EARLY BRONZE AGE TECHNOLOGY AND TRADE
The Evidence of Irish Gold

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Ireland was the focus of the Western European “Golden Age” by virtue of the impressive quantity of gold ornaments produced there during the Bronze Age, a period in itself perhaps misnamed because the greatest volume of gold was worked at this time in prehistoric Europe. Unlimited speculation surrounds the exceptional role that societies invariably give to gold, be they prehistoric or historic, simple or complex. Here, however, discussion of gold will be restricted to consideration of the Bronze Age goldsmith’s capabilities, to trade, and to the exchange of ideas connected with gold and prehistoric gold sources of Britain and Ireland as revealed by spectrographic analysis.

In general, the interpretation of its distribution and circumstances of discovery is constantly frustrating. Most gold is recovered as isolated finds, although some hoards have been found. The latter usually contain only gold, very seldom any bronze, and occasionally have been buried close to archaeological structures such as hill-forts. Any association is rare and the hoard’s connection with these obvious topographical features is often difficult to interpret; but gold in excavated situations, or as datable finds, such as in settlements or graves, is even rarer. This places the greatest emphasis upon information coming from the piece itself. To glean an accurate, useful and objective reconstruction of the gold’s place in Bronze Age Ireland, all aspects of an individual ornament must be examined in detail, including the relationship its decoration has to all prehistoric art styles, the technique of construction, how it conforms to the range within its type, and how it and the rest of its group relate to characteristics displayed among the numerous contemporary styles of ornaments. The most valid approach at present, therefore, is through technology and, in a more limited way, the assessment of gold analyses.

The earliest appearance of gold seems to correspond with the arrival of copper- and bronze-working in Ireland. Controversy continues as to who was responsible for introducing metal-working into Britain and Ireland but, regardless of who initially exploited the Mt. Gabriel copper mines, the tin sources of Cornwall, or the alluvial gold sources widely scattered over the highlands of both Britain and Ireland, the people who established an early dominance in copper and gold work are today known as the Beaker Folk, after their habit of burying their dead with an elaborately decorated “drinking beaker.” Much has been written about these people, and little will be resolved here, but some important implications emanating from this society in connection with early Bronze Age Irish gold sheetwork need consideration. For instance, most of the decoration on this Irish sheetwork can be attributed to their distinctive art style. Beaker Folk had a very formalized art style dominated by linear geometric designs and laid out according to precise conventions applying simple rules of symmetry, which involved the application of motif zones. Their art is perhaps best portrayed in the funerary Beaker. This rigorous style ranges widely with little alteration over the greater extent of Western Europe, bounded by Czechoslovakia, Scandinavia, Iberia or North Africa, and the British Isles. The Beaker Folk flourished between 2300 and 1300 B.C. (on uncalibrated dates); by 2100 B.C. they had already introduced the horse into Ireland and were probably casting tin-bronze axes in flat axe moulds close by the megalithic tomb of Newgrange, Co. Meath. The decoration dominant in their art derives from a limited, but versatile series of linear geometric motifs and various combinations of these, almost justifying our describing it as being derived from a motif library. The universal combinations of the motifs as well as the consistency of
the single patterns repeated across the vast territory, suggest very great control indeed. The consistent application of the decoration, while superficially adapting to the various shapes warranting adornment, never falsifies from medium to medium, reinforcing the idea of organization.

All this reflects, through its cohesiveness of unity and of organization, a sophisticated society. Thereby, it is reminiscent of the La Tène Iron Age [see H. Burton, pp. 18-19], in which, similarly, a distinctive and controlled art style reflects the cultural unity of Celtic tribes spread over an equally broad geographical area. Besides pottery, various other objects which retain the Beaker decoration—bone, metals (bronze, copper, gold and silver), amber and jet—are preserved today. Such artifacts were, no doubt, the principal means by which the internal standard of the style was sustained and in which it was conveyed to most regions occupied by the Beaker Folk. Occasionally, however, there are gaps in our evidence of how contact occurred; these may have been spanned by some peripheral media such as leather, wood textiles, and even possibly body-tattooing. Whether one accepts the Beaker Folk as a nation or political entity, as a loosely islander "international" religion or a highly organized trading enterprise, there is little argument that the goldwork of the Early Bronze Age in the British Isles, as established by its decoration and construction, is largely if not wholly Beaker in origin.

The Beaker sheetwork is hard to explain, as the manufacturing of thin burnished sheet is difficult, and there is no apparent need to hammer all gold into sheet ornaments, when their copper and bronze smelting and casting extended to the use of bivalve moulds. Maybe it was a means of displaying the greatest expanses of gold for the volume containing. Some discs, basket earring, and the broad, crescentic sheet collar known as lunulae, reflect the style attributable to the Beaker Folk about 2100-1700 B.C., while bilt bands for daggers, other discs and goldwork attributed to the "Food Vessel" period in Scotland and Ireland and to the "Wessan" period in England date to the final phase of Beaker fashion about 1600-1500 B.C. The general absence of radiocarbon dates for the Beaker period, and particularly for its gold, makes the absolute dating of Irish goldwork virtually impossible. In relative terms, however, one can work with reasonable safety.

Beaker discs and basket earring are initially the earliest gold ornaments in Britain and Ireland, although their duration is debatable. Both ornaments were worn by individuals as well as accompanied them to the grave, while lunulae, or gold crescentic collars, appear to have a more communal ownership and are extremely rare in graves. The discs seem to have a greater duration or survival in the Beaker society as they continued, with modification, into the Food Vessel period that extended to post-1500 B.C. Both discs and earrings have prototypes in Central Europe. The earrings resemble most closely ones in gold from Wapniz, Poland, while some of the early discs show precisely the same cross motif as found on some Únetice racquet-headed pins from Bohemia and Slovakia. The only challenged import into the British Isles of this type of ornament, however, is from Iberia in the form of a gold "earring" found last century, apparently alone, at "Dacomot" (Dacre-nommed?). Co. Down. This "earring" or racquet-headed pin differs from the Irish basket earrings paralleled with Wapniz, Poland, but is precisely the same in construction, thickness of sheet and decoration as earrings from the Extremadura region in Portugal. It neatly straddles both Irish discs and earrings as it appears to have functioned in Ireland as a disc or "pin head" (as suggested by scratches along its tang), while the Iberian parallels were most probably worn as earrings.

Although, of all the racquet-headed pin decorations, only the cross motif seems to be maintained in the Beaker disc, many of the other pin designs also are present in the general repertoire of Beaker motifs. Obviously the cross was sufficiently important as an emblem to merit its wearing on pairs of discs, presumably stitched to clothing around the chest region; but today we are unable to say whether the cross symbolized political rank, was a religious badge or possibly was in some way a combination of the two. It is unlikely that it was purely decorative. At the use of pins such as the racquet-headed pins normally was restricted to the function of fastening textiles, and as evidence in the form of V-porroformed buttons, toggles and bell-pulls seems to point to a preference for leather apparel among the Beaker Folk (at least in their early period), there would be no need for retaining more than the pin head as represented by the gold disc, affixed into place. This eventually underwent considerable elaboration when regionalism in Beaker art began to break from the earlier more rigid universal style.
The discs of Tedavnet portray this very well with their repoussé double-cross motif. The ultimate devolved cross is found on the Upton Lovell V perforated button base and the Clandon Barrow pectoral lozenge plate, both grave goods from rich Wessex burials in England, which are attributable to the final phase of the Beaker Folk. Sheet gold of the thickness used in disc and earring construction was very easily decorated with a round-pointed wooden or bone stylus. In most cases this gave a raised mock-repoussé effect to the decoration, but in the case of the Tedavnet pair, true repoussé was produced by the lines being raised from behind and probably a bronze awl being employed to prick out the dots outlining the lines on the top. No engraving existed even in the treatment of the heavier lunulæ sheetwork, which must have needed some forceful hammering to effect the decoration. In the very thin Wessex work, which was mostly from beaten sheet of about the weight of heavy aluminium foil, the use of the stylus was most important; occasionally the awis used to dot the sheet would tear it, emphasizing what delicate treatment this thin foil required.

The lunulæ, whose inception comes shortly after the discs and earrings, appear apparently the inspiration of the Irish Beaker society. Over 81 are known from Ireland alone and only a little over 100 are known in all. These attractive gold crescentic sheet collars are the most elaborately decorated of all the Beaker ornaments, employing the full art style rubric in rigorous zoned decoration applied to the horns of the crescent and to the outlying border around the edge of the collar. Three groups of these collars can be identified—Classical, Unaccomplished and Provincial. They are distinguished not only by their decoration, which is obvious simply by glancing at the collar, but also by the ratio of width to thickness, which demonstrates the degree of proficiency in working the gold. The Classical and Unaccomplished were apparently of Irish manufacture and, although some Classical lunulæ were exported to Britain and Brittany, the Unaccomplished lunulæ never left Ireland. The Provincial, on the other hand, were made outside Ireland and did not appear ever to have been imported there.

The artisans who decorated the Unaccomplished group seem to have been as unskilled in their hammering out of the sheet as they were in applying the decorat-
tion, although they showed greater adventure in their choice of motifs than the Classical masters. The Classical collars, however, were not only masterfully decorated with precise lining of the zone, but also boasted the thinnest and broadest. Perhaps this was merely complying with the client’s wishes for the greatest show of wealth for the minimum amount of gold therein, but there is also great skill shown in the way the collar is subtly strengthened around its edges. The thickest and therefore strongest area is around the inner collar edge, with the next area of strengthening around the outer edge. The thinnest sheet occupies the center of the crescent. Some Provincial collars, of much thicker sheet, demonstrate a similar consciousness and skill. These Provincial collars have the most archaic decoration, the craftsmen or clients preferring the least complicated motifs. In Brittany, this may reflect the Breton preference for simpler motifs: it is in this area that lumlae seem to have greatest popularity outside Ireland, although the highland zones of Britain (Cornwall, Wales and Scotland) contain a number of lumlae which also share a similar preference for these simple designs.

An indication of how the lumlae were prepared was found in a broken necking found as scrap metal in the Kerivó, Côtes-du-Nord, hoard. Three complete lumlae were also in the hoard, one of which was identical in construction and decoration with the Harlyn Bay, Cornwall, lumlae. Experiments using lead rods of the same dimensions as the Kerivó rods, which already had terminals similar to those on Provincial lumlae, showed that crescent collars could be beaten from these rods after the shaping of the terminals. Three, including one from Ballybey, Co. Monaghan and another from an unlocated Irish spot (now in the Mayer collection of the Merseyside County Museum), prove that the amount of gold contained in the scrapped rod could have made collars to their dimensions. This also shows that the preparation of massive ornaments of the dimensions of the Kerivó scrapped necking rod was possible, but sheet was apparently always preferred. The lumlae are dateable only by the motifs portrayed, these motifs having been key to various scholars’ typologies. Reliance upon these motifs is important because no association, apart from an early type of flat axe found with two lumlae at Harlyn Bay, Cornwall, has ever been found. Most lumlae that were found in association with prominent landmarks suggest that the sites were selected for the ease of re-locating the buried collars rather than for any true archaeological relationship. The myth that lumlae were thrown as votive offerings into hogs does not seem credible upon inspection. It is general opinion that the Beaker motifs on lumlae are from those that comprise the British regional groups of Beaker pottery rather than from the earlier and purer Continental group, but they are certainly not as late as the motifs carried on the Food Vessel or Wessex objects. This would place the collars later than 1900 B.C., but earlier than 1600 B.C. (uncalibrated). Since the Ballagrowan lumlae has a second series of decorations over its horns in the Unaccomplished manner, but its dimensions and residual traces of its first series of designs are Classical, it cannot be assumed that Unaccomplished evolved into Classical. The very proficient style of the Food Vessel and Wessex gold ornaments suggests that the skill did not diminish in any sense, so we are left with no means of determining the duration of these collars’ popularity. It should be considered, however, that even the hundred or so lumlae which represent the greatest volume of gold in the Early Bronze Age of the British Isles could not have sustained many artists full-time for very long, and a working lifetime, even in the Bronze Age, would be about fifteen or twenty years. Estimates of a craftsman’s productive life as demonstrated by evidence from the Classical
expedition

Spring 1979

19. 20 Two views of the Skateraw (East Lothian) hill band showing that the shape of the hill differed within the group. Diameter about 3 cm; width about 0.8 cm. (National Museum of Scotland EQ 200)

21 The Blackwaterfoot (Bute, Scotland) hill band. Width about 0.6 cm. (National Museum of Scotland EQ 266)

22 The Newton of Collessie (Fife, Scotland) hill band shows the narrow ribbing or corrugation typical of these bands. Width about 0.8 cm. (National Museum of Scotland EQ 58). These three hill bands (Figs. 19-22) have no associations to demonstrate their contemporaneity, but metal analysis links them closely.

23, 24 The Topped Mountain Cairn (Co. Fermanagh) hill band and dagger formed part of a grave group associated with a Fored Vessel axe, thus establishing both the period and the culture with which these hill bands were associated. Width about 0.5 cm.

16 Ballintaggart lunula. The distinctive decoration partially obliterated by the barbs is symptomatic later decoration.

17 The Ballintaggart (Co. Kerry) lunula is classical in form, but the second series of decoration is in the Unaccomplished style (details; Figs. 16, 18). (National Museum of Ireland)

18 Ballintaggart lunula: the arrow marks the rather uncontrolled later decoration.

19, 20 Men with the gold. Who did the commissioning, however, is a problem because lunulae seem to be non-personal ornaments. That is, since they do not accompany the dead, the collars were either owned communally by the society, or followed some significant inheritance pattern. However, their pristine condition suggests they received a minimum of wear and possibly were not for human adornment, but rather for that of now preserved statues.

Associated with the final phase of the Beaker Folk is the Food Vessel group, again named after the shape of the vessel found in the burials. The Northern British and Scottish Food Vessels in shape and decoration link neatly with those of Ireland, and a small group of gold hill bands substantiates this link beyond a doubt. These few narrow bands would have adorned the daggers of three Scottish and one Irish member of the Food Vessel population. Found at Newtown of Collessie, Blackwaterfoot and Skateraw in Scotland, and the Topped Mountain Cairn in Ireland, only the Irish band could be proved beyond a doubt to be associated with a Food Vessel. Upon analyzing the gold of these hill bands and the discs from Knowes of Trotty, Orkney, it was discovered that they all must have come from the same source with an unusually high tin level, probably located in Scotland. The connection with the Orkney discs was not apparent until they were drawn together with the hill bands through their tightly grouping gold analyses. This meant that the re-used amber spacer-plates associated with the Orkney discs add an element of information to the dating of the hill bands. Surely so few items must be contemporaneous, which would place discs and hill bands sometime shortly after about 1500 B.C. (uncalibrated) when amber spacer-plate necklaces ceased being committed to wooden groups. This date has some bearing on the dating of the Hiberno-Scottish decorated axe trade to the Continent, which has previously been considered earlier. The implication is interesting as we know so little about the chronological placing of gold and trade patterns are equally difficult as they are often traced through hoards. As the Beaker Folk are known in this period almost exclusively from graves and, apart from a few sparse settlements, known mostly through graves in this earlier period, there is little one can correlate among hoards, stray finds, trade patterns and the fairly extensive material culture reconstructed from funerary assemblages.

(The Derrinboyce hoard heralds the coming of a new and massive art style to Ireland, from Central Europe through France. This new style came rapidly into vogue and brought a complete change of ornaments. The date for the demise of the Beaker Folk with their linear, geometrically decorated sheet ornaments is not clear, but the massive style gained popularity some
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The Knowes of Trotty (Orkney) discs are probably the latest version of the earlier Beaker gold discs since they are associated with portions of an amber “spacer-plate” head. Such heads are dated about 1500 B.C., so the re-use of one, cut into a series of smaller heads (bottom of photo), suggests a post-1500 B.C. date for the whole deposit. Analysis of the gold places these discs with the gold hilt bands (Figs. 19-22). (National Museum of Scotland, EQ 126-30.)

Time after 1400 and before 1200 B.C. (uncalibrated). The mechanism by which such a fashion change was achieved escapes us at present, but the division seems clear-cut and forms the demarcation line between the earlier and the later Bronze Age throughout the British Isles. It seems likely that there were not great population changes, because areas where ornaments were concentrated in the Beaker period provide focal points in the later period for similar concentrations. Ireland is certainly consistent in again leading the gold production of the later Bronze Age in the British Isles, thereby maintaining her position as the focal point in the Western European “Golden Age.”

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