398/311	
E1624	398/312	
E1625	398/313	
E1626	398/314	
E1627	398/315	
E1628	398/316	

vessel code	NMS cat. (EOA)	Scott (1951)
E1629	398/317	
E1630	398/318	
E1631	398/319	
E1632	398/320	
E1633	398/321	
E1634	398/322	
E1635	398/323	
E1636	398/324	
E1637	398/325	
E1638	398/326	
E1639	398/327	
E1640	398/328	
E1641	398/329	
E1642	398/330	
E1643	398/331	
E1644	398/332	
E1645	398/333	
E1646	398/334	
E1647	398/335	
E1648	398/336	
E1649	398/337	
E1650	398/338	
E1651	398/339	
E1652	398/340	
E1653	398/341	
E1654	398/342	
E1655	398/343	
E1656	398/344	
E1657	398/345	
E1658	398/346	
E1659	398/347	
E1660	398/348	
E1661	398/349	
E1662	398/350	
E1663	398/351	
E1664	398/352	
E1665	398/353	
E1666	398/354	
E1667	398/355	
E1668	398/356	
E1669	398/357	
E1670	398/358	
E1671	398/359	
E1672	398/360	
E1673	398/361	
E1674	398/362	
E1675	398/363	
E1676	398/364	
E1677	398/365	
E1678	398/366	
E1679	398/367	
E1680	398/368	

vessel code	NMS cat. (EOA)	Scott (1951)
E1681	398/369	
E1682	398/370	
E1683	398/371	
E1684	398/372	
E1685	398/373	
E1686	398/374	
E1687	398/375	
E1688	398/376	
E1689	398/377	
E1690	398/378	
E1691	398/379	
E1692	398/380	
E1693	398/381	
E1694	398/382	
E1695	398/383	
E1696	398/384	
E1697	398/385	
E1698	398/386	
E1699	398/387	
E1700	398/388	
E1701	398/389	
E1702	398/390	
E1703	398/391	
E1704	398/392	
E1705	398/393	
E1706	398/394	
E1707	398/395	
E1708	398/396	
E1709	398/397	
E1710	398/398	
E1711	398/399	
E1712	398/400	
E1713	398/401	
E1714	398/402	
E1715	398/403	
E1716	398/404	
E1717	398/405	
E1718	398/406	
E1719	398/407	
E1720	398/408	
E1721	398/409	
E1722	398/410	
E1723	398/411	
E1724	398/412	
E1725	398/413	
E1726	398/414	
E1727	398/415	
E1728	398/416	
E1729	398/417	
E1730	398/418	
E1731	398/419	
E1732	398/420	

vessel code	NMS cat. (EOA)	Scott (1951)
E1733	398/421	
E1734	398/422	
E1735	398/423	
E1736	398/424	
E1737	398/425	
E1738	398/426	
E1739	398/427	
E1740	398/428	
E1741	398/429	
E1742	398/430	
E1743	398/431	
E1744	398/432	
E1745	398/433	
E1746	398/434	
E1747	398/435	
E1748	398/436	
E1749	398/437	
E1750	398/438	
E1751	398/439	
E1752	398/440	
E1753	398/441	
E1754	398/442	
E1755	398/443	
E1756	398/444	
E1757	398/445	
E1758	398/446	
E1759	398/447	
E1760	398/448	
E1761	398/449	
E1762	398/450	
E1763	398/451	
E1764	398/452	
E1765	398/453	
E1766	398/454	
E1767	398/455	
E1768	398/456	
E1769	398/457	
E1770	398/458	
E1771	398/459	
E1772	398/460	
E1773	398/461	
E1774	398/462	
E1775	398/463	
E1776	398/464	
E1777	398/465	
E1778	398/466	
E1779	398/467	
E1780	398/468	
E1781	398/469	
E1782	398/470	
E1783	398/471	
E1784	398/472	

vessel code	NMS cat. (EOA)	Scott (1951)
E1785	398/473	
E1786	398/474	
E1787	398/475	
E1788	398/476	
E1789	398/477	
E1790	398/478	
E1791	398/479	
E1792	398/480	
E1793	398/481	
E1794	398/482	
E1795	398/483	
E1796	398/484	
E1797	398/485	
E1798	398/486	
E1799	398/487	
E1800	398/488	
E1801	398/489	
E1802	398/490	
E1803	398/491	
E1804	398/492	
E1805	398/493	
E1806	398/494	
E1807	398/495	
E1808	398/496	
E1809	398/497	
E1810	398/498	
E1811	398/499	
E1812	398/500	
E1813	398/501	
E1814	398/502	
E1815	398/503	
E1816	398/504	
E1817	398/505	
E1819	398/506	
E1820	398/507	
E1821	398/508	
E1822	398/509	
E1823	398/510	
E1824	398/511	
E1825	398/512	
E1826	398/513	
E1827	398/514	
E1828	398/515	
E1829	398/516	
E1830	398/517	
E1831	398/518	
E1832	398/519	
E1833	398/520	
E1834	398/521	
E1835	398/522	
E1836	398/523	
E1837	398/524	

vessel code	NMS cat. (EOA)	Scott (1951)
E1838	398/525	
E1839	398/526	
E1840	398/527	
E1841	398/528	
E1842	398/529	
E1843	398/530	
E1844	398/531	
E1845	398/532	
E1846	398/533	
E1847	398/534	
E1848	398/535	
E1849	398/536	
E1850	398/537	
E1851	398/538	
E1852	398/539	
E1853	398/540	
E1854	398/541	
E1855	398/542	
E1856	398/543	
E1857	398/544	
E1858	398/545	
E1859	398/546	
E1860	398/547	
E1861	398/548	
E1862	398/549	
E1863	398/550	
E1864	398/551	
E1865	398/552	
E1866	398/553	
E1867	398/554	
E1868	398/555	
E1869	398/556	
E1870	398/557	
E1871	398/558	
E1872	398/559	
E1873	398/560	
E1874	398/561	
E1875	398/562	
E1876	398/563	
E1877	398/564	
E1878	398/565	
E1879	398/566	
E1880	398/567	
E1881	398/568	
E1882	398/569	
E1883	398/570	
E1883	398/580	
E1884	398/571	
E1885	398/572	
E1886	398/573	
E1887	398/574	
E1888	398/575	

vessel code	NMS cat. (EOA)	Scott (1951)
E1889	398/576	
E1890	398/577	
E1891	398/578	
E1892	398/579	
E1893	398/590	
E1894	398/591	
E1895	398/592	
E1897	398/594	
E1898	398/595	
E1899	398/596	
E1900	398/597	
E1901	398/598	
E1902	398/599	
E1903	398/600	
E1904	398/601	
E1905	398/602	
E1906	398/603	
E1907	398/604	
E1908	398/605	
E1909	398/606	
E1910	398/607	
E1911	398/608	
E1912	398/609	
E1913	398/610	
E1914	398/611	
E1915	398/612	
E1916	398/613	
E1917	398/614	
E1918	398/615	
E1919	398/616	
E1920	398/617	
E1921	398/618	
E1922	398/619	
E1923	398/620	
E1924	398/621	
E1925	398/622	
E1926	398/623	
E1927	398/624	
E1928	398/625	
E1929	398/626	
E1930	398/627	
E1931	398/628	
E1932	398/629	
E1933	398/630	
E1934	398/631	
E1935	398/632	
E1936	398/633	
E1937	398/634	
E1938	398/635	
E1939	398/636	
E1940	398/637	
E1943	398/640	

vessel code	NMS cat. (EOA)	Scott (1951)
E1944	1408/1	
E1945	1408/2	
E1946	1408/3	
E1947	1408/4	
E1948	1408/5	
E1949	1408/6	
E1950	1408/7	
E1951	1408/8	
E1952	1408/9	
E1953	1408/10	
E1954	1408/11	
E1955	1408/12	
E1956	1408/13	
E1957	1408/14	
E1958	1408/15	
E1959	1408/16	
E1960	1408/17	
E1961	1408/18	
E1962	1408/19	
E1962	1408/20	
E1963	1408/21	
E1965	1408/22	
E1966	1408/23	
E1967	1408/24	
E1968	1408/25	
E1969	1408/26	
E1970	1408/27	
E1971	1408/28	
E1972	1408/29	
E1973	1408/30	
E1974	1408/31	
E1975	1408/32	
E1976	1408/33	
E1977	1408/34	
E1978	1408/35	
E1979	1408/36	
E1980	1408/37	
E1981	1408/38	
E1982	1408/39	
E1983	1408/40	
E1984	1408/41	
E1985	1408/42	
E1986	1408/43	
E1986	398/593	
E1987	1408/44	
E1988	1408/45	
E1989	1408/46	
E1990	1408/47	
E1991	1408/48	
E1992	1408/49	
E1993	1408/50	
E1994	1408/51	
E1995	1408/52	
E1996	1408/53	
E1997	1408/54	
E1998	1408/55	
E1999	1408/56	
E2000	1408/57	
E2001	1408/58	
E2002	1408/59	
E2003	1408/60	
E2004	1408/61	
E2005	1408/62	
E2006	1408/63	
E2007	1408/64	
E2008	1408/65	
E2009	1408/66	
E2010	1408/67	
E2011	1408/68	
E2012	1408/69	
E2013	1408/70	
E2014	1408/71	
E2015	1408/72	
E2016	1408/73	
E2017	1408/74	
E2018	1408/75	
E2019	1408/76	
E2020	1408/77	
E2021	1408/78	
E2022	1408/79	
E2023	1408/80	
E2024	1408/81	
E2025	1408/82	
E2026	1408/83	
E2027	1408/84	
E2028	1408/85	
E2029	1408/86	
E2032	1408/89	
E2033	1408/90	
E2034	1408/91	
E2035	1408/92	
E2036	1408/93	
E2037	1408/94	
E2038	1408/95	
E2039	1408/96	
E2040	1408/97	
E2041	1408/98	
E2042	1408/99	
E2043	1408/100	
E2044	1408/101	
E2045	1408/102	
E2046	1408/103	
E2047	1408/104	
E2048	1408/105	

vessel code	NMS cat. (EOA)	Scott (1951)	vessel code	NMS cat. (EOA)	Scott (1951)
E2049	1408/106		**E2101**	1408/158	
E2050	1408/107		**E2102**	1408/159	
E2051	1408/108		**E2103**	1408/160	
E2052	1408/109		**E2104**	1408/161	
E2053	1408/110		**E2105**	1408/162	
E2054	1408/111		**E2106**	1408/163	
E2055	1408/112		**E2107**	1408/164	
E2056	1408/113		**E2108**	1408/165	
E2057	1408/114		**E2109**	1408/166	
E2058	1408/115		**E2110**	1408/167	
E2059	1408/116		**E2111**	1408/168	
E2060	1408/117		**E2112**	1408/169	
E2061	1408/118		**E2113**	1408/170	
E2062	1408/119		**E2114**	1408/171	
E2063	1408/120		**E2115**	1408/172	
E2064	1408/121		**E2116**	1408/173	
E2065	1408/122		**E2117**	1408/174	
E2066	1408/123		**E2118**	1408/175	
E2067	1408/124		**E2119**	1408/176	
E2068	1408/125		**E2120**	1408/177	
E2069	1408/126		**E2121**	1408/178	
E2070	1408/127		**E2122**	1408/179	
E2071	1408/128		**E2123**	1408/180	
E2072	1408/129		**E2124**	1408/181	
E2073	1408/130		**E2125**	1408/182	
E2074	1408/131		**E2126**	1408/183	
E2075	1408/132		**E2127**	1408/184	
E2076	1408/133		**E2128**	1408/185	
E2077	1408/134		**E2129**	1408/186	
E2078	1408/135		**E2130**	1408/187	
E2079	1408/136		**E2131**	1408/188	
E2080	1408/137		**E2132**	1408/189	
E2081	1408/138		**E2133**	1408/190	
E2082	1408/139		**E2134**	1408/191	
E2083	1408/140		**E2135**	1408/192	
E2084	1408/141		**E2136**	1408/193	
E2085	1408/142		**E2137**	1408/194	
E2086	1408/143		**E2138**	1408/195	
E2087	1408/144		**E2139**	1408/196	
E2088	1408/145		**E2140**	1408/197	
E2089	1408/146		**E2141**	1408/198	
E2090	1408/147		**E2142**	1408/199	
E2091	1408/148		**E2143**	1408/200	
E2092	1408/149		**E2144**	1408/201	
E2093	1408/150		**E2145**	1408/202	
E2094	1408/151		**E2146**	1408/203	
E2094	1408/157		**E2147**	1408/204	
E2095	1408/152		**E2148**	1408/205	
E2096	1408/153		**E2149**	1408/206	
E2097	1408/154		**E2150**	1408/207	
E2098	1408/155		**E2151**	1408/208	
E2099	1408/156		**E2152**	1408/209	

vessel code	NMS cat. (EOA)	Scott (1951)
E2153	1408/210	
E2154	1408/211	
E2155	1408/212	
E2156	1408/213	
E2157	1408/214	
E2158	1408/215	
E2159	1408/216	
E2160	1408/217	
E2161	1408/218	
E2162	1408/219	
E2163	1408/220	
E2164	1408/221	
E2165	1408/222	
E2166	1408/223	
E2167	1408/224	
E2168	1408/225	
E2169	1408/226	
E2170	1408/227	
E2171	1408/228	
E2172	1408/229	
E2173	1408/230	
E2174	1408/231	
E2175	1408/232	
E2176	1408/233	
E2177	1408/234	
E2178	1408/235	
E2179	1408/236	
E2180	1408/237	
E2181	1408/238	
E2182	1408/239	
E2183	1408/240	
E2184	1408/241	
E2185	1408/242	
E2186	1408/243	
E2187	1408/244	
E2188	1408/245	
E2189	1408/246	
E2190	1408/247	
E2191	1408/248	
E2192	1408/249	
E2193	1408/250	
E2194	1408/251	
E2195	1408/252	
E2196	1408/253	
E2197	1408/254	
E2198	1408/255	
E2199	1408/256	
E2200	1408/257	
E2201	1408/258	
E2202	1408/259	
E2203	1408/260	
E2204	1408/261	

vessel code	NMS cat. (EOA)	Scott (1951)
E2205	1408/262	
E2206	1408/263	
E2207	1408/264	
E2208	1408/265	
E2209	1408/266	
E2210	1408/267	
E2211	1408/268	
E2212	1408/269	
E2213	1408/270	
E2214	1408/271	
E2215	1408/272	
E2216	1408/273	
E2217	1408/274	
E2218	1408/275	
E2219	1408/276	
E2220	1408/277	
E2221	1408/278	
E2222	1408/279	
E2223	1408/280	
E2224	1408/281	
E2225	1408/282	
E2226	1408/283	
E2227	1408/284	
E2228	1408/285	
E2229	1408/286	
E2230	1408/287	
E2231	1408/288	
E2232	1408/289	
E2233	1408/290	
E2234	1408/291	
E2235	1408/292	
E2236	1408/293	
E2237	1408/294	
E2238	1408/295	
E2239	1408/296	
E2240	1408/297	
E2241	1408/298	
E2242	1408/299	
E2243	1408/300	
E2244	1408/301	
E2245	1408/302	
E2246	1408/303	
E2247	1408/304	
E2248	1408/305	
E2249	1408/306	
E2250	1408/307	
E2251	1408/308	
E2252	1408/309	
E2253	1408/310	
E2254	1408/311	
E2255	1408/312	
E2256	1408/313	

vessel code	NMS cat. (EOA)	Scott (1951)
E2257	1408/314	
E2258	1408/315	
E2259	1408/316	
E2260	1408/317	
E2261	1408/318	
E2262	1408/319	
E2263	1408/320	
E2264	1408/321	
E2265	1408/322	
E2266	1408/323	
E2267	1408/324	
E2268	1408/325	
E2269	1408/326	
E2269	1408/326/1	
E2269	1408/326/2	
E2270	1408/327	
E2271	1408/328	
E2272	1408/329	
E2273	1408/330	
E2274	1408/331	
E2275	1408/332	
E2276	1408/333	
E2277	1408/334	
E2278	1408/335	
E2279	1408/336	
E2280	1408/337	
E2281	1408/338	
E2282	1408/339	
E2283	1408/340	
E2284	1408/341	
E2285	1408/342	
E2286	1408/343	
E2287	1408/344	
E2288	1408/345	
E2289	1408/346	
E229?	333/60	
E2290	1408/347	
E2291	1408/348	
E2292	1408/349	
E2293	1408/350	
E2294	1408/351	
E2295	1408/352	
E2296	1408/353	
E2297	1408/354	
E2298	1408/355	
E2299	1408/356	
E2300	1408/357	
E2301	1408/358	
E2302	1408/359	
E2303	1408/360	
E2304	1408/361	
E2305	1408/362	

vessel code	NMS cat. (EOA)	Scott (1951)
E2306	1408/363	
E2307	1408/364	
E2308	1408/365	
E2309	1408/366	
E2310	1408/367	
E2311	1408/368	
E2312	1408/369	
E2313	1408/370	
E2314	1408/371	
E2315	1408/372	
E2316	1408/373	
E2317	1408/375	
E2319	1408/376	
E2320	1408/377	
E2321	1408/378	
E2322	1408/379	
E2323	1408/380	
E2324	1408/381	
E2325	1408/382	
E2326	1408/383	
E2327	1408/384	
E2328	1408/385	
E2329	1408/386	
E2340	1408/387	
E2341	1408/388	
E2342	1408/389	
E2343	1408/390	
E2344	1408/391	
E2345	1408/392	
E2346	1408/393	
E2347	1408/394	
E2348	1408/395	
E2349	1408/396	
E2350	1408/397	
E2351	1408/398	
E2352	1408/399	
E2353	1408/400	
E2354	1408/401	
E2355	1408/402	
E2356	1408/403	
E2357	1408/404	
E2357	1408/405	
E2359	1408/406	
E2360	1408/407	
E2361	1408/408	
E2362	1408/409	
E2363	1408/410	
E2364	1408/411	
E2365	1408/412	
E2366	1408/413	
E2367	1408/414	
E2368	1408/415	

vessel code	NMS cat. (EOA)	Scott (1951)
E2369	1408/416	
E2370	1408/417	
E2371	1408/418	
E2372	1408/419	
E2373	1408/420	
E2374	1408/421	
E2375	1408/422	
E2376	1408/423	
E2377	1408/424	
E2378	1408/425	
E2379	1408/426	
E2380	1408/427	
E2381	1408/428	
E2382	1408/429	
E2383	1408/430	
E2384	1408/431	
E2385	1408/432	
E2386	1408/433	
E2387	1408/434	
E2388	1408/435	
E2389	1408/436	
E2390	1408/437	
E2391	1408/438	
E2392	1408/439	
E2393	1408/440	
E2394	1408/441	
E2395	1408/442	
E2396	1408/443	
E2397	1408/444	
E2398	1408/445	
E2399	1408/446	
E2400	1408/447	
E2401	1408/448	
E2402	1408/449	
E2403	1408/450	
E2404	1408/451	
E2405	1408/452	
E2406	1408/453	
E2407	1408/454	
E2408	1408/455	
E2409	1408/456	
E2410	1408/457	
E2411	1408/458	
E2412	1408/459	
E2413	1408/460	
E2414	1408/461	
E2415	1408/462	
E2416	1408/463	
E2417	1408/464	
E2418	1408/465	
E2419	1408/466	
E2420	1408/467	

vessel code	NMS cat. (EOA)	Scott (1951)
E2421	1408/468	
E2422	1408/469	
E2423	1408/470	
E2424	1408/471	
E2425	1408/472	
E2426	1408/473	
E2427	1408/474	
E2428	1408/475	
E2429	1408/476	
E2430	1408/477	
E2431	1408/478	
E2432	1408/479	
E2433	1408/480	
E2434	1408/481	
E2435	1408/482	
E2436	1408/483	
E2437	1408/484	
E2438	1408/485	
E2439	1408/486	
E2440	1408/487	
E2441	1408/488	
E2442	1408/489	
E2443	1408/490	
E2444	1408/491	
E2445	1408/492	
E2446	1408/493	
E2447	1408/494	
E2448	1408/495	
E2449	1408/496	
E2450	1408/497	
E2451	1408/498	
E2452	1408/499	
E2453	1408/500	
E2454	1408/501	
E2455	1408/502	
E2456	1408/503	
E2457	1408/504	
E2458	1408/505	
E2459	1408/506	
E2460	1408/507	
E2461	1408/508	
E2462	1408/509	
E2463	1408/510	
E2464	1408/511	
E2465	1408/512	
E2466	1408/513	
E2467	1408/514	
E2468	1408/515	
E2469	1408/516	
E2470	1408/517	
E2471	1408/518	
E2472	1408/519	

vessel code	NMS cat. (EOA)	Scott (1951)
E2473	1408/520	
E2474	1408/521	
E2475	1408/522	
E2476	1408/523	
E2477	1408/524	
E2478	1408/525	
E2479	1408/526	
E2480	1408/527	
E2481	1408/528	
E2482	1408/529	
E2483	1408/530	
E2484	1408/531	
E2485	1408/532	
E2486	1408/533	
E2487	1408/534	
E2488	1408/535	
E2489	1408/536	
E2490	1408/537	
E2491	1408/538	
E2492	1408/539	
E2493	1408/540	
E2494	1408/541	
E2495	1408/542	
E2496	1408/543	
E2497	1408/544	
E2498	1408/545	
E2499	1408/546	
E2500	1408/547	
E2501	1408/548	
E2502	1408/549	
E2503	1408/550	
E2504	1408/551	
E2505	1408/552	
E2506	1408/553	
E2507	1408/554	
E2508	1408/555	
E2509	1408/556	
E2510	1408/557	
E2511	1408/558	
E2512	1408/559	
E2513	1408/560	
E2514	1408/561	
E2515	1408/562	
E2516	1408/563	
E2517	1408/564	
E2518	1408/565	
E2519	1408/566	
E2520	1408/567	
E2521	1408/568	
E2522	1408/569	
E2523	1408/570	
E2524	1408/571	

vessel code	NMS cat. (EOA)	Scott (1951)
E2525	1408/572	
E2526	1408/573	
E2527	1408/574	
E2528	1408/575	
E2529	1408/576	
E2530	1408/577	
E2531	1408/578	
E2532	1408/579	
E2533	1408/580	
E2534	1408/581	
E2535	1408/582	
E2536	1408/583	
E2537	1408/584	
E2538	1408/585	
E2539	1408/586	
E2540	1408/587	
E2541	1408/588	
E2542	1408/589	
E2543	1408/590	
E2544	1408/591	
E2545	1408/592	
E2546	1408/593	
E2547	1408/594	
E2548	1408/595	
E2549	1408/596	
E2550	1408/597	
E2551	1408/598	
E2552	1408/599	
E2553	1408/600	
E2554	1408/601	
E2555	1408/602	
E2556	1408/603	
E2557	1408/604	
E2558	1408/605	
E2559	1408/606	
E2560	1408/607	
E2561	1408/608	
E2562	1408/609	
E2563	1408/610	
E2564	1408/611	
E2565	1408/612	
E2566	1408/613	
E2567	1408/614	
E2568	1408/615	
E2569	1408/616	
E2570	1408/617	
E2571	1408/618	
E2572	1408/619	
E2573	1408/620	
E2574	1408/621	
E2575	1408/622	
E2576	1408/623	

vessel code	NMS cat. (EOA)	Scott (1951)
E2577	1408/624	
E2578	1408/625	
E2579	1408/626	
E2580	1408/627	
E2581	1408/628	
E2582	1408/629	
E2583	1408/630	
E2584	1408/631	
E2585	1408/632	
E2586	1408/633	
E2587	1408/634	
E2588	1408/635	
E2589	1408/636	
E2590	1408/637	
E2591	1408/638	
E2592	1408/639	
E2593	1408/640	
E2594	1408/641	
E2595	1408/642	
E2596	1408/643	
E2597	1408/644	
E2598	1408/645	
E2599	1408/646	
E2600	1408/647	
E2601	1408/648	
E2602	1408/649	
E2603	1408/650	
E2604	1408/651	
E2605	1408/652	
E2606	1408/653	
E2607	1408/654	
E2608	1408/655	
E2609	1408/656	
E2610	1408/657	
E2611	1408/658	
E2612	1408/659	
E2613	1408/660	
E2614	1408/661	
E2615	1408/662	
E2616	1408/663	
E2617	1408/664	
E2618	1408/665	
E2619	1408/666	
E2620	1408/667	
E2621	1408/668	
E2622	1408/669	
E2623	1408/670	
E2624	1408/671	
E2625	1408/672	
E2626	1408/673	
E2627	1408/674	
E2628	1408/675	

vessel code	NMS cat. (EOA)	Scott (1951)
E2629	1408/676	
E2630	1408/677	
E2631	1408/678	
E2632	1408/679	
E2633	1408/680	
E2635	1408/682	
E2636	1408/683	
E2637	1408/684	
E2638	1408/685	
E2639	1408/686	
E2640	1408/687	
E2641	1408/688	
E2642	1408/689	
E2643	1408/690	
E2644	1408/691	
E2645	1408/692	
E2646	1408/693	
E2647	1408/694	
E2648	1408/695	
E2649	1408/696	
E2650	1408/697	
E2651	1408/698	
E2652	1408/699	
E2653	1408/700	
E2654	1408/701	
E2655	1408/702	
E2656	1408/703	
E2657	1408/704	
E2658	1408/705	
E2659	1408/706	
E2660	1408/707	
E2661	1408/708	
E2662	1408/709	
E2663	1408/710	
E2664	1408/711	
E2665	1408/712	
E2666	1408/713	
E2667	1408/714	
E2668	1408/715	
E2669	1408/716	
E2670	1408/717	
E2671	1408/718	
E2672	1408/719	
E2673	1408/720	
E2674	1408/721	
E2675	1408/722	
E2676	1408/723	
E2677	1408/724	
E2678	1408/725	
E2679	1408/726	
E2680	1408/727	
E2681	1408/728	

vessel code	NMS cat. (EOA)	Scott (1951)
E2682	1408/729	
E2683	1408/730	
E2684	1408/731	
E2685	1408/732	
E2686	1408/733	
E2687	1408/734	
E2688	1408/735	
E2689	1408/736	
E2690	1408/737	
E2691	1408/738	
E2692	1408/739	
E2693	1408/740	
E2694	1408/741	
E2695	1408/742	
E2696	1408/743	
E2697	1408/744	
E2698	1408/745	
E2699	1408/746	
E2700	1408/747	
E2701	1408/748	
E2702	1408/749	
E2703	1408/750	
E2704	1408/751	
E2705	1408/752	
E2706	1408/753	
E2707	1408/754	
E2708	1408/755	
E2709	1408/756	
E2710	1408/757	
E2711	1408/758	
E2712	1408/759	
E2713	1408/760	
E2714	1408/761	
E2715	1408/762	
E2716	1408/763	
E2717	1408/764	
E2718	1408/765	
E2719	1408/766	
E2720	1408/767	
E2721	1408/768	
E2722	1408/769	
E2723	1408/770	
E2724	1408/771	
E2725	1408/772	
E2726	1408/773	
E2727	1408/774	
E2728	1408/775	
E2729	1408/776	
E2730	1408/777	
E2731	1408/778	
E2732	1408/779	
E2733	1408/780	
E2734	1408/781	
E2735	1408/782	
E2736	1408/783	
E2737	1408/784	
E2738	1408/785	
E2739	1408/786	
E2740	1408/787	
E2741	1408/788	
E2742	1408/789	
E2743	1408/790	
E2744	1408/791	
E2745	1408/792	
E2746	1408/793	
E2747	1408/794	
E2748	1408/795	
E2749	1408/796	
E2750	1408/797	
E2751	1408/798	
E2752	1408/799	
E2753	1408/800	
E2754	1408/801	
E2755	1408/802	
E2756	1408/803	
E2757	1408/804	
E2758	1408/805	
E2759	1408/806	
E2760	1408/807	
E2761	1408/808	
E2762	1408/809	
E2763	1408/810	
E2764	1408/811	
E2765	1408/812	
E2766	1408/813	
E2767	1408/814	
E2768	1408/815	
E2769	1408/816	
E2770	1408/817	
E2771	1408/818	
E2772	1408/819	
E2773	1408/820	
E2774	1408/821	
E2775	1408/822	
E2776	1408/823	
E2777	1408/824	
E2778	1408/825	
E2779	1408/826	
E2780	1408/827	
E2781	1408/828	
E2782	1408/829	
E2783	1408/830	
E2784	1408/831	
E2785	1408/832	

vessel code	NMS cat. (EOA)	Scott (1951)
E2786	1408/833	
E2787	1408/834	
E2788	1408/835	
E2789	1408/836	
E2790	1408/837	
E2791	1408/838	
E2792	1408/839	
E2793	1408/840	
E2794	1408/841	
E2795	1408/842	
E2796	1408/843	
E2797	1408/844	
E2798	1408/845	
E2799	1408/846	
E2800	1408/847	
E2801	1408/848	
E2802	1408/849	
E2803	1408/850	
E2804	1408/851	
E2805	1408/852	
E2806	1408/853	
E2807	1408/854	
E2808	1408/855	
E2809	1408/856	
E2810	1408/857	
E2811	1408/858	
E2812	1408/859	
E2813	1408/860	
E2814	1408/861	
E2815	1408/862	
E2816	1408/863	
E2817	1408/864	
E2818	1408/865	
E2819	1408/866	
E2820	1408/867	
E2821	1408/868	
E2822	1408/869	
E2823	1408/870	
E2824	1408/871	
E2825	1408/872	
E2826	1408/873	
E2827	1408/874	
E2828	1408/875	
E2829	1408/876	
E2830	1408/877	
E2831	1408/878	
E2832	1408/879	
E2833	1408/880	
E2834	1408/881	
E2835	1408/882	
E2836	1408/883	
E2837	1408/884	

vessel code	NMS cat. (EOA)	Scott (1951)
E2838	1408/885	
E2839	1408/886	
E2840	1408/887	
E2841	1408/888	
E2842	1408/889	
E2843	1408/890	
E2844	1408/891	
E2845	1408/892	
E2846	1408/893	
E2847	1408/894	
E2848	1408/895	
E2849	1408/896	
E2850	1408/897	
E2851	1408/898	
E2852	1408/899	
E2853	1408/900	
E2854	1408/901	
E2855	1408/902	
E2856	1408/903	
E2857	1408/904	
E2858	1408/905	
E2859	1408/906	
E2860	1408/907	
E2861	1408/908	
E2862	1408/909	
E2863	1408/910	
E2864	1408/911	
E2865	1408/912	
E2866	1408/913	
E2867	1408/914	
E2868	1408/915	
E2869	1408/916	
E2870	1408/917	
E2871	1408/918	
E2872	1408/919	
E2873	1408/920	
E2874	1408/921	
E2875	1408/922	
E2876	1408/923	
E2877	1408/924	
E2878	1408/925	
E2879	1408/926	
E2880	1408/927	
E2881	1408/928	
E2882	1408/929	
E2883	1408/930	
E2884	1408/931	
E2885	1408/932	
E2886	1408/933	
E2887	1408/934	
E2888	1408/935	
E2889	1408/936	

vessel code	NMS cat. (EOA)	Scott (1951)
E2890	1408/937	
E2891	1408/938	
E2892	1408/939	
E2893	1408/940	
E2894	1408/941	
E2895	1408/942	
E2896	1408/943	
E2897	1408/944	
E2898	1408/945	
E2899	1408/946	
E2900	1408/947	
E2901	1408/948	
E2902	1408/949	
E2903	1408/950	
E2904	1408/951	
E2905	1408/952	
E2906	1408/953	
E2907	1408/954	
E2908	1408/955	
E2909	1408/956	
E2910	1408/957	
E2911	1408/958	
E2912	1408/959	
E2913	1408/960	
E2914	1408/961	
E2915	1408/962	
E2916	1408/963	
E2917	1408/964	
E2918	1408/965	
E2919	1408/966	
E2920	1408/967	
E2921	1408/968	
E2922	1408/969	
E2923	1408/970	
E2924	1408/971	
E2925	1408/972	
E2926	1408/973	
E2927	1408/974	
E2928	1408/975	
E2929	1408/976	
E2930	1408/977	
E2931	1408/978	
E2932	1408/979	
E2933	1408/980	
E2934	1408/981	
E2935	1408/982	
E2936	1408/983	
E2937	1408/984	
E2938	1408/985	
E2939	1408/986	
E2940	1408/987	
E2941	1408/988	

vessel code	NMS cat. (EOA)	Scott (1951)
E2942	1408/989	
E2943	1408/990	
E2944	1408/991	
E2945	1408/992	
E2946	1408/993	
E2947	1408/994	
E2948	1408/995	
E2949	1408/996	
E2950	1408/997	
E2951	1408/998	
E2952	1408/999	
E2953	1408/1000	
E2954	1408/1001	
E2955	1408/1002	
E2956	1408/1003	
E2957	1408/1004	
E2958	1408/1005	
E2959	1408/1006	
E2960	1408/1007	
E2961	1408/1008	
E2962	1408/1009	
E2963	1408/1010	
E2964	1408/1011	
E2965	1408/1012	
E2966	1408/1013	
E2967	1408/1014	
E2968	1408/1015	
E2969	1408/1016	
E2970	1408/1017	
E2971	1408/1018	
E2972	1408/1019	
E2973	1408/1020	
E2974	1408/1021	
E2975	1408/1022	
E2976	1408/1023	
E2977	1408/1024	
E2978	1408/1025	
E2979	1408/1026	
E2980	1408/1027	
E2981	1408/1028	
E2982	1408/1029	
E2983	1408/1030	
E2984	1408/1031	
E2985	1408/1032	
E2986	1408/1033	
E2987	1408/1034	
E2988	1408/1035	
E2989	1408/1036	
E2990	1408/1037	
E2991	1408/1038	
E2992	1408/1039	
E2993	1408/1040	

vessel code	NMS cat. (EOA)	Scott (1951)
E2994	1408/1041	
E2995	1408/1042	
E2996	1408/1043	
E2997	1408/1044	
E2998	1408/1045	
E2999	1408/1046	
E3000	1408/1047	
E3001	1408/1048	
E3002	1408/1049	
E3003	1408/1050	
E3004	1408/1051	
E3005	1408/1052	
E3006	1408/1053	
E3007	1408/1054	
E3008	1408/1055	
E3009	1408/1056	
E3010	1408/1057	
E3011	1408/1058	
E3012	1408/1059	
E3013	1408/1060	
E3014	1408/1061	
E3015	1408/1062	
E3016	1408/1063	
E3017	1408/1064	
E3018	1408/1065	
E3019	1408/1066	
E3020	1408/1067	
E3021	1408/1068	
E3022	1408/1069	
E3023	1408/1070	
E3024	1408/1071	
E3025	1408/1072	
E3026	1408/1073	
E3027	1408/1074	
E3028	1408/1075	
E3029	1408/1076	
E3030	1408/1077	
E3031	1408/1078	
E3032	1408/1079	
E3033	1408/1080	
E3034	1408/1081	
E3035	1408/1082	
E3036	1408/1083	
E3037	1408/1084	
E3038	1408/1085	
E3039	1408/1086	
E3040	1408/1087	
E3041	1408/1088	
E3042	1408/1089	
E3043	1408/1090	
E3044	1408/1091	
E3045	1408/1092	

vessel code	NMS cat. (EOA)	Scott (1951)
E3046	1408/1093	
E3047	1408/1094	
E3048	1408/1095	
E3049	1408/1096	
E3050	1408/1097	
E3051	1408/1098	
E3052	1408/1099	
E3053	1408/1100	
E3054	1408/1101	
E3055	1408/1102	
E3056	1408/1103	
E3057	1408/1104	
E3058	1408/1105	
E3059	1408/1106	
E3059	1408/1109	
E3060	1408/1107	
E3061	1408/1108	
E3062	1408/1110	
E3063	1408/1111	
E3064	1408/1112	
E3065	1408/1113	
E3066	1408/1114	
E3067	1408/1115	
E3068	1408/1116	
E3069	1408/1117	
E3070	1408/1118	
E3071	1408/1119	
E3072	1408/1120	
E3073	1408/1121	
E3074	1408/1122	
E3075	1408/1123	
E3076	1408/1124	
E3077	1408/1125	
E3078	1408/1126	
E3079	1408/1127	
E3080	1408/1128	
E3081	1408/1129	
E3082	1408/1130	
E3083	1408/1131	
E3084	1408/1132	
E3085	1408/1133	
E3086	1408/1134	
E3087	1408/1135	
E3088	1408/1136	
E3089	1408/1137	
E3090	1408/1138	
E3091	1408/1139	
E3092	1408/1140	
E3093	1408/1141	
E3094	1408/1142	
E3095	1408/1143	
E3096	1408/1144	

vessel code	NMS cat. (EOA)	Scott (1951)
E3097	1408/1145	
E3098	1408/1146	
E3099	1408/1147	
E3100	1408/1148	
E3101	1408/1149	
E3102	1408/1150	
E3103	1408/1151	
E3104	1408/1152	
E3105	1408/1153	
E3106	1408/1154	
E3107	1408/1155	
E3108	1408/1156	
E3109	1408/1157	
E3110	1408/1158	
E3111	1408/1159	
E3112	1408/1160	
E3113	1408/1161	
E3114	1408/1162	
E3115	1408/1163	
E3116	1408/1164	
E3117	1408/1165	
E3118	1408/1166	
E3119	1408/1167	
E3120	1408/1178	
E3121	1408/1169	
E3122	1408/1170	
E3123	1408/1171	
E3124	1408/1172	
E3125	1408/1173	
E3126	1408/1174	
E3127	1408/1175	
E3128	1408/1176	
E3129	1408/1177	
E3130	1408/1188	
E3131	1408/1189	
E3132	1408/1190	
E3132	1408/1190/1	
E3132	1408/1190/2	
E3133	1408/1191	
E3134	1408/1192	
E3135	1408/1193	
E3136	1408/1194	
E3137	1408/1195	
E3138	1408/1196	
E3139	1408/1197	
E3140	1408/1198	
E3141	1408/1199	
E3142	1408/1200	
E3143	1408/1201	
E3144	1408/1202	

vessel code	NMS cat. (EOA)	Scott (1951)
E3145	1408/1203	
E3146	1408/1204	
E3147	1408/1205	
E3148	1408/1206	
E3149	1408/1207	
E3150	1408/1208	
E3151	1408/1209	
E3152	1408/1210	
E3153	1408/1211	
E3154	1408/1212	
E3155	1408/1213	
E3156	1408/1214	
E3157	1408/1215	
E3158	1408/1216	
E3159	1408/1217	
E3160	1408/1218	
E3161	1408/1219	
E3162	1408/1220	
E3163	1408/1221	
E3164	1408/1222	
E3165	1408/1223	
E3166	1408/1224	
E3167	1408/1225	
E3168	1408/1226	
E3169	1408/1227	
E3170	1408/1228	
E3171	1408/1229	
E3172	1408/1230	
E3173	1408/1231	
E3174	1408/1232	
E3175	1408/1233	
E3176	1408/1234	
E3177	1408/1235	
E3178	1408/1236	
E3179	1408/1237	
E3180	1408/1238	
E3181	1408/1239	
E3182	1408/1240	
E3183	1408/1241	
E3184	1408/1242	
E3185	1408/1243	
E3186	1408/1244	
E3187	1408/1245	
E3188	1408/1246	
E3189	1408/1247	
E3190	1408/1248	
E3191	1408/1249	
E3192	1408/1250	
E3193	1408/1251	
E3194	1408/1252	
E3195	1408/1253	
E3196	1408/1254	

vessel code	NMS cat. (EOA)	Scott (1951)
E3197	1408/1255	
E3198	1408/1256	
E3199	1408/1257	
E3200	1408/1258	
E3201	1408/1259	
E3202	1408/1260	
E3203	1408/1261	
E3204	1408/1262	
E3205	1408/1263	
E3206	1408/1264	
E3207	1408/1265	
E3208	1408/1266	
E3209	1408/1267	
E3210	1408/1268	
E3211	1408/1269	
E3212	1408/1270	
E3213	1408/1271	
E3214	1408/1272	
E3215	1408/1273	
E3216	1408/1274	
E3217	1408/1275	
E3218	1408/1276	
E3219	1408/1277	
E3220	1408/1278	
E3221	1408/1279	
E3222	1408/1280	
E3223	1408/1281	
E3224	1408/1282	
E3225	1408/1283	
E3226	1408/1284	
E3227	1408/1285	
E3228	1408/1286	
E3229	1408/1287	
E3230	1408/1288	
E3231	1408/1289	
E3232	1408/1290	
E3233	1408/1291	
E3234	1408/1292	
E3235	1408/1293	
E3236	1408/1294	
E3237	1408/1305	
E3238	1408/1296	
E3239	1408/1297	
E3240	1408/1298	
E3241	1408/1299	
E3242	1408/1300	
E3243	1408/1301	
E3244	1408/1302	
E3245	1408/1303	
E3246	1408/1314	
E3247	1408/1315	
E3248	1408/1316	

vessel code	NMS cat. (EOA)	Scott (1951)
E3249	1408/1317	
E3250	1408/1318	
E3251	1408/1319	
E3252	1408/1320	
E3253	1408/1321	
E3254	1408/1322	
E3255	1408/1323	
E3256	1408/1324	
E3257	1408/1325	
E3258	1408/1326	
E3259	1408/1327	
E3260	1408/1328	
E3261	1408/1329	
E3262	1408/1330	
E3263	1408/1331	
E3264	1408/1332	
E3265	1408/1333	
E3266	1408/1334	
E3267	1408/1335	
E3268	1408/1336	
E3269	1408/1337	
E3270	1408/1338	
E3271	1408/1339	
E3272	1408/1340	
E3273	1408/1341	
E3274	1408/1342	
E3275	1408/1343	
E3276	1408/1344	
E3277	1408/1345	
E3278	1408/1346	
E3279	1408/1347	
E3280	1408/1348	
E3281	1408/1349	
E3282	1408/1350	
E3283	1408/1351	
E3284	1408/1352	
E3285	1408/1353	
E3286	1408/1354	
E3287	1408/1355	
E3288	1408/1356	
E3289	1408/1357	
E3290	1408/1358	
E3291	1408/1359	
E3292	1408/1360	
E3293	1408/1361	
E3294	1408/1362	
E3295	1408/1363	
E3296	1408/1364	
E3297	1408/1365	
E3298	1408/1366	
E3299	1408/1367	
E3300	1408/1368	

vessel code	NMS cat. (EOA)	Scott (1951)
E3301	1408/1369	
E3302	1408/1370	
E3303	1408/1371	
E3304	1408/1372	
E3305	1408/1373	
E3306	1408/1374	
E3307	1408/1375	
E3308	1408/1376	
E3309	1408/1377	
E3310	1408/1378	
E3311	1408/1379	
E3312	1408/1380	
E3313	1408/1381	
E3314	1408/1382	
E3315	1408/1383	
E3316	1408/1384	
E3317	1408/1385	
E3318	1408/1386	
E3319	1408/1387	
E3320	1408/1388	
E3321	1408/1389	
E3322	1408/1390	
E3323	1408/1391	
E3324	1408/1392	
E3325	1408/1393	
E3326	1408/1394	
E3327	1408/1395	
E3328	1408/1396	
E3329	1408/1397	
E3330	1408/1398	
E3331	1408/1399	
E3332	1408/1400	
E3333	1408/1401	
E3334	1408/1402	
E3335	1408/1403	
E3336	1408/1404	
E3336	1408/1405	
E3337	1408/1406	
E3338	1408/1407	
E3339	1408/1408	
E3340	1408/1409	
E3341	1408/1410	
E3342	1408/1411	
E3343	1408/1412	
E3344	1408/1413	
E3345	1408/1414	
E3346	1408/1415	
E3347	1408/1416	
E3348	1408/1417	
E3349	1408/1418	
E3350	1408/1419	
E3351	1408/1420	

vessel code	NMS cat. (EOA)	Scott (1951)
E3352	1408/1421	
E3353	1408/1422	
E3354	1408/1433	
E3355	1408/1434	
E3356	1408/1435	
E3357	1408/1436	
E3358	1408/1437	
E3359	1408/1438	
E3360	1408/1439	
E3361	1408/1440	
E3362	1408/1441	
E3363	1408/1442	
E3364	1408/1443	
E3365	1408/1444	
E3366	1408/1445	
E3367	1408/1446	
E3368	1408/1447	
E3369	1408/1448	
E3370	1408/1449	
E3371	1408/1450	
E3372	1408/1451	
E3373	1408/1452	
E3374	1408/1453	
E3375	1408/1454	
E3376	1408/1455	
E3377	1408/1456	
E3378	1408/1457	
E3379	1408/1458	
E3380	1408/1459	
E3381	1408/1460	
E3382	1408/1461	
E3383	1408/1462	
E3384	1408/1463	
E3385	1408/1464	
E3386	1408/1465	
E3387	1408/1466	
E3388	1408/1467	
E3389	1408/1468	
E3390	1408/1469	
E3391	1408/1470	
E3392	1408/1471	
E3393	1408/1472	
E3394	1408/1473	
E3395	1408/1474	
E3396	1408/1475	
E3397	1408/1476	
E3398	1408/1477	
E3399	1408/1478	
E3400	1408/1479	
E3401	1408/1480	
E3402	1408/1481	
E3403	1408/1482	

vessel code	NMS cat. (EOA)	Scott (1951)
E3404	1408/1483	
E3405	1408/1484	
E3405	1408/1484/1	
E3405	1408/1484/2	
E3406	1408/1485	
E3407	1408/1486	
E3408	1408/1487	
E3409	1408/1488	
E3410	1408/1489	
E3411	1408/1490	
E3412	1408/1491	
E3413	1408/1492	
E3414	1408/1493	
E3415	1408/1494	
E3416	1408/1495	
E3417	1408/1496	
E3418	1408/1497	
E3419	1408/1498	
E3420	1408/1499	
E3421	1408/1500	
E3422	1408/1501	
E3423	1408/1502	
E3424	1408/1503	
E3425	1408/1504	
E3426	1408/1505	
E3427	1408/1506	
E3428	1408/1507	
E3429	1408/1508	
E3430	1408/1509	
E3431	1408/1510	
E3432	1408/1511	
E3433	1408/1512	
E3434	1408/1513	
E3435	1408/1514	
E3436	1408/1515	
E3437	1408/1516	
E3438	1408/1517	
E3439	1408/1518	
E3440	1408/1519	
E3441	1408/1520	
E3442	1408/1521	
E3443	1408/1522	
E3444	1408/1523	
E3445	1408/1524	
E3446	1408/1525	
E3447	1408/1526	
E3448	1408/1527	
E3448	1408/1528	
E3449	1408/1529	
E3450	1408/1530	

vessel code	NMS cat. (EOA)	Scott (1951)
E3451	1408/1531	
E3452	1408/1532	
E3453	1408/1533	
E3454	1408/1534	
E3455	1408/1535	
E3456	1408/1536	
E3457	1408/1537	
E3458	1408/1538	
E3459	1408/1539	
E3460	1408/1540	
E3461	1408/1541	
E3462	1408/1542	
E3463	1408/1543	
E3464	1408/1544	
E3465	1408/1545	
E3466	1408/1546	
E3467	1408/1547	
E3468	1408/1548	
E3469	1408/1549	
E3470	1408/1550	
E3471	1408/1551	
E3472	1408/1552	
E3473	1408/1553	
E3474	1408/1554	
E3475	1408/1555	
E3476	1408/1556	
E3477	1408/1557	
E3478	1408/1558	
E3479	1408/1559	
E3480	1408/1560	
E3481	1408/1561	
E3482	1408/1562	
E3483	1408/1563	
E3484	1408/1564	
E3485	1408/1565	
E3486	1408/1566	
E3487	1408/1567	
E3488	1408/1568	
E3489	1408/1569	
E3490	1408/1570	
E3491	1408/1571	
E3492	1408/1572	
E3493	1408/1573	
E3494	1408/1574	
E3495	1408/1575	
E3496	1408/1576	
E3497	1408/1577	
E3498	1408/1578	
E3499	1408/1579	
E3500	1408/1580	
E3501	1408/1581	
E3502	1408/1582	

vessel code	NMS cat. (EOA)	Scott (1951)
E3503	1408/1583	
E3504	1408/1584	
E3505	1408/1585	
E3506	1408/1586	
E3507	1408/1587	
E3508	1408/1588	
E3509	1408/1589	
E3510	1408/1590	
E3511	1408/1591	
E3512	1408/1592	
E3513	1408/1593	
E3514	1408/1594	
E3515	1408/1595	
E3516	1408/1596	
E3517	1408/1597	
E3518	1408/1598	
E3519	1408/1599	
E3520	1408/1600	
E3521	1408/1601	
E3522	1408/1602	
E3523	1408/1603	
E3524	1408/1604	
E3525	1408/1605	
E3526	1408/1606	
E3527	1408/1607	
E3528	1408/1608	
E3529	1408/1609	
E3530	1408/1610	
E3531	1408/1611	
E3532	1408/1612	
E3533	1408/1613	
E3534	1408/1614	
E3535	1408/1615	
E3536	1408/1616	
E3537	1408/1617	
E3538	1408/1618	
E3539	1408/1619	
E3540	1408/1620	
E3541	1408/1621	
E3542	1408/1622	
E3543	1408/1623	
E3544	1408/1624	
E3545	1408/1625	
E3546	1408/1626	
E3547	1408/1627	
E3548	1408/1628	
E3549	1408/1629	
E3550	1408/1630	
E3551	1408/1631	
E3552	1408/1632	
E3553	1408/1633	
E3554	1408/1634	

vessel code	NMS cat. (EOA)	Scott (1951)
E3555	1408/1635	
E3556	1408/1636	
E3557	1408/1637	
E3558	1408/1638	
E3559	1408/1639	
E3560	1408/1640	
E3561	1408/1641	
E3562	1408/1642	
E3563	1408/1643	
E3564	1408/1644	
E3565	1408/1645	
E3566	1408/1646	
E3567	1408/1647	
E3568	1408/1648	
E3569	1408/1649	
E3570	1408/1650	
E3571	1408/1651	
E3572	1408/1652	
E3573	1408/1653	
E3574	1408/1654	
E3575	1408/1655	
E3576	1408/1656	
E3577	1408/1657	
E3578	1408/1658	
E3579	1408/1659	
E3580	1408/1660	
E3581	1408/1661	
E3582	1408/1662	
E3583	1408/1663	
E3584	1408/1664	
E3585	1408/1665	
E3586	1408/1666	
E3587	1408/1667	
E3588	1408/1668	
E3589	1408/1669	
E3590	1408/1670	
E3591	1408/1671	
E3592	1408/1672	
E3593	1408/1673	
E3594	1408/1674	
E3595	1408/1675	
E3596	1408/1676	
E3597	1408/1677	
E3598	1408/1678	
E3599	1408/1679	
E3600	1408/1680	
E3601	1408/1681	
E3602	1408/1682	
E3603	1408/1683	
E3604	1408/1684	
E3605	1408/1685	
E3606	1408/1686	

vessel code	NMS cat. (EOA)	Scott (1951)
E3607	1408/1687	
E3608	1408/1688	
E3609	1408/1689	
E3610	1408/1690	
E3611	1408/1691	
E3612	1408/1692	
E3613	1408/1693	
E3614	1408/1694	
E3615	1408/1695	
E3616	1408/1696	
E3617	1408/1697	
E3618	1408/1698	
E3619	1408/1699	
E3620	1408/1700	
E3621	1408/1701	
E3622	1408/1702	
E3623	1408/1703	
E3624	1408/1704	
E3625	1408/1705	
E3626	1408/1706	
E3627	1408/1707	
E3628	1408/1708	
E3629	1408/1709	
E3630	1408/1710	
E3631	1408/1711	
E3632	1408/1712	
E3633	1408/1713	
E3634	1408/1714	
E3635	1408/1715	
E3636	1408/1716	
E3637	1408/1717	
E3638	1408/1718	
E3639	1408/1719	
E3640	1408/1720	
E3641	1408/1721	
E3642	1408/1722	
E3643	1408/1723	
E3644	1408/1724	
E3645	1408/1725	
E3646	1408/1726	
E3647	1408/1727	
E3648	1408/1728	
E3649	1408/1729	
E3650	1408/1730	
E3651	1408/1731	
E3652	1408/1732	
E3653	1408/1733	
E3654	1408/1734	
E3655	1408/1735	
E3656	1408/1836	
E3657	1408/1837	
E3658	1408/1838	

vessel code	NMS cat. (EOA)	Scott (1951)
E3659	1408/1839	
E3660	1408/1840	
E3661	1408/1841	
E3662	1408/1842	
E3663	1408/1843	
E3664	1408/1844	
E3665	1408/1845	
E3666	1408/1846	
E3667	1408/1847	
E3668	1408/1848	
E3669	1408/1849	
E3670	1408/1850	
E3671	1408/1851	
E3672	1408/1852	
E3673	1408/1853	
E3674	1408/1854	
E3676	1408/1856	
E3677	1408/1857	
E3678	1408/1858	
E3680	1408/1860	
E3681	1408/1861	
E3682	1408/1862	
E3683	1408/1863	
E3684	1408/1864	
E3685	1408/1865	
E3686	1408/1866	
E3687	1408/1867	
E3688	1408/1868	
E3689	1408/1869	
E3690	1408/1870	
E3691	1408/1871	
E3692	1408/1872	
E3693	1408/1873	
E3694	1408/1874	
E3695	1408/1875	
E3696	1408/1876	
E3697	1408/1877	
E3698	1408/1878	
E3701	1408/1881	
E3702	1408/1882	
E3703	1408/1883	
E3704	1408/1884	
E3707	1408/1887	
E3708	1408/1888	
E3709	1408/1889	
E3710	1408/1890	
E3711	1408/1891	
E3712	1408/1892	
E3713	1408/1893	
E3714	1408/1894	
E3715	1408/1895	
E3716	1408/1896	

vessel code	NMS cat. (EOA)	Scott (1951)
E3717	1408/1897	
E3718	1408/1898	
E3719	1408/1899	
E3720	1408/1900	
E3721	1408/1901	
E3722	1408/1902	
E3723	1408/1903	
E3724	1408/1904	
E3725	1385	
E3725	1385/1	
E3725	1385/2	
E3725	1385/3	
E3725	1385/4	
E3727	1276	
E3728	347	
E3729	1381	1.6, Plate V
E3730	1226	Z30, Figure 7
E3731	1316	
E3732	1117	
E3733	1124	
E3734	1202	2.36, Figure 9
E3734	1202/1	2.36, Figure 9
E3734	1202/2	2.36, Figure 9
E3735	20	2.1, Figure 9
E3735	20/1	2.1, Figure 9
E3735	20/10	2.1, Figure 9
E3735	20/2	2.1, Figure 9
E3735	20/3	2.1, Figure 9
E3735	20/4	2.1, Figure 9
E3735	20/5	2.1, Figure 9
E3735	20/6	2.1, Figure 9
E3735	20/7	2.1, Figure 9
E3735	20/8	2.1, Figure 9
E3735	20/9	2.1, Figure 9
E3736	19	Y2, Figure 6
E3736	19/1	Y2, Figure 6
E3736	19/2	Y2, Figure 6
E3736	19/3	Y2, Figure 6
E3737	1	2.2, Figure 9
E3737	1/1	2.2, Figure 9
E3737	1/2	2.2, Figure 9
E3737	1/3	2.2, Figure 9
E3737	1/4	2.2, Figure 9
E3737	1/5	2.2, Figure 9
E3737	1/6	2.2, Figure 9
E3737	1/7	2.2, Figure 9
E3737	1/8	2.2, Figure 9
E3737	1/9	2.2, Figure 9
E3738	69	W1, Figure 5
E3738	69/1	W1, Figure 5
E3738	69/10	W1, Figure 5
E3738	69/11	W1, Figure 5

vessel code	NMS cat. (EOA)	Scott (1951)
E3738	69/12	W1, Figure 5
E3738	69/13	W1, Figure 5
E3738	69/14	W1, Figure 5
E3738	69/2	W1, Figure 5
E3738	69/3	W1, Figure 5
E3738	69/4	W1, Figure 5
E3738	69/5	W1, Figure 5
E3738	69/6	W1, Figure 5
E3738	69/7	W1, Figure 5
E3738	69/8	W1, Figure 5
E3738	69/9	W1, Figure 5
E3739	1281	048, Plate III
E3739	1281/1	048, Plate III
E3739	1281/10	048, Plate III
E3739	1281/11	048, Plate III
E3739	1281/12	048, Plate III
E3739	1281/13	048, Plate III
E3739	1281/14	048, Plate III
E3739	1281/15	048, Plate III
E3739	1281/16	048, Plate III
E3739	1281/17	048, Plate III
E3739	1281/18	048, Plate III
E3739	1281/19	048, Plate III
E3739	1281/2	048, Plate III
E3739	1281/20	048, Plate III
E3739	1281/21	048, Plate III
E3739	1281/22	048, Plate III
E3739	1281/23	048, Plate III
E3739	1281/24	048, Plate III
E3739	1281/25	048, Plate III
E3739	1281/26	048, Plate III
E3739	1281/27	048, Plate III
E3739	1281/28	048, Plate III
E3739	1281/29	048, Plate III
E3739	1281/3	048, Plate III
E3739	1281/30	048, Plate III
E3739	1281/31	048, Plate III
E3739	1281/32	048, Plate III
E3739	1281/33	048, Plate III
E3739	1281/34	048, Plate III
E3739	1281/35	048, Plate III
E3739	1281/36	048, Plate III
E3739	1281/37	048, Plate III
E3739	1281/38	048, Plate III
E3739	1281/39	048, Plate III
E3739	1281/4	048, Plate III
E3739	1281/40	048, Plate III
E3739	1281/41	048, Plate III
E3739	1281/42	048, Plate III
E3739	1281/43	048, Plate III
E3739	1281/44	048, Plate III
E3739	1281/45	048, Plate III

vessel code	NMS cat. (EOA)	Scott (1951)
E3739	1281/46	048, Plate III
E3739	1281/5	048, Plate III
E3739	1281/6	048, Plate III
E3739	1281/7	048, Plate III
E3739	1281/8	048, Plate III
E3739	1281/9	048, Plate III
E3740	149	2.3, Figure 9
E3740	149/1	2.3, Figure 9
E3740	149/10	2.3, Figure 9
E3740	149/11	2.3, Figure 9
E3740	149/12	2.3, Figure 9
E3740	149/13	2.3, Figure 9
E3740	149/14	2.3, Figure 9
E3740	149/15	2.3, Figure 9
E3740	149/16	2.3, Figure 9
E3740	149/17	2.3, Figure 9
E3740	149/18	2.3, Figure 9
E3740	149/19	2.3, Figure 9
E3740	149/2	2.3, Figure 9
E3740	149/20	2.3, Figure 9
E3740	149/21	2.3, Figure 9
E3740	149/22	2.3, Figure 9
E3740	149/23	2.3, Figure 9
E3740	149/24	2.3, Figure 9
E3740	149/25	2.3, Figure 9
E3740	149/3	2.3, Figure 9
E3740	149/4	2.3, Figure 9
E3740	149/5	2.3, Figure 9
E3740	149/6	2.3, Figure 9
E3740	149/7	2.3, Figure 9
E3740	149/8	2.3, Figure 9
E3740	149/9	2.3, Figure 9
E3741	244	1.1., Figure 8
E3741	244/1	1.1., Figure 8
E3741	244/10	1.1., Figure 8
E3741	244/11	1.1., Figure 8
E3741	244/12	1.1., Figure 8
E3741	244/13	1.1., Figure 8
E3741	244/14	1.1., Figure 8
E3741	244/15	1.1., Figure 8
E3741	244/16	1.1., Figure 8
E3741	244/17	1.1., Figure 8
E3741	244/18	1.1., Figure 8
E3741	244/19	1.1., Figure 8
E3741	244/2	1.1., Figure 8
E3741	244/20	1.1., Figure 8
E3741	244/21	1.1., Figure 8
E3741	244/22	1.1., Figure 8
E3741	244/23	1.1., Figure 8
E3741	244/24	1.1., Figure 8
E3741	244/25	1.1., Figure 8
E3741	244/3	1.1., Figure 8

vessel code	NMS cat. (EOA)	Scott (1951)
E3741	244/4	1.1., Figure 8
E3741	244/5	1.1., Figure 8
E3741	244/6	1.1., Figure 8
E3741	244/7	1.1., Figure 8
E3741	244/8	1.1., Figure 8
E3741	244/9	1.1., Figure 8
E3742	238	Y1, Figure 6
E3742	238/1	Y1, Figure 6
E3742	238/10	Y1, Figure 6
E3742	238/11	Y1, Figure 6
E3742	238/12	Y1, Figure 6
E3742	238/13	Y1, Figure 6
E3742	238/14	Y1, Figure 6
E3742	238/15	Y1, Figure 6
E3742	238/2	Y1, Figure 6
E3742	238/3	Y1, Figure 6
E3742	238/4	Y1, Figure 6
E3742	238/5	Y1, Figure 6
E3742	238/6	Y1, Figure 6
E3742	238/7	Y1, Figure 6
E3742	238/8	Y1, Figure 6
E3742	238/9	Y1, Figure 6
E3743	1408/1905	
E3744	1408/1906	
E3745	1408/1907	
E3746	1408/1908	
E3747	1408/1909	
E3748	1408/1910	
E3749	1408/1911	
E3750	1408/1912	
E3751	1408/1913	
E3752	1408/1914	
E3753	1408/1915	
E3754	1408/1916	
E3755	1408/1917	
E3756	1408/1918	
E3757	1408/1919	
E5000	398/581	
E5001	398/582	
E5002	398/583	
E5003	398/584	
E5004	398/585	
E5005	398/586	
E5006	398/587	
E5007	398/588	
E5008	398/589	
E5009	333/64	
E5010	333/65	
E5011	350	
E5012	333/67	
E5013	333/68	
E5014	333/70	

vessel code	NMS cat. (EOA)	Scott (1951)
E5015	333/71	
E5016	333/72	
E5017	333/73	
E5018	1408/1168	
E5019	1408/1179	
E5020	1408/1180	
E5021	1408/1181	
E5022	1408/1182	
E5023	1408/1183	
E5024	1408/1184	
E5025	1408/1185	
E5026	1408/1186	
E5027	1408/1187	
E5028	1408/1304	
E5029	1408/1306	
E5030	1408/1307	
E5031	1408/1308	
E5032	1408/1309	
E5033	1408/1310	
E5034	1408/1311	
E5035	1408/1312	
E5036	1408/1313	
E5037	1408/1736	
E5038	1408/1737	
E5039	1408/1738	
E5040	1408/1739	
E5041	1408/1740	
E5042	1408/1741	
E5043	1408/1742	
E5044	1408/1743	
E5045	1408/1744	
E5046	1408/1745	
E5047	1408/1746	
E5048	1408/1747	
E5049	1408/1748	
E5050	1408/1749	
E5051	1408/1750	
E5052	1408/1751	
E5053	1408/1752	
E5054	1408/1753	
E5055	1408/1754	
E5056	1408/1755	
E5057	1408/1756	
E5058	1408/1757	
E5059	1408/1758	
E5060	1408/1759	
E5061	1408/1760	
E5062	1408/1761	
E5063	1408/1762	
E5064	1408/1763	
E5065	1408/1764	
E5066	1408/1765	

vessel code	NMS cat. (EOA)	Scott (1951)
E5067	1408/1766	
E5068	1408/1767	
E5069	1408/1768	
E5070	1408/1769	
E5071	1408/1770	
E5072	1408/1771	
E5073	1408/1772	
E5074	1408/1773	
E5075	1408/1774	
E5076	1408/1775	
E5077	1408/1776	
E5078	1408/1777	
E5079	1408/1778	
E5080	1408/1779	
E5081	1408/1780	
E5082	1408/1781	
E5083	1408/1782	
E5084	1408/1783	
E5085	1408/1784	
E5086	1408/1785	
E5087	1408/1786	
E5088	1408/1787	
E5089	1408/1788	
E5090	1408/1789	
E5091	1408/1790	
E5092	1408/1791	
E5093	1408/1792	
E5094	1408/1793	
E5095	1408/1794	
E5096	1408/1795	
E5097	1408/1796	
E5098	1408/1797	
E5099	1408/1798	
E5100	1408/1799	
E5101	1408/1800	
E5102	1408/1801	
E5103	1408/1802	
E5104	1408/1803	
E5105	1408/1804	
E5106	1408/1805	
E5107	1408/1806	
E5108	1408/1807	
E5109	1408/1808	
E5110	1408/1809	
E5111	1408/1810	
E5112	1408/1811	
E5113	1408/1812	
E5114	1408/1813	
E5115	1408/1814	
E5116	1408/1815	
E5117	1408/1816	
E5118	1408/1817	

vessel code	NMS cat. (EOA)	Scott (1951)
E5119	1408/1818	
E5120	1408/1819	
E5121	1408/1820	
E5122	1408/1821	
E5123	1408/1822	
E5124	1408/1823	
E5125	1408/1824	
E5126	1408/1825	
E5127	1408/1826	
E5128	1408/1827	
E5129	1408/1828	
E5130	1408/1829	
E5131	1408/1830	
E5132	1408/1831	

vessel code	NMS cat. (EOA)	Scott (1951)
E5133	1408/1832	
E5134	1408/1833	
E5135	1408/1834	
E5136	1408/1835	
E5137	91	
E5138	GT338	
E5139	381	1.6, Plate V
E5140	117	Z34, Figure 7
E5141	276	Y.59, Figure 6
E5142	202	2.36, Figure 9
E5143	226	Z30, Figure 7
E5144	74	W.5, Figure 5
E5145	152	041, Figure 7
E5146	GT340	

Table A.1.4.: vessel concordance for the ceramic assemblage from Rubha an Udail Site 6

vessel code	Squair (nd.)
R1	A1
R2	A2
R3	A3
R4	A4
R5	A5
R6	A6
R7	A7
R8	A8
R9	A9
R10	A10
R11	A11
R12	A12
R13	A13
R14	A14
R15	A15
R16	A16
R17	B1
R18	B2
R19	B3
R20	B4
R21	B5
R22	B6
R23	B7
R24	B8
R25	B9
R26	B10
R27	B11
R28	B12
R29	B13
R30	B15
R31	B16
R32	B18
R33	B19
R34	B20
R35	B21
R36	B22
R37	B23
R38	B24
R39	B25
R40	B26
R41	B27
R42	B28
R43	B29
R44	B30
R45	B31
R46	B32
R47	B33
R48	B34
R49	B35

vessel code	Squair (nd.)
R50	B36
R51	B37
R52	B38
R53	B39
R54	B40
R55	B41
R56	B42
R57	B43
R58	B44
R59	B45
R60	B46
R61	B47
R62	B48
R63	B49
R64	B50
R65	B51
R66	B52
R67	B53
R68	B54
R69	B55
R70	B56
R71	B57
R72	B58
R73	B59
R74	B60
R75	B61
R76	B62
R77	B63
R78	B64
R79	B65
R80	B66
R81	B67
R82	B68
R83	B69
R84	B70
R85	B71
R86	B72
R87	B73
R88	B74
R89	C1
R90	C2
R91	C3
R92	C4
R93	C5
R94	C6
R96	C8
R97	C9
R98	C10
R99	C11

vessel code	Squair (nd.)
R100	C12
R101	C13
R102	C14
R103	C15
R104	C16
R105	C17
R106	C18
R107	C19
R108	C20
R109	C21
R110	C22
R111	C23
R112	D1
R113	D2
R114	D3
R115	D4
R116	D5
R117	D6
R118	D7
R119	D8
R120	D9
R121	D10
R122	D11
R123	D12
R124	D13
R125	D14
R126	D15
R127	D16
R128	D17
R129	D18
R130	D19
R131	D20
R132	D21
R133	D22
R134	D23
R135	D24
R136	D25
R137	D26
R138	D27
R139	D28
R140	D29
R141	D30
R142	D31
R143	D32
R144	D33
R145	D34
R146	D35
R147	D36
R148	D37
R149	D38
R150	D39
R151	D40
R152	D41
vessel code	**Squair (nd.)**
R153	D42
R154	D43
R155	D44
R156	D45
R157	D46
R158	D47
R159	D48
R160	D49
R161	D50
R162	D51
R163	D52
R164	D53
R165	D54
R166	D55
R167	D56
R168	D57
R169	D58
R170	D59
R171	D60
R172	D61
R173	D62
R174	D63
R175	D64
R176	D65
R177	D66
R178	D67
R179	D68
R180	D69
R181	D70
R182	D71
R183	D72
R184	D73
R185	D74
R186	D75
R187	D76
R188	D77
R189	D78
R190	D79
R191	D80
R192	D81
R193	D82
R194	D83
R195	D84
R196	D85
R197	D86
R198	D87
R199	D88
R200	D89
R201	D90
R202	D91
R203	D92
R204	D93
R205	D94

vessel code	Squair (nd.)
R206	D95
R207	D96
R208	D97
R209	D98
R210	E1
R211	E2

vessel code	Squair (nd.)
R212	E3
R213	E4
R214	E5
R215	B14
R216	B17
R217	C7

Table A.1.5.: vessel concordance for the ceramic assemblage from Barpa Langass

vessel code	Henshall (1972)	NMS cat. (EO)
B1	1	978
B2	2	349, 350
B3	3	979
B4	4	980
B5	-	981

Table A.1.6.: vessel concordance for the ceramic assemblage from Geirisclett

vessel code	Henshall (1972)	NMS cat. (GT)
G1	1	50
G2	2	52, 53, 231
G3	3	49
G4	4	51
G5	5	53a

Table A.1.7.: vessel concordance for the ceramic assemblage from Pygmies Isle

vessel code	NMS cat. (HD, HR)
P1	HD285
P2	HD286
P3	HD287
P4	HD288
P5	HD289
P6	HR 626

Table A.1.7.: vessel concordance for the ceramic assemblage from Airidh nan Seilicheag

vessel code	NMS cat. (GT)
A1	GT618

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