

ABSTRACT

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The Enigmatic Origins of The Bell Beaker Phenomenon
(Under the Direction of DR. ERVAN GARRISON)

Bell Beaker pottery is an important, enigmatic, and well-documented phenomenon which appears suddenly and briefly in the archaeological record through most of Europe. These bell-shaped goblets are extremely uniform considering their geographic distribution and are surprisingly widespread considering their short persistence. Previous research has suggested a variety of diverse origins for the Bell Beakers including as status symbols associated with knowledge of copper metallurgy, and recent carbon dating indicates possible Iberian genesis. Thorough review of current literature in French and English provided the basis for investigation and was supplemented by interviews of leading Swiss Beaker archaeologists and on-site investigation of Swiss museum holdings. Two major points of contention in Beaker research include where the Beakers originated geographically and whether the Beakers indicate the spread of a people or simply the expansion of ideas. Stylistic analysis of goblet decoration led to many competing theories about Beaker origins, but modern radiocarbon data show that the Beakers are oldest in Iberia and get progressively younger to the north and east. Careful study of Beaker accompaniments has shown that regional ceramics are important to understanding the cultural and social settings of the Beaker period, and three distinct Beaker sub-cultures have been identified. The contemporary existence of these groups and the lack of evidence revealing large-scale migration imply that the archaeological Beaker culture is more representative of ideological, technological, and stylistic spread than en masse population movement. Beaker data

is most consistent with a hypothesis supporting Iberian origins, metallurgy, and social status as important facets of Beaker success in Europe.

INDEX WORDS: Bell Beaker, Iberia, Europe, Common Ware, Metallurgy, Status, Radiocarbon dating, Origins, Phenomenon

THE ENIGMATIC ORIGINS OF THE BELL BEAKER PHENOMENON

by

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DEDICATION

For my Grandmothers, Gram and Grandmama. I could not have been more blessed than to have two so very different but incredibly special people in my life. When I think of all the obstacles you have overcome and the challenges you have faced, this thesis seems but a trifle! Thank you for everything. I love you.

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1. INTRODUCTION

Bell Beakers, enigmatic yet distinctive pottery from the early, so-called “Bronze Age” (Fig. 1, Table 1), are clearly an important and prominent part of European archaeological history. While incomplete data are inherent in the nature of archaeological inquiry, there is a large body of evidence which significantly illuminates the role of this important phenomenon. Bell Beaker pottery is an important, certainly enigmatic, and well-documented phenomenon which appears suddenly and briefly in the archaeological record through most of Europe during the Chalcolithic, at the transition between the Neolithic and Bronze Ages [Besse 2004a]. It has traditionally been associated with the dawn of copper metallurgy and the conspicuous “Beaker Set” of archery-related artefacts found in several burial assemblages [Besse 1998a]



Figure 1:

Bell Beaker Goblets

(Photo courtesy of the Cantonal Museum of Archaeology in Sion, Switzerland)

Bell Beakers show up in the archaeological record in the second half of the third millennium BC [Besse 2003b, Rojo-Guerra et al. 2005] and span an area (Fig. 2) from Northern Africa to Great Britain and from the Atlantic Coast to Hungary and the Czech Republic [Salanova 2002]. The Beaker Period lasted almost a millennium, in total, but the duration was shorter in any given region [Czebreszuk 2004]. Data indicate that the Bell Beaker Phenomenon appeared first in the southwest, moved successively north and east through the European continent, and persisted longest in the north [Czebreszuk 2004]. Beaker influence was multi-directional, but was predominantly from south to north [Barfield 1998].

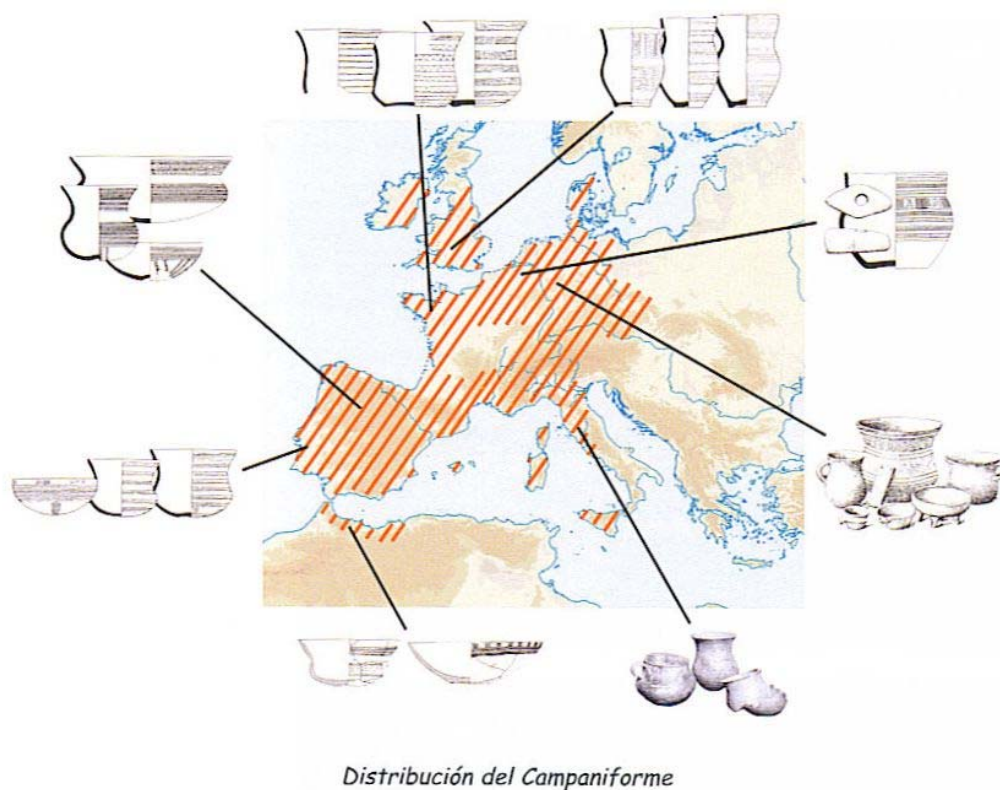


Figure 2: Bell Beaker Distribution in Europe (Rojo-Guerra et al. 2005)

The appearance and circulation of the Bell Beakers is, in and of itself, not so shocking. It is the complex and multifaceted nature of the phenomenon which makes it both so difficult and so interesting archaeologically [Guilaine 2002]. How did the Beakers cover such a large geographic area (only the European Union can compare in size [Czebreszuk 2004]) while somehow maintaining a large level of homogeneity and simultaneously allowing for the flexibility of regional variation [Besse 2004b, Besse et al. 2005]?

The standard Bell Beaker vase, from which the tradition gets its name, is only one element of a rich and diverse culture of artefacts (Fig. 3) [Besse 1998a, Case 2004]. When considered on a European scale, the Bell Beaker data set, despite certain Pan-European components, is extremely heterogeneous [Besse 2003a, Salanova 2005]. This variability of manifestation is one of the key factors contributing to the complexity of the phenomenon [Vander Linden 2004]—since the type and frequency of finds is so inconsistent across regions, the archaeological data are very difficult to synthesize into universal trends [Besse 1998b, Besse 2003b].



Figure 3:

“The Bell Beaker Set” : An Assortment of Diverse Artefacts

(Rojo-Guerra et al. 2005)

The Bell Beaker Phenomenon is polymorphous in both its manifestation and influence as well as in its origins. In some areas, the Beakers are recognized primarily as a funerary tradition [Lemerrier et al. 2001], but in others they have a substantial domestic role [Benz et al. 1998a]. Their diversity both illustrates the complexity of the people who deposited the Beakers and complicates analysis of their remains. The regional variations of the Phenomenon make it virtually impossible to develop any coherent hypotheses which are applicable to the entire Beaker-using population [Lemerrier 1998]. Brodie sums up the situation by saying, “No single hypothesis can satisfactorily explain the spread of the beaker culture” [Brodie 1998].

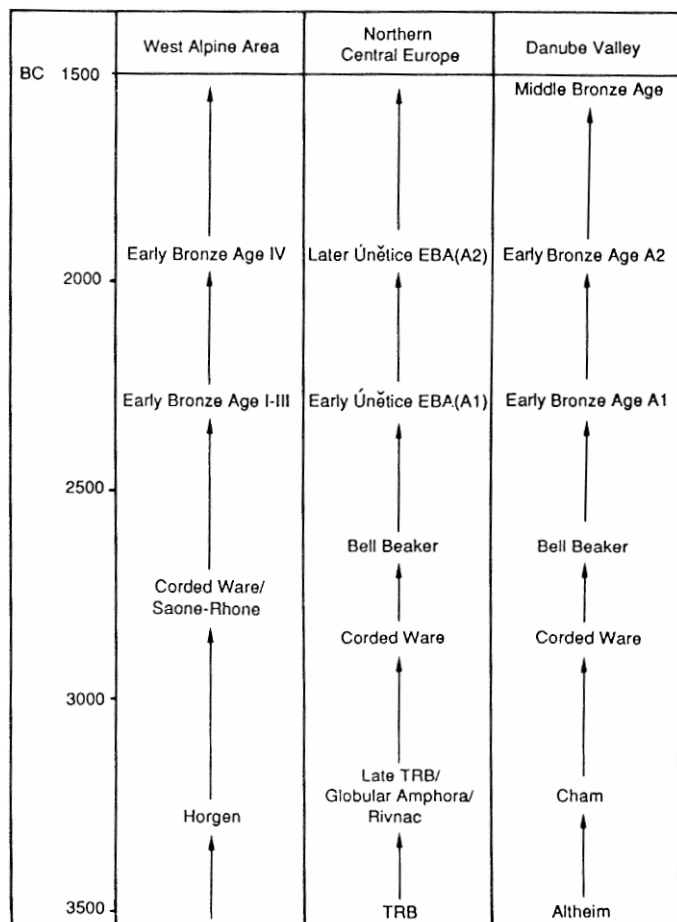


Table 1:

A Chronology of Central Europe from 3500 - 1500 BC

(Modified from Shennan 1993)

2. DEFINITIONS AND TERMINOLOGY

In any field of study, it is important to carefully define all applicable terminology, but for the Bell Beakers, this step is particularly crucial. The Beakers are studied by so many people, in so many different languages, and in so many different contexts that there is a real problem maintaining and utilizing consistent definitions. In a discussion at the Riva del Garda Colloquium in Italy in 1998, archaeologists from across Europe noted this problem and observed that names for some pottery types mean different things in France as they do in Spain or parts of northern Europe [Barfield 1998]. How can they possibly hope to discuss the Beaker Phenomenon if they are unable to understand what each other means?

For the purposes of this work, I will establish precise definitions of many terms important to the discussion of the Bell Beaker Phenomenon and will use those words in that context unless otherwise specified.

The term “Bell Beaker” can be used to identify any of several things including a particular type of ceramic vase, the people theorized to have used/made/brought those goblets, and even the archaeological manifestations of those people and their pottery.

Salanova writes, “Le Campaniforme est principalement défini par une céramique en forme de cloche, décorée de motifs géométriques simples (bandes hachurées, lignes horizontales, triangles,

chevrons). Cette céramique apparaît dans la 2^e moitié du III^e millénaire avant J.-C., des Îles Britanniques aux côtes de l'Afrique du Nord et de l'Océan atlantique à la Hongrie. [Salanova 2002] » That is to say, the Bell Beakers are principally defined by a bell-shaped ceramic, decorated with simple geometric patterns (hatched bands, horizontal lines, triangles, chevrons). This ceramic appears in the second half of the third millennium BC, in an area from the British Isles to North Africa, and from the Atlantic Ocean to Hungary [Salanova 2002].

An expert in decorated Bell Beaker pottery and its fabrication, Laure Salanova defined the classic Bell Beaker goblet (described above) as “the Standard” Bell Beaker pottery. The standard is equivalent to what has previously been recognized as the “Maritime” or “International” styles of pottery [Salanova 2005]. Her definition has been widely used and there seems to be an implicit scholarly consensus on the validity of the term. In this paper, the three stylistic terms (Standard, Maritime, International) will be used interchangeably.

While the Standard style is clearly the most pan-European of the Beaker ceramics, there are also many adaptations of this primary style. “All Over Ornamented” (AOO) and “All Over Corded” (AOC) are two of the more broad-range variations, but there were multitudinous regional variants as well. All of these decorated vases will be discussed and elaborated in further detail in the following section on Beaker Pottery.

In addition to the well-known decorated pottery, the Bell Beaker Phenomenon also includes a substantial collection of (generally) undecorated domestic ceramics [Besse 1998b]. Initially, these forms were recognized as the “smooth ceramics” since they were undecorated [Besse

2003a]. They were termed *Begleitkeramik* by German-speaking scholars and translated to *Ceramic Commune* or *Ceramic d'Accompagnement* by the Francophone. While these terms translate to the same things, they can actually be used to indicate separate assemblages [Barfield 1998]. The English translation of “Common Ware” is not much better since it ambiguous whether it is common in frequency, in use by different communities, or in mundanity of daily use [Barfield 1998].

For this document, “Common Ware,” “*Begleitkeramik*,” “*Ceramic Commune*,” and “*Ceramic d'Accompagnement*” will be considered equivalent, but Common Ware will be used preferentially. The term Common Ware was defined in 1998 by Marie Besse, a leading Beaker scholar, as those ceramics which are associated with decorated Bell Beaker finds but are not attributed to another known culture [Besse 1998b].

In addition to ceramics, many other objects are often identified in Bell Beaker finds and are grouped together into the “Bell Beaker Set.” This set includes the decorated Bell Beaker goblet, undecorated goblets, polypod bowls and cups, copper daggers, arciform (half-moon shaped) pendants, Palmela points, and arrowheads [Benz et al. 1998b, Besse 2004a, Strahm 1998]. One concern in the consideration of a “typical Beaker assemblage” (Fig. 4) is that, just as two modern scholars might use the same word to mean different things, separate groups in Beaker times might not have given the same significance to the articles. For this reason, Salanova encourages the reader to view the set as a “common vocabulary” rather than as a uniform Beaker Ideology [Salanova 1998b].



Figure 4: Example of a Bell Beaker Assemblage from Petit Chasseur in Sion, Switzerland (Besse 1998a)

The definition of a “Beaker Culture” or a “Beaker Ideology” is much debated. The former was discredited through its association with now-outdated models of an invading culture porting their Beakers across the European continent, and the latter, as alluded to above, also has its imperfections [Barfield 1998, Case 2004]. The precariousness of these terms comes from their attempts to group all of the Beaker peoples together when in reality they probably came from a huge variety of backgrounds.

Such diversity undoubtedly contributes to the surprising combination of homogeneity and inconsistency in European Beaker finds. Even a cursory glance at the data set leaves one with a distinct impression of correlation between the different groups, but it quickly becomes difficult to reconcile this intuition when presented with more detail: so few of the sites contain all of the typical elements, but so many contain a significant assortment. In his analysis of the Bell Beaker Phenomenon, Vander Linden references Clarke's 1968 definition of a Polythetic group to help with this problem. "A polythetic group is a group of entities such that each entity possesses a large number of attributes of the group, each attribute is shared by large numbers of entities and no single attribute is both sufficient and necessary to the group membership" [Vander Linden 2004]. Even the Bell Beaker goblet is not found in all sites which, for example, by the presence of Bell Beaker Common Ware, can be identified as probable Bell Beaker sites.

Other Archaeologists approach the problem in a slightly different manner, however. Marie Besse uses the presence of either (or both) decorated and undecorated vases to indicate the presence of a Bell Beaker layer [Besse 2004b]. Since such a small percentage of potsherds are from decorated pots, many important sites would not be included in a grouping that mandated decorated samples [Besse 2003a]. Lemerrier concurs that if only the sites with decorated, Standard Beakers are considered, the Beaker Phenomenon would be limited to the southern basin [Besse 2004b, Besse et al. 2005].

3. POTTERY

Bell Beakers have been largely identified through traces of their ceramics, so it is important to understand what makes their pots so special. From standardized modes of fabrication and pan-European designs to regional patterns and a variety of undecorated, domestic wares, Bell Beaker Pottery is a fascinating and enigmatic collection of artefacts.

3.1 General Attributes

The Bell Beakers do not usually show up in a distinct horizon—they generally appear with other pottery from contemporary cultures. This coincidence indicates diffusion of a specialized technique without a change in general potting practice; that is to say, the potters were simultaneously making both traditional and Bell Beaker Pottery, and the Beaker as an object must not have been the stimulus for exchange [Salanova 1998b].

The Bell Beaker goblets are very special in late Neolithic/Early Bronze Age Europe, and it is evident that they were important: craftsmanship, decoration, and appearance were all outstanding [Salanova 1998a]. Additionally, the fabrication of the pots gave them the valuable quality of thermal shock resistance [Salanova 1998b]. Ceremonial functions and prestige may also have been intrinsic to the goblets [Salanova 1998b].

Marie Besse makes a strong case that the undecorated ceramics and the decorated pottery should be considered separately [Besse 1998b], and considering the differences between the two seas, this argument appears valid. There are, however, several commonalities between the classic, decorated Bell Beakers and the less well-known Common Ware ceramics. Both types of pottery are found, albeit in unequal proportions, in funerary assemblages as well as domestic contexts [Besse 2003a, Besse 2003b, Besse 2004a]. Data show that the raw materials used to make both decorated and domestic types of pots were similar in many areas of Europe [Convertini 1998b]. Additionally, analysis of these materials indicates that all of the pots were usually made in a local, domestic context with nearby substrates [Besse 1998a, Billard et al. 1998, Convertini 1998b, Garrido-Pena et al. 2005, Salanova 2002].

As is indicated by the local fabrication and materials, Beaker pottery was not generally transported very far. A few pots may have been transported by individuals during seasonal movements or as gifts associated with trade or marriage alliances, but for the most part, all of the pottery remained near the area where it was produced [Case 2004, Gallay 1998b, Ohtenin-Girard 1998]. This lack of dissemination of pots has special implications for the diffusion of the Bell Beaker Phenomenon since clearly not just the earthenware was traveling. The technological homogeneity of Bell Beaker production strongly indicates that people were moving and the potters were coming into contact with each other [Guilaine 2002, Salanova 1998b]. The spread of the Beaker tradition is thus evidence of technological diffusion and person-to-person knowledge transfer [Lemerrier 1998, Salanova 2002].

Ethnographic research has shown that while motifs and artistic patterns can spread quickly, technology is more culturally-rooted and is usually slower to change [Salanova 1998b]. The technological diffusion of the Bell Beakers is, consequently, not the result of a simple change in taste or spread of novel fashion, but rather indicates the movement of and contact between individuals during the late Neolithic and Early Bronze Ages in Europe [Salanova 1998b, Salanova 2005, Vander Linden 2004].

3.2 Decorated Pottery

The many sorts of decorated Bell Beaker pottery can be neatly divided into two distinct groups based on the extent of their geographic distributions: those which are homogenous across Europe, and those which are confined to more local regions [Besse 1998a]. The first group includes Salanova's "Standard" Bell Beaker goblet as well as the AOO (All Over Ornamented) and AOC (All Over Corded) varieties. These styles tend to have consistent form, decoration, and color. The regional group, however, is much wider in spectrum. It includes a variety of forms (cups, bowls, and pitchers with handles), decorations, and surface colors [Besse 1998a]. While the pan-European styles tended to have very regimented standards of usage and fabrication, the regional styles were not as strictly regulated and probably carried a different significance [Salanova 2002]. Both the pan-European and regional styles did, however, carry symbolic importance [Salanova 2002].

Typical Bell Beaker decoration styles are found not only on the classic goblet-shaped pots but also on cups, bowls, and pitchers, etc. [Besse 1998a]. These patterns give pieces the appearance

of belonging to the “Bell Beaker Family” of specially decorated goblets [Besse 1998a], and, with the exception of some Corded Ware culture productions, no other Neolithic or Chalcolithic cultures share Bell Beaker decoration designs [Besse 2004a]. Despite their uniqueness during the period, it is still quite challenging (if not impossible) to determine the evolutionary lineages of Beaker Family pottery from decoration alone [Besse 1998a]. The evolution and preservation of regional designs, however, seems a bit easier to figure out. If women were doing the potting, then the patterns would easily have passed from generation to generation in parallel with kinship ties. In this fashion, the regional variations of the Bell Beaker decorations would be analogous to the conservation of Scottish tartans, which were made by women in the family, for many years [Garrido-Pena 2005, Thomas 2005].

3.2.1 The Standard Style

The Standard Bell Beaker goblet (Fig. 5) is the classic, pan-European Beaker. It has also been known as the Maritime or International style of Beaker and is very homogenous in style and mode of fabrication. The goblet was produced domestically, but according to a strict protocol which gave the Beaker its well-known red-orange color, bell-shape, and simple geometric design. Standard Beakers were decorated in several fashions, but the general pattern involved using a shell or toothed-comb to leave alternating bands of impressed lines and smooth clay. These pots took hours to produce and were clearly intended for a special function in excess of daily use. [Salanova 2002, Salanova 2005]

As a funerary piece, the Standard Beaker was held to a range of guidelines concerning both production and esthetics [Salanova 1998a]. It is usually very distinct from the typical local productions in an area, and required a much greater investment of time [Guilaine 2002, Salanova 2002]. Evidence suggests that the Beakers found in graves were made particularly for the occasion, since goblets in the same burial appear to be made by the same potter and not simply chosen from a pre-made stock [Salanova 2002]. Strictly-made Standard Beakers have been found almost entirely in grave sites, but the decorated Beakers found in settlements tend to have a bit more originality in their design [Salanova 1998a, Salanova 1998b].

Figure 5:

The Classic “Maritime” Beaker

This type is now known as the “Standard” or “International” style of Beaker goblet.

(Rojo-Guerra et al. 2005)



Variations of the Standard Maritime Beaker are quite common and include the AOO, AOC, geometric pointed, and mixed styles [Rojo-Guerra et al. 2005]. In the past, there was some thought that the AOC (Fig. 6), not the Standard, was the primeval Beaker, but the lack of Corded Beakers in Portugal and Spain makes this particularly unlikely [Case 2004]. Later variations include a “barbed-wire” design crafted using small pieces of flint wrapped with string [Harrison 1980].

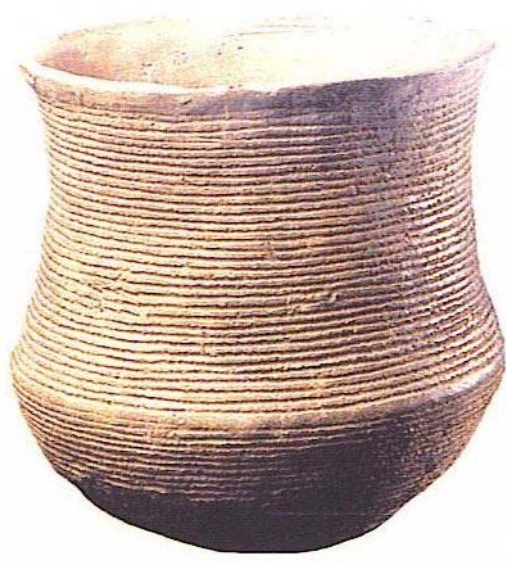


Figure 6: An AOC
or “All Over
Corded” Beaker

(Rojo-Guerra et al.
2005)

The evolution of the Standard Beaker is curious, but its design seems to indicate contact with other cultures and influences from different sources. Since Portugal is located in a prime crossroads between several areas, it makes sense that there would be a convergence of ideas coincident with overlapping exchange networks and the mixing of people [Garrido-Pena et al. 2005]. The zonal-notched decoration on the rim of some Beaker pottery, among other designs, is similar to patterns from north Africa [Case 2004]. These patterns could have evolved separately, but most likely serve as evidence for the communication between cultures at the end of the Neolithic.

3.2.2 Technique

While vessel decoration is no doubt crucial to the classification of Bell Beaker pottery, consideration of the technology used is also essential [Salanova 1998b]. The Beakers were made using very different technique from many traditional ceramics, so an understanding of what

makes them unique aids in their identification. Bell Beaker analysis has revealed several interesting characteristics: nearly all of the vases are made from local clay, temper/grog was used in all of the pottery, and the signature red-brown-orange color is from the use of Iron-oxide rich clays [Convertini 1998a]. It is interesting to note that even though regular, local clays were used in all regions [Salanova 1998a], the potters still selected the appropriately iron-rich substrates for their work.

The use of temper (i.e. grog or “*degraissant*”) in the Bell Beaker pots is one of the major aspects which distinguishes them from other ceramic traditions [Convertini 1998b]. The addition of these “non-plastic” particles [Convertini 1998a] made the pottery more resistant to heat shocks [Salanova 1998b] and improved durability. Several different types of grog were used including ground calcite (popular in the Midi region) and chamotte, the pulverized remains of previously fired pottery [Convertini 1998a]. Most of the Bell Beaker ceramics contain chamotte as temper [Convertini 1998b], but the amount used varies by region along a south-north gradient [Besse et al. 2005].

Tools used for decoration are also an important part of the Beaker technique since they are an integral aspect of decoration. The choice of tool is determined by the decoration to be made just as much as the decoration created is influenced by the tool used [Salanova 1998b]. Common tools selected by Bell Beaker potters include shells (particularly cockle shells, *Cerastoderma edule*), toothed combs, fish dorsal-fin bones, small cords, and fingernails [Billard et al. 1998]. The decorations are highly variable but were generally created in soft clay (e.g. before firing) [Salanova 2002]. The sea shells were most commonly used for decoration of the Standard

beakers, but comb impressions (Fig. 7) were fairly common in regionalized designs [Salanova 2002]. Despite these regularities and production codes for the Standard [Salanova 2002], however, there must have been some allowance for individual creativity and local resource availability since Salanova identified eleven different methods for creating the Maritime decoration [Salanova 1998b].

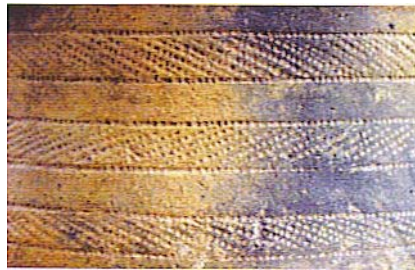


Figure 7: Bell Beaker Decoration Made Using a Toothed Bone Tool
(Rojo-Guerra et al. 2005)

3.2.3 Function

It is clear from the nature of the Bell Beakers that they were vessels intended for holding something, but the exact identity of the contents is unknown [Lemercier 1998]. As far as their social, ritual, religious, domestic, symbolic, and other functions, not much is clear [Gallay 1998a, Gallay 1998b]. Analysis, especially of caramelized matter on the inside of pots, shows that the Beakers definitely served domestic purposes [Besse 1998a, Besse 1998b, Salanova 1998a], but hypotheses of beverages and libation rituals [Benz et al. 1998b, Czebreszuk 2004] are slightly more speculative.

3.2.4 Spread

The distribution of the Standard, Maritime Bell Beaker is very perplexing and intriguing. While the design of the Beakers is shockingly homogenous over Europe [Salanova 2002], their dispersal is very surprisingly uneven. The density of the Standard is very high on the Atlantic coast but decreases markedly the farther inland one goes [Guilaine 2002]. Such a large number of Standard pots in Portugal and other parts of southwestern Europe no doubt encourage the idea that the Beaker tradition developed in that region before expanding elsewhere [Case 2004].



Figure 8:

Decorated Bell Beaker Pottery

(Photo courtesy of the Cantonal Museum of Archaeology in Sion, Switzerland)

Another factor that potentially plays a large role in the spread and diffusion of Bell Beakers is that each society has its own propensity to change. Some communities are extremely conservative—old habits die hard and new traditions are very hesitantly established—while others pick up new fashions with each changing wind. One striking example from the Bell Beaker data, is a comparison between the Brittany and Paris Basin regions of France [Salanova 2004]. The Parisians are very slow to adopt anything new that comes through, while the Bretons demonstrate a much greater propensity towards cultural transformation by accepting new styles and habits (like pottery and burial traditions) [Salanova 2004, Guilaine 2002].

3.3 The Common Ware

Despite the huge diversity and widespread distribution of decorated Bell Beaker finds, the undecorated, Common Ware is currently the newest, most promising branch of Beaker study [Barfield 1998]. The Common Ware may be new forms, or they may have derived from the local Neolithic cultures [Besse 2004b], but in either case their domestic function makes them good indicators of cultural solidarity [Gallay 1998a]. In fact, some scholars have used the apparent homogeneity of the Common Ware to assert the existence of an independent Beaker Culture [Billard et al. 1998]. Others have used it to show linkages between Neolithic, Bell Beaker, and Bronze Age cultures [Besse 1998b]. At the very least, however, the Common Ware is useful for the identification of sub-cultures within the larger framework of Beaker-using peoples [Gallay 1998a] and illustration of their ties to the Beaker super-culture [Benz et al. 1998b]. Marie Besse, who has recently done extensive analysis of the Beaker Common Ware, points out that the Common Ware actually composes the majority of Bell Beaker pottery finds but has typically received very little of the scholarly attention [Besse 2003a].

The Common Ware, or *Begleitkeramik*, are the undecorated, domestic ceramics of the Beaker-using populations [Besse 1998a]. These pots are less carefully fabricated than their decorated counterparts and have fewer regulations for fabrication than the Standard, but there are still some general pottery production standards [Besse 1998a, Besse 2003b]. They appear to be the result of Bell Beaker interaction with the contemporary local cultures [Benz et al. 1998b].

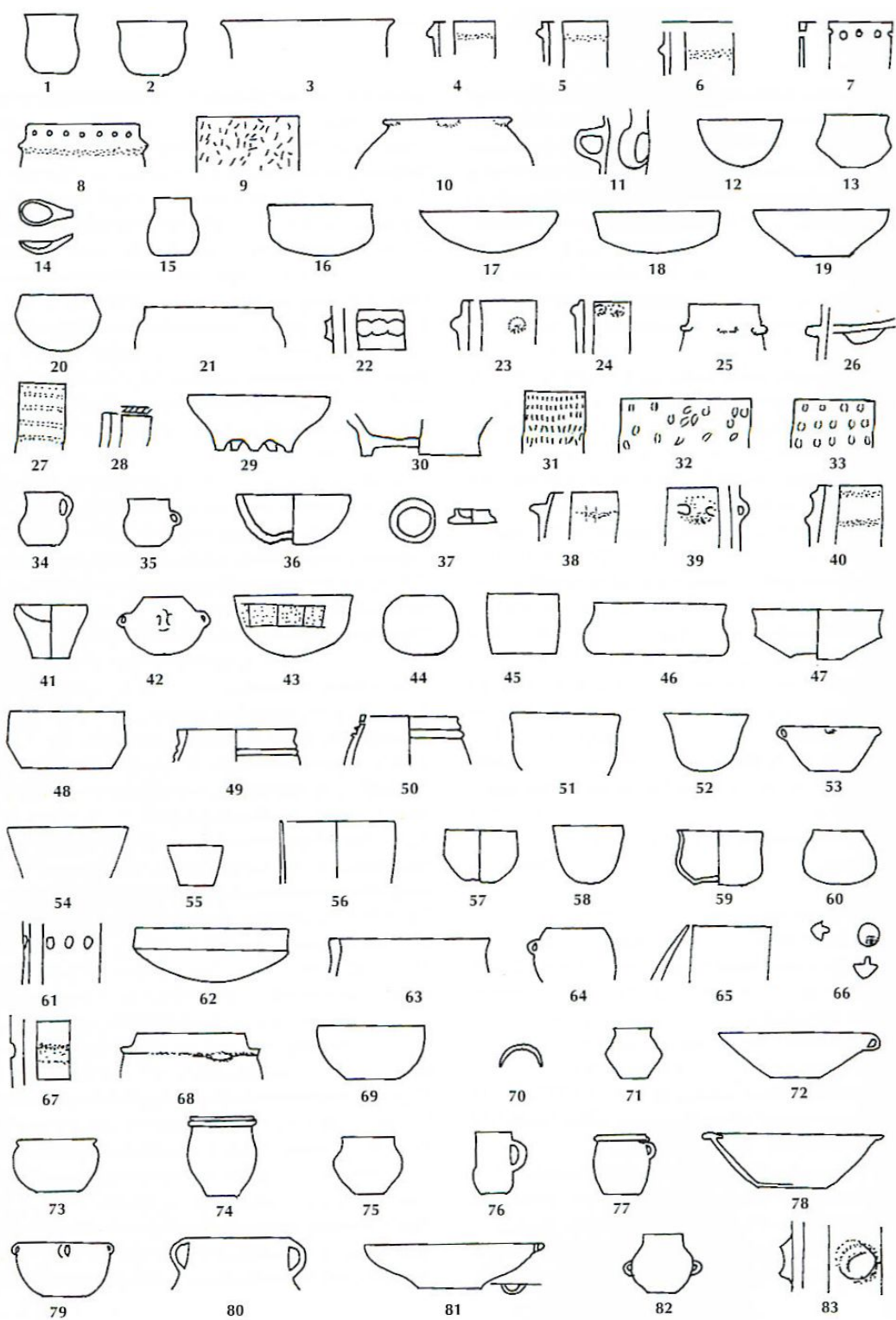


Figure 9: The 83 types of Bell Beaker Common Ware Pottery Identified by Marie Besse (Besse 2003b)

For her analysis of the Bell Beaker Common Ware, Marie Besse considered data from 800 different sites [Besse 2003b, Besse 2004b, Guilaine 2002]. From this representative body of data [Besse 2003b], she described 83 distinct types of pottery (Fig. 9). The 19 styles occurring in 25 or more sites were considered “Principle Types” and all the rest were called “Secondary Types” [Besse 2003b, Besse 2004a, Guilaine 2002]. A Multidimensional Scaling Analysis showed that the data associated strongly into three geographically-based sub-cultural groups (Fig. 10): the Eastern Domain (including Bohemia, Moravia, Austria, Hungary, Bavaria, and Poland), the Northern Domain (including Western France, the Netherlands, Belgium, and Germany, except Bavaria), the Southern Domain (including Northern Italy, Switzerland, and France, except Western France) [Besse 2003b, Besse 2004b, Besse et al. 2005].

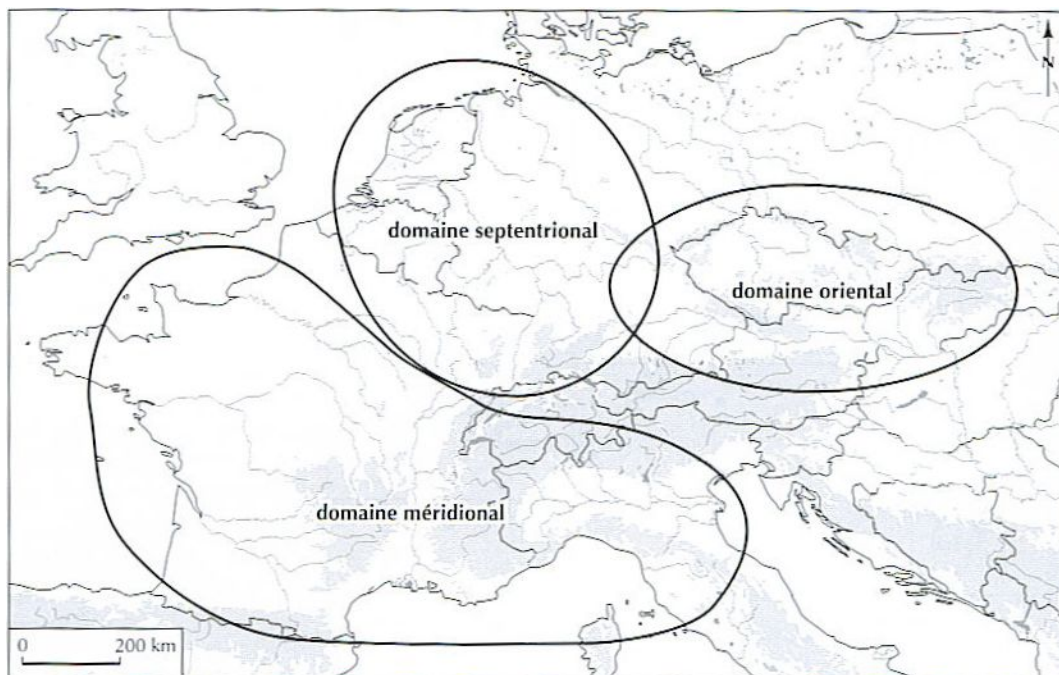


Figure 10: The Three Sub-Cultural Domains Identified Through Common Ware Analysis: the Eastern Domain (domaine oriental), the Northern Domain (domaine septentrional), and the Southern Domain (domaine méridional). (Besse 2003b)

These Domains were not entirely isolated, but their influences on each other were highly varied [Besse 2003a]. It is interesting to note that the local Neolithic substrates also vary in their influence on the evolution of Bell Beaker Common Ware in the different Domains. The Southern Domain pottery has very little relationship with the Neolithic substrate, and this lack of visible influence seems to indicate an important change or renewal in the area [Besse 2003a]. In the Eastern and Northern Domains, however, the Corded Ware substrate appears to be instrumental in the development of the Beaker Common Ware. There is no abrupt change in style from the substrate to the Beakers, so a gradual transition from one to the other seems likely. [Besse 2003a] Curiously enough, the Corded Ware culture is also contemporary with the Bell Beakers in these areas [Besse 2003a], thus there could not simply have been a direct and complete progression from Corded to Beaker.

The Eastern Domain includes twelve Principle Types of Common Ware [Besse 2003b] and is geographically centered on what is now the Czech Republic [Besse 2004a]. The ceramics in this region are very clearly linked to the Corded Ware culture and include some styles from that period [Besse 2004a]. At the Riva del Garda Colloquim, it was suggested that the *Begleitkeramik* actually derived from contemporary Hungarian groups [Barfield 1998]. The forms most common in the Eastern Domain include: undecorated, low goblets; one-handled pitchers; bowls with a T-shaped lip and vertical or horizontal handles; and polypod cups [Besse 2003b].

Influences in the Northern Domain are also linked to the Corded Ware substrate (Fig. 11), and the most common forms of Beaker pottery in this region are derivatives from similar Corded

Ware pieces [Besse 2004a]. Some stylistic influences are also evident from the Southern and Eastern Domains [Besse 2004a]. The most abundant forms of Common Ware in the Northern Domain include: both low and high, undecorated goblets; pots with fingernail and spatula-impressed patterns; one-handled pitchers; and tall, slender pieces [Besse 2003b].

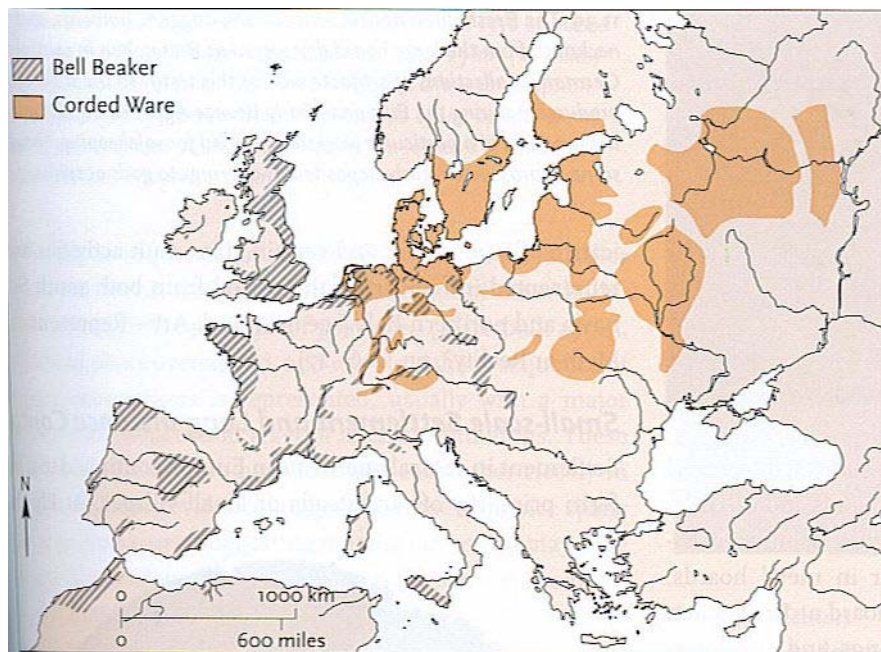


Figure 11:

Map of the Corded Ware and Bell Beaker Substrates in Europe

(Scarre 2005)

The Southern Domain has almost no relation to the local substrate, but there are many influences on both form and style from the other two Domains [Besse 2004a]. Common types of pottery in this region include: undecorated goblets; pots with little ‘tongues’ for handles; vessels with perforated rims; carinated beakers; pots with notched rims; hemispherical bowls; pieces with cordon impressions under the rim; as well as one-handled bowls and pitchers [Besse 2003b].

One remarkable aspect of the Bell Beaker Common Ware is that there is a different distribution of pottery in tombs and settlements in all three Domains [Besse 2003b]. In addition to whatever it indicates about Bell Beakers, this variation also implies that in regions where data are

predominantly from only one type of site, there is a large chunk of pottery missing from data set in that area [Besse 2003a]. In the Eastern Domain, the same pottery styles are found in both graves and settlements, but the ratios are very different [Guilaine 2002]. Most of the data in the Northern Domain comes from burial sites, but it indicates that there is no appreciable difference between ceramics from collective and individual burials in that region [Guilaine 2002]. The Southern Domain, on the other hand, has a much more diverse collection of pottery in collective than in individual burials [Guilaine 2002].

The Bell Beaker Common Ware is very clearly an important, intricate part of the Bell Beaker mystery. Marie Besse aptly describes it as “a reflection of the complex relationships existing between different cultural groups” [Besse 2004a] and uses it to try to answer some of the proverbial Bell Beaker questions [Besse 2003a]. The Common Ware data illustrate that the Bell Beakers were certainly not one homogenous cultural group, but rather a collection of sub-cultures under a Beaker super-culture. The relatively small number of sites found with only Common Ware (and not decorated Bell Beakers) evidences the importance of the Bell Beaker cultural components in society at the time [Besse 2004a].

3.4 Contents

In addition to wondering about the origins of the Bell Beakers and the people who deposited the goblets, many archaeologists have questioned what exactly the Beakers held. To some, it seems obvious that a goblet of Bell-Beaker size would be quite useful as a drinking vessel, but others find that they are much, much too large for any such individual usage [Garrido-Pena 2005].

Judging by the difference in cup size between the whopping 44 oz. stadium cups so popular in America today, and the petite demitasse cups used for espresso, it seems that size cannot serve as an indicator for use as a drinking vessel so much as what type of beverage it might have held.

Numerous archaeologists have hypothesized that the Beakers were used to hold beer, or a similar psychotropic beverage, for special ceremonies like funerals [Garrido-Pena 2005, Garrido-Pena et al. 2005]. Some chemical analyses have revealed that several Bell Beakers almost certainly did contain beer and that others contained animal fat (probably some sort of food) [Garrido-Pena 2005, Garrido-Pena et al. 2005]. Despite these data, however, there are still many skeptics about the relationship between the Bell Beakers and intoxicating beverages.

4. THE BEAKER SET ASSEMBLAGE

The classic Bell Beaker is not a stand alone object, but rather it is frequently found as an element associated with a typical “Beaker Set” of artefacts. As Salanova argues [Salanova 2005], it is important to understand the Set, its components, and the resulting cultural phenomenon if one wants to understand the origin and spread of the Bell Beaker tradition. The Beaker Set is usually considered to include decorated pottery, undecorated pottery, Archery/Warrior equipage, and personal ornaments [Lemercier 1998, Rojo-Guerra et al. 2005, Salanova 2005]

The decorated pottery of the Beaker Set includes the typical funerary type, the Standard, as well as other variations [Lemercier 1998, Salanova 2005]. While there are many different types of decorated, Bell Beaker, funerary ceramics, these pieces are still adherent to strict stylistic and technical norms [Lemercier 1998]. Despite this consistency, however, there are richly varied decorative motifs within the Beaker patterns [Lemercier 1998].

Undecorated ceramics in the Beaker Set are the domestic Common Ware, or *Begleitkeramik*. These pots show heavy influence by the local groups including the Corded Ware culture and other central European groups [Salanova 2005]. As Marie Besse shows in her work, the actual composition of the Common Ware selected for tomb is heavily dependent on the local region [Besse 2003a].

The lithic components of the Beaker Set tend to include arrowheads (Fig. 12), the style of which varies by region, as well as archers' armguards, and V-perforated buttons [Garrido-Pena et al. 2005, Lemerrier 1998, Rojo-Guerra et al. 2005]. The armguards were alternately made from leather or other such flexible materials and the V-perforated buttons were often made with bone [Rojo-Guerra et al. 2005]. Stone articles also included in some Beaker burials include daggers and knife blades [Gély 1998].



Figure 12: Bell Beaker Arrowheads (from the Tomb of the Amesbury Archer)
(Wessex Archaeology 2002)

One of the most distinctive features of the Bell Beaker Set is the inclusion of metal goods (Fig. 13) or elements used in metallurgy. These elements are a point of contention since they are found somewhat infrequently, but they do tend to be associated with elite, male burials from the Bell Beaker tradition [Salanova 2005]. Metal objects found in Beaker graves are usually made of copper and the different forms include Palmela Points, which were probably used as javelin tips [Case 2004], tongued daggers, small daggers, and double-ended square-cross-sectioned awls [Lemerrier 1998, Rojo-Guerra et al. 2005, Salanova 2005, Thomas 2005]. Some graves also contain cushion stones, an essential tool for copper metallurgy [BBC 2003].



Figure 13:

Copper Daggers (from the Tomb of the Amesbury Archer)

(Wessex Archaeology 2002)

Personal ornaments discovered in Beaker Graves are widely varied by region [Salanova 2005] and are frequently unique finds. One of the most common pieces of jewelry is the ‘arciform’ (bow-shaped or half-moon-shaped) pendant [Lemerrier 1998]. Necklaces, headbands/diadems,

beads, and earrings/tress-rings have also been associated with Beaker burials [BBC 2003, Blocksberger 1971, Lemerrier 1998, Rojo-Guerra et al. 2005, Salanova 1998a]. The materials used to craft these adornments range in value from shell, bone, and stone to copper and gold [BBC 2003, Gély 1998, Rojo-Guerra et al. 2005]. Gold finds are quite significant from this time period because they are so precious and rare [BBC 2003, Gély 1998].

4.1 The Amesbury Archer

One of the most impressively complete and elaborate of the Bell Beaker burial finds is the ‘Amesbury Archer’ (also known as ‘The King of Stonehenge’) from what is now England. The grave was located only 5 km from Stonehenge and right on the banks of the Avon River, which would have served as a navigational ‘highway’ of sorts at the time [BBC 2003, Fitzpatrick 2002]. In addition to its prime geographic location, the burial was positioned very close to another similarly well-furnished tomb [BBC 2003, Fitzpatrick 2002].

The first tomb, that of the so-called Amesbury Archer, was extraordinarily equipped (Fig. 14) for an Early Bronze burial. It contained: five Bell Beakers (usually only two are found in a single tomb), three copper knives (usually only one per burial), two complete sets of archery equipment (including armguards and bone tools), fifteen flint arrowheads (all of which were crafted by the same flint-knapper), two gold tress rings, a shale belt loop, leather slippers, a large bone pin (as for fastening a cloak/garment), two full sets of clothing, a deer antler spatula-tool (for flint-knapping), several boar’s tusks, and a cushion stone (small, black stone used as an anvil for copper metallurgy). [BBC 2003, Fitzpatrick 2002]

Of the Bell Beakers in the grave, none were in the Maritime, or Standard, style. AOC and geometric pointed styles were present, but there were also some very regional discoveries. One Beaker was decorated with plaited cord impressions (only a few of these have ever been found in the British Isles), another with a very Scottish looking triangle pattern, and third with alternating bands of cord impressions. [BBC 2003]



Figure 14:

The Amesbury
Archer's
Impressive
Funerary
Assemblage

(Wessex
Archaeology
2002)

Arrangement of the artefacts at the site indicates that the burial was deposited very precisely (Fig. 15). The body was placed in a flexed position, lying on its side, and facing north. One of the armguards was probably attached to the subject's wrist, and the arrowheads were clustered like there might have originally been a quiver of arrows. The shale loop and bone pin were near the waist and chest, respectively, and the gold jewelry was located up near the head (hence some ambiguity as to their purpose as earrings, tress rings, or fasteners for a headdress which was not preserved). Many of the extra tools, etc. were grouped as if they had been stored in a bag which did not survive archaeologically. Of the five Bell Beakers, two were placed near the face of the

deposited individual and the other three were together just behind the body. [BBC 2003, Fitzpatrick 2002]



Figure 15:

The Tomb of
the
Amesbury
Archer

(Wessex
Archaeology
2002)

The second tomb contained almost the same accoutrements, including the gold tress rings. Scientific analysis of the tress rings indicates that all four of them (two from each grave) were actually made from the same gold nugget, but each set of two was crafted separately (but possibly by the same person). This piece of trivia is quite interesting in light of the fact that the two burials are thought to have occurred in the same general time frame. [BBC 2003, Fitzpatrick 2002]

Radiocarbon dating revealed that both sites are from around 2400-2200 BC which is the beginning of the Copper (Chalcolithic) and Bronze Ages in England. Two dates were analyzed from each deposit, but the resolution of the radiocarbon dating is not precise enough to differentiate between the graves. It does show, however, that the two men were probably contemporaries. [BBC 2003, Fitzpatrick 2002]

Physical analysis of the Amesbury Archer indicates that the interred individual was probably a thirty-five to forty year old male. He was approximately five feet, eight inches tall, very muscular, and had peculiarly articulated heel-bones. Careful examination of the skull revealed both a short, rounded cranium with a flat occipital portion and a large super-orbital region and very significant dental abscess. This abscess probably started as a minor infection in the teeth and festered until it actually made a hole in the jaw-bone, worked its way through the soft tissue, and oozed into the man's mouth. One can only imagine the stench of his breath with no toothpaste and a jaw constantly excreting infected material. [BBC 2003, Fitzpatrick 2002]

The Archer's halitosis seems inimitable, but it was probably matched by the odor from his badly infected knee. Somewhere in his intriguing past, possibly in a battle, a fall, or a hunting venture, the Amesbury Archer lost his patella (knee cap). With such a significant injury, it is amazing that the man even survived, much less live long enough to warp his femur bones by walking around in a contorted, twisted manner. Without a patella, it is impossible to fully extend the leg, so the Archer resorted to swinging his injured leg around the side of his body as he attempted to walk. In addition to the inconvenience of such a weird gait, he would have had to deal with the puss, pain, and smell of a severe, chronic bone infection. [BBC 2003, Fitzpatrick 2002] Clearly this man was important and tough to have survived so long and so much!

Analysis of the body from the second grave revealed a twenty to twenty-five year old male with similar skull shape and articulated heel bones to the Amesbury Archer. The similar physique (horrible injuries excepted) of the two men, their comparable material largess, and their temporal proximity leads one to hypothesize that they were probably related—possibly father and son. If indeed they were related, one must also wonder if there was a familial transfer of authority between generations. It seems unlikely that so many coincidences would occur otherwise. [BBC 2003, Fitzpatrick 2002]

Strontium-isotope dating from the teeth of the two individuals produced very interesting results: the older man grew up in central Europe (Switzerland) and then moved over to England, but the younger man grew up in Bristol, England and moved slightly eastwards during his lifetime. [BBC 2003, Fitzpatrick 2002] This discrepancy is curious since they appear to be related, but it is quite easy to explain. Marriage partners (in addition to cattle, foodstuffs, etc.) are historically

important goods of exchange, and a wealthy, foreign man bringing lots of rare and interesting objects and talents would make a very eligible suitor [BBC 2003]. As Jane Austen so acutely recognized, “It is a truth universally acknowledged, that a single man in possession of a good fortune must be in want of a wife” [Austen 1813]. It appears that the Amesbury Archer might have amassed his fortune, traveled to England, found a wife, and produced a son (who was possibly also his heir) [BBC 2003].

One important thing to remember is that while a funerary assemblage can indicate an individual’s personal status during life, it does not necessarily do so. Funerals are important social occasions and are more of a service for the survivors than the dead. [BBC 2003]. There is some consideration that the Bell Beakers could have been used to hold beverages for the mourners [Garrido-Pena 2005] (this explanation would certainly elucidate the inclusion of Bell Beakers in infant and child burials [Garrido-Pena 2005]), and other data show that some funerals involved the slaughter of enough cattle to feed a thousand people for a whole week [Thomas 2005]. In any case, a funerary celebration involving an *Odyssey*-style hecatomb must have been a big deal.

Regardless of the need to be careful when assuming connections between funerary assemblage and real-life prestige, the Amesbury Archer and his (possible) successor were extremely well-prepared for the after-life. The “very conspicuous consumption” [BBC 2003] of their burials, not to mention the long survival of the pitifully injured Archer, seems to indicate that these two men were, at the very least, important to those around them.

4.2 Discussion of the Beaker Set

The Beaker Set is a very intriguing aspect of the Beaker Problem since it is both glaringly obvious in the archaeological record and disturbingly rare in its complete form. Salanova notes that single tombs rarely contain the full Bell Beaker Set [Salanova 1998a], and Lemerrier et al. discuss the juxtaposition of its general absence from the Atlantic and Mediterranean regions with its prevalence in the Eastern Domain [Lemerrier et al. 2001]. Clearly the data are heterogeneous enough to make analysis of the Beaker Set, its meaning, and its importance very difficult.

It has been suggested that instead of representing a consistent Bell Beaker Ideology across the whole of the European continent, the Beaker Set is actually a collection of objects and symbols which have separate meanings to different groups of people [Thomas 2005]. Thomas calls the Set a “shared symbolic currency” and writes, “The Beaker assemblage did not have a single message, but provided a material language in which a variety of different messages could be expressed” [Thomas 2005]. He goes on to say that “The Beaker package was neither the symptom nor the cause of a specific form of social organization or an ideological structure, but as a powerful array of material symbols, it enabled existing mortuary rituals to be elaborated, enhanced and clarified” [Thomas 2005].

This viewpoint is very tempting since there are so many illustrations from modern life to support it. For example, many English speaking people around the world have widely different meanings for the same words. Geographic separation allows the evolution of regional

differences. Just like in the children's game of Telephone, the repeated passing of information has a tendency to alter the original message.

Such an approach also meshes with Vander Linden's suggestion that the change in grave goods might not be anything more significant than a superficial adoption of new traditions.

Ethnographic studies have shown that sometimes groups appear to adopt a new ideology, but in truth they use the novel foreign symbols to represent their former local traditions.

Another idea to explain the apparent symbolism of the Beaker Set is that the objects fulfill similar roles in the different communities. If several independent areas all develop a certain need, which happens to be filled by the components of the Set, then the Beaker Set could become widespread without necessarily accompanying the permeation of a particular Ideology [Czebreszuk 2004].

One of the biggest changes between the Bell Beaker Set and prior funerary assemblages is the inclusion of weaponry [Salanova 1998a]. The substantial presence of copper daggers and archery equipment leads many scholars to wonder if the Bell Beakers might have represented an emerging class of elite warriors who became the first aristocracy [Czebreszuk 2004]. Case suggests that the components of the Set signify the protective, 'manly' qualities of cunning, endurance, courage, and power and that they were more symbolic than functional [Case 2004]. He sees the Bell Beaker as one component of a tradition intended both to honor ancestors and to protect the living [Case 2004].

The components of the Bell Beaker Set are no doubt of special significance during the third millennium BC. Their distinctive design and careful fabrication combined with their presence in very particularly deposited tombs implies that they have a substantial cultural value to the people who used them [Czebreszuk 2004]. Despite this importance, however, the Bell Beaker Phenomenon is becoming less strictly associated with the Beaker-dagger-armguard-arrowhead funerary assemblage [Salanova 1998a].

4.3 Copper

The Bell Beakers, famous for their copper daggers, have long been associated with the copper metallurgy and the dawn of the Metal Age in Europe and the Beaker Period has been associated with a metallurgic boom [Salanova 1998a]. Some have even suggested that the entire Beaker Phenomenon was actually triggered by the use of copper metallurgy [Salanova 1998b].

In England, metallurgy is thought to have been imported by the same people who brought the Bell Beakers—local people were surely involved in the process, but an influx of ideas and technology with foreign travelers seems to have sparked the change [BBC 2003]. The aforementioned Amesbury Archer was clearly an important member of society and he, most notably, was buried with a cushion stone, an important tool for metallurgists [BBC 2003].

The Ross Island Mine in Ireland has also received much attention in the discussion of Bell Beakers and copper metallurgy. Early production of copper and gold in the area was linked to the appearance of the Bell Beakers in the third quarter of the third millennium BC [O'Brien

1998]. A Bell Beaker work camp where copper ore was smelted to make usable metal has also been discovered at the mine [O'Brien 1998]. In the words of O'Brien, "Ross Island provides conclusive evidence that some Beaker-using groups in Ireland were directly involved in the mining, production and exchanged of copper metal in the final Neolithic period" [O'Brien 1998].

One of the Amesbury Archer's weapons was actually made with metal from Western Ireland. The other two, however, are thought to have come from the continent since they contain such a different arsenic concentration from the Irish metal [BBC 2003]. Most of the copper used in Europe at the time was very rich in arsenic [Barge et al. 1998] and this impurity added strength to the metal and made it less malleable.

Portugal is yet another location where the arrival of the Bell Beaker tradition has been associated with the appearance of copper metallurgy [van Schoor 1998].

Despite all of these linkages between the Bell Beakers and the start of metallurgy, there are many discoveries which clearly demonstrate the presence and use of copper metal well before the appearance of Bell Beakers. The Beakers did not arrive in Switzerland until the third millennium BC, but the first evidence of copper metallurgy dates back to the fourth millennium BC [Stöckli 1995].

According to Vancer Linden, the Bell Beakers actually bring a technological regression to previously well-developed metallurgical traditions [Vander Linden 2004]. Ambert mentions that French metallurgy was actually three centuries old when the Bell Beakers first appeared

[Ambert 1998a] and finds that Beaker metallurgy in this region is, in fact, less common than the original local copper metallurgy [Ambert 1998b]. Lemerrier's finds in Midi concur with Ambert on the anteriority of copper metallurgy in the area and lead him to contend that since metallurgy predates the Bell Beakers, propagation of the art could not have been the impetus for Bell Beaker spread in the region [Lemerrier 1998].

Salanova reports the anteriority of copper daggers to the Beakers [Salanova 2005], and also argues that the Bell Beaker period is not a starting point for early French copper metallurgy, but rather a development, or point of arrival [Salanova 1998a]. She goes on to cite the significance of the copper dagger as THE major status point in Bell Beaker society as supporting evidence for that assertion [Salanova 1998a]. In a discussion at the Riva del Garda colloquium, Archaeologists agree that the metallurgy of the Bell Beakers is truly poor in comparison with that previously established in southeastern Europe [Barfield 1998].

Even though there is little doubt that the Bell Beakers were not the first to bring metallurgy to most of Europe, there have not been any findings to indicate that the Beaker-using people were not metallurgists [Ambert 1998a]. Copper awls and knives were in use before the Bell Beakers, but the square-cross-sectioned awl and the tanged knife blade with hammered flanges (as opposed to notched ones), appear to have been Bell Beaker innovations [Case 2004]. Palmela Points appear to be contemporary with the Bell Beakers (even if not indubitably one of their innovations) [Ambert 1998a], and Salanova recognizes similar patterns of circulation for both Palmela Points and Bell Beaker pottery [Salanova 1998b].

Furthermore, Bell Beaker finds in Estremadura, Portugal have demonstrated an association between the pots and a metallurgical workshop [Salanova 2004]. Other authors describe the same connection between Beakers and metal-working areas [Kunst 1998, Salanova 1998a, Salanova 1998b], and some Bell Beaker vases found in Spain were even used for the smelting of copper-rich ores [Salanova 1998b]. Experimental studies of ancient copper metallurgy have also demonstrated the ability to use clay crucibles for heating ore and purifying the metal [BBC 2003, Happ 1998]. Kunst [1998] raises an interesting question regarding this accumulation of Bell Beakers in areas used for copper production: were the copper and gold smiths working for the upper echelon of society, or were they working for it?

One would think that such a novel technology as copper metallurgy would have profound effects on society and social complexity, but interestingly enough, researchers in Spain found no evidence for such an effect [Harrison et al. 1998]. In his writing about Portugal, however, Van Schoor notes that social hierarchy develops with the introduction of metal into society and the appearance of prestige weapons and gold jewelry [van Schoor 1998].

4.4 Lithics

Whilst metallurgy was clearly important during Beaker times, one must not forget that the newfound copper metal is replacing an ancient tradition of lithic technology. Flint and other types of stone were among the first materials crafted into tools by human ancestors. Lithic tools have played a major role in human development, but they have not received much attention in the consideration of the Bell Beaker Problem. Such neglect is no doubt a result of the

importance of metallurgy to the Beaker quandary, yet there have still been several interesting observations regarding Bell Beaker stone work.

Much like the regional variations in ceramics across Europe, lithic technology also varies by region: fusiform arrowheads are very popular in the Southern Domain whereas Central European groups used compact, triangular ones (Fig. 12) [Besse et al. 2005].

Bell Beaker pottery was domestically produced by local materials, and evidence shows that stone tools were made using local substrates as well [Barge et al. 1998, Gallay 1998a].

The excavation of a Bell Beaker site at Derrière-le-Château in France revealed a huge lithic industry with over 10,000 pieces of knapped flint. Abundance of lithic material at this site was probably due more to the heavy use of flint products than to a very long occupancy [Bailly 1998]. Even so, it is suspected the Bell Beakers occupied the site for more than a century [Hénon 1998].

4.5 Social Status

From their initial identification, Bell Beakers and the Bell Beaker Set have been associated with status and prestige. The symbolic goods, fine decorations, precise positioning of the tomb, and general richness of the assemblage are all characteristics of the Bell Beaker components which seem to indicate the personal importance of the interred individual and have been historically thought to imply a great deal of prestige in an increasingly stratified society [Benz et al. 1998a,

Benz et al. 1998b, Harrison et al. 1998, Salanova 1998a]. Their use in a ritualized context has even hypothesized to have helped secure the establishment of a new group of societal elites [Fagan 1996].

This idea of the Bell Beakers and the Bell Beaker Set as prestige objects, however, has recently come into question [Salanova 1998a]. Many well-informed scholars now think that Bell Beakers are not indicative of status, but archaeologists argue about what exactly qualifies an object as a prestige good [Salanova 1998a]. Lemerrier says that because of their pleasing appearance, quality of decoration, and distinct technology (use of chamotte as temper) that the Bell Beakers were special, “pretty” objects and would have been prestigious [Lemerrier 1998]. Salanova, on the other hand, says that the only real difference between precious objects and prestigious ones is inutility—the prestigious ones are just as rare, valuable, and time consuming to create, but they are not functional [Salanova 1998a]. She also points out that since the Bell Beakers are found in so many practical, functional, domestic contexts that they cannot, according to her definition, be given prestige value, and consequently, funerary Beaker (ceramic) deposits cannot be used to infer any sort of differentiation by social status [Salanova 2005].

Other studies support Salanova’s assertion by demonstrating that the quality of Bell Beaker pottery does not in any way appear correlated with the contents or the occupant of the tomb [Besse 2003b, Salanova 1998a, Salanova 1998b, Salanova 2002]. Well-made pots are frequently found with incomplete or poorly made ones [Salanova 1998b], and the best Beakers are not always buried with the finest specimens of jewelry, weapons, or metal work [Salanova 1998a]. Gender, age, occupation, and status do not appear to influence the selection of Bell Beakers

placed in a tomb [Salanova 1998a, Salanova 2002]. The dominant opinion amongst the experts seems to be that Bell Beaker vases are not at all associated with personal status.

Just because the Bell Beaker, itself, is not indicative of status does not mean, however, that none of the other goods in the Bell Beaker Set can be used to identify one's place in society. In fact, Salanova contends that status is actually marked by the funerary assemblage, even though it is not discernable from the included pottery pieces [Salanova 1998a]. Type of burial (individual or collective), tools, and jewelry do not appear to be elements of the assemblage which indicate status, but the inclusion of weapons (especially copper daggers) does—these objects are found almost exclusively in adult male burials [Salanova 1998a]. The only tool that associates with status is the armguard [Salanova 1998a], but this seems to make sense considering the warring/hunting type depicted by the inclusion of daggers and archery equipment in adult male burials.

Unfortunately for the argument, the daggers, while they do correlate with status, cannot be considered, by definition, to be prestige objects. Ambert identifies the presence of copper daggers in domestic settings, so they must have a utilitarian function in contemporary Bell Beaker society [Ambert 1998a].

One problem with the idea of status in Bell Beaker times is that the only indicator, at present, is associated strictly with adult males. This connection makes it very difficult to determine what was happening to the wives and children associated with these men [Kunst 1998]. Some would say, however, that the similarity between Bell Beaker graves indicates that everyone has

essentially the same social rank, and since children are buried with identical funerary assemblages to adults, they too have comparable status [Barfield 1998]. Salanova suggests that the initial perception of the Bell Beakers as a class of elite burials was probably encouraged by the increased economic success of societies during the third millennium BC [Salanova 1998a].

5. BURIALS

Bell Beaker burials are a prevalent and widely studied facet of European Archaeology. Beaker tombs can be individual interments in pits, coffins, or cysts (dug into old, collective tombs) or they can be collective graves in old, megalithic monuments [Besse et al. 2005]. Tombs which show purely Bell Beaker influence are a rarity and are usually single graves [Barge et al. 1998]. These single graves predominate in Eastern Europe, but they are also found in Western Europe where megalithic tombs are the most prevalent style of interment [Benz et al. 1998a]. Since both the single and collective graves contain the same types of funerary assemblages, they are generally thought to be contemporary styles of burial (rather than one tradition having evolved from the other) [Salanova 1998b]. Some would argue that collective burial is the true habitude of Bell-Beaker-depositing peoples [Lemercier et al. 2001], but this view is too narrow for the complexity of the Bell Beaker Phenomenon.

Burial associations and assemblages in Bell Beaker tombs illustrate the importance of ethos and mythology in the Bell Beaker tradition [Case 2004]. The arrangement of grave goods usually appears deliberate [Garrido-Pena et al. 2005], thus a change in grave goods could very easily indicate a more abstract change in ideology [Kunst 1998]. The selection of Beaker grave goods could have been selected to prepare the dead for self-defense or a long journey in the afterlife, or it could have simply been paraphernalia associated with some male-oriented drinking and fighting traditions of the period [Fagan 1996, Kunst 1998]. Strahm feels that these components

cannot have substantial religious or funerary significance, however, since the same objects are used in daily, domestic life [Strahm 1998]. This argument seems to make sense as Bell Beakers and copper daggers are not exclusive to funerary finds, but Case points out the impracticality and expensive, symbolic nature of items like stone armguards which could not have been very functional for normal use [Case 2004]. Additionally, there are cultures (e.g. certain Native American groups) which do not recognize a distinction between religious and daily life [Weaver 2006]. Clearly not all of the elements of the Beaker funerary assemblage were pragmatic, but many of them were no different from the vessels and tools used in habitats during the period. This practicality, however, does not necessarily preclude religious significance.

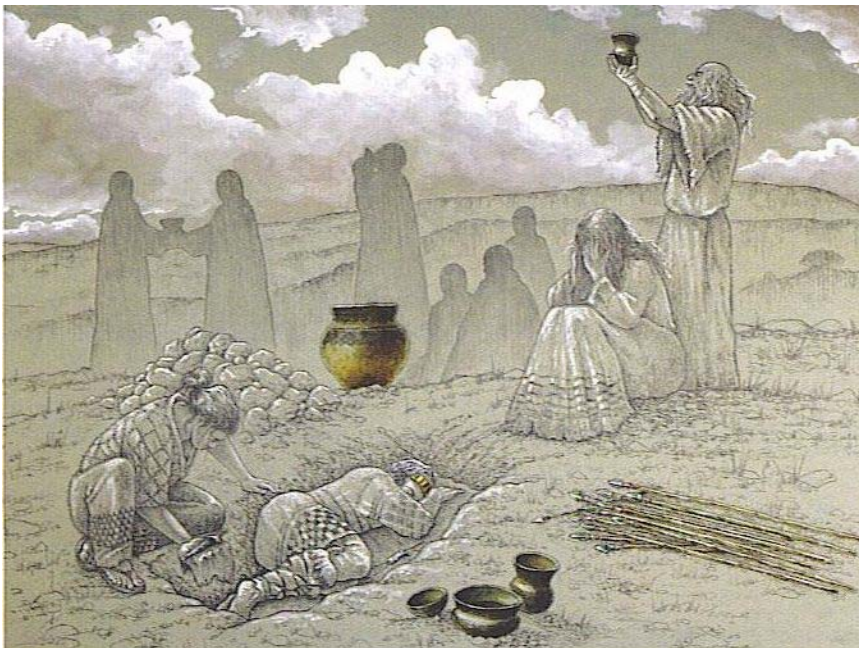


Figure 16:

An Artist's
Interpretation
of a Bell
Beaker
Funeral

(Rojo-Guerra
et al. 2005)

The Bell Beakers and their grave goods were not an isolated phenomenon—in fact, they show up during a time where rich funerary assemblages were quite popular [Lemercier et al. 2001].

Argaric graves have been discovered with similar pottery, V-perforated buttons, arrowheads, and armguards to the Bell Beakers [Kunst 1998]. The Ciempozuelos assemblage from Spain appears

partly-Bell-Beaker with its traditional three-bowl deposit including an open bowl, a carinated bowl, and a Bell Beaker [Harrison et al. 1998]. Other burials seem to indicate the interment of artisans with whetstones, flint daggers and scrapers, and bone or bronze awls, but it is not apparent whether they are socially or temporally separate from the traditional Bell Beaker warrior burials [Brodie 1998].

Salanova divides the Bell Beaker burial associations into four different categories: those with weapons and vases (these types are rare and exclusively masculine); those with tools and vases; those with jewelry and vases; and those with vases alone [Salanova 1998a]. She also recognizes that a fifth category, in which the dead are deposited with no grave goods, should be considered [Salanova 1998a]. Despite the distinctions between different funerary assemblages, all four categories of burial include the same styles of Bell Beaker ceramics [Salanova 1998a].

Many scholars find that the Bell Beaker tradition places a novel emphasis on the importance of people as individuals [Garrido-Pena et al. 2005]. Single graves separate individuals from the community and allow differential recognition of status and hierarchy [van Schoor 1998]. The strict regulation of body placement in funerary rites is also thought to demonstrate the significance of the individual in Beaker-using societies [Benz et al. 1998b]. Since males and females are buried with the same rites but in chiral positions to each other, it is thought that the sexes were more-or-less social equals [Benz et al. 1998b, Strahm 1998]. Guilaine points out, however, that fewer women were buried by the Bell Beakers than by the Corded Ware culture, and he finds that this difference is due to a Bell Beaker emphasis on a “male ethos” [Guilaine 2002].

Bodies in Bell Beaker graves are typically deposited with a north-south orientation. All of the dead are placed on their sides facing east with women's heads pointing south and men's heads pointing north [Benz et al. 1998b, Kalicz-Schreiber et al. 1998, Salanova 1998a, Salanova 2005]. This positioning means that the women were lying on their right sides and men were on their left [Benz et al. 1998a]. In the Netherlands, however, Bell Beaker burials tended to be oriented east-west (more like the local Corded Ware Culture) [Salanova 1998a], and in England and Ireland, geographic positioning of the corpses is extremely variable [Guilaine 2002].

The Corded Ware burials were generally east-west oriented, single inhumations under a tumulus with the men on their right sides and the women lying on their left [Stöckli 1995, Strahm 1998]. The traditional Corded Ware grave goods include a drinking goblet of sorts and weapons which appear to be status symbols [Strahm 1998]. Strahm even hypothesizes that the great diversity of the Bell Beaker Phenomenon is due to a tension between the Bell Beakers and the Corded Ware Culture which caused the two groups to try and differentiate their traditions from each other's [Strahm 1998].

Benz, Strahm, and Van Willigen describe several points of comparison between Bell Beaker and Corded Ware funerary traditions [Benz et al. 1998b]. Both groups use single graves and have roughly equivalent rites for males and females. The Corded Ware people orient bodies east-west and place them under a tumulus while the Bell Beakers place the dead in under steles and give them a north-south orientation. Drinking goblets (albeit with different styles of decoration) are standard elements of both funerary assemblages but the Corded Ware graves have an amphora instead of the Common Ware bowl found in Bell Beaker burials. Both traditions use weapons as

status symbols, but the Corded Ware use daggers and battle axes instead of daggers and archery equipment. Metallurgy is evident in both cultures, however the Corded Ware people tended to deposit only weapons and copper jewelry whereas the Bell Beakers left ornaments crafted from precious metals (like gold) and tools used by metal smiths. [Benz et al. 1998b] One clear commonality between the two cultures is that they both have very strong norms for fabrication, decoration, and deposition of grave goods [Benz et al. 1998b]. The two traditions are significantly different in many respects, but they are certainly linked and are not independent of each other even though they were probably culturally distinct [Besse et al. 2005].

Many scholars have studied the distributions and patterns of Bell Beaker burials, and it seems that the funerary rites tend to blend with whatever habits were popular in a given region before the Bell Beaker assemblage arrived [Thomas 2005]. There is actually a very strong localism in the Bell Beaker funerary tradition as is evidenced by the predominance of single grave burials in the east and the much greater diversity in the densely populated west [Besse et al. 2005, Guilaine 2002, Harrison et al. 1998]. In Britain and the Netherlands, round barrows were popular but in Eastern Europe, flat graves predominated [Thomas 2005]. Although most areas retained, in general, the local styles of inhumation, the important change during the Bell Beaker period was the switch of the grave goods and orientation while maintaining the pre-existing structural traditions [Lemerrier et al. 2001]. This type of partial conversion appears to represent a cultural or ideological shift of some sort in the populations with the arrival of the Bell Beakers.

Localization is also evident in the way that the apparent Beaker protocol is adhered to most strongly at the beginning of the period and then changes gradually in each region over time [Thomas 2005].

Some funerary practices, however, were brought in with the Bell Beakers. In Hungary, the standard style of burial changes from cremation to inhumation with the Beakers, but the transition is incomplete [Besse 2003b, Besse et al. 2005]. One of the other remarkable changes brought to many regions by the Bell Beakers is the use (and re-use!) of megalithic monuments [Benz et al. 1998b, Guilaine 2002, Lemerrier 1998, von Burg 2002]. This style of monument was not widely used before the Bell Beaker Period [Lemerrier 1998], but the habit of re-using preexisting monuments is almost exclusively Bell Beaker [Guilaine 2002]. In addition to re-using tombs, sometimes the Beakers were simply continuing the use of local, collective tombs; on other occasions, they altered or rebuilt old tombs [von Burg 2002]. Bell Beaker commandeering of old tombs is particularly noticeable in regions near the Corded Ware Culture where there would have been an incentive to assert their own cultural identity [Benz et al. 1998b]. In the substantial Bell Beaker find at Petit Chasseur in Sion, Switzerland, several different Beaker interments were excavated including one re-used megalithic monument where the skeletons of the prior occupants were actually chucked into a pile outside of the Dolmen to make room for the Bell Beaker dead [Besse et al. 2003, Gallay 1986].

At the Riva del Garda Colloquium, Beaker archaeologists discussed how one must be careful using burial data to make inferences about daily life since those finds only indicate what people thought about death [Barfield 1998]. They also mentioned that “it is easier to accept a new technology than a new burial tradition” [Barfield 1998]. Consequently, as Lemerrier suggests, the appearance of any new types of sepulture during the Beaker period probably indicates the movement of people and not just the transfer of ideas about metallurgy or the technology to make a new pot [Lemerrier 1998]. In addition to movement of people, changes in burial rites

can also be indicative of significant alterations in Ideology or the relationship between the living and the dead [Thomas 2005].

5.1 Burials in the Three Domains

Bell Beaker Burials, like the Common Ware, can be used to identify different sub-cultural domains within the greater Bell Beaker population [Besse 2004b]. This capacity may be a result of the localization of funerary traditions within the Bell-Beaker-using areas. In the Eastern Domain, graves are mostly individual with ceramics, daggers, and archery equipment. These deposits are fairly similar to the contemporary Corded Ware burials, and they generally contain undecorated types of Common Ware, or *Begleitkeramik* [Besse 2003b]. The Northern domain has both collective and individual tombs with a very uneven geographic-distribution of finds [Besse 2003b]. Variation in the North is unmatched, however, by the astounding diversity of finds in the Southern Domain. Collective tombs are quite common, but individual sepultures, pit tombs, and habitats are also found with frequency [Besse 2003b]. Finds in this region include Common Ware, metal work, jewelry, finely engraved steles, a variety of ceramic forms, and a multitude of decoration techniques [Besse 2003b]. Interestingly enough, however, the variation in the Southern Domain does not correlate with the Neolithic substrate [Besse 2003b].

6. BELL BEAKER SETTLEMENTS

Since Bell Beaker funerary finds are somewhat more common, historically, than Bell Beaker settlements, not as much work has been done in this area. Settlement data from the Eastern Domain is particularly scant, but the Western and Northern Domains have yielded more interesting finds [Benz et al. 1998a]. It has been suggested that the isolation and dispersal of habitat finds in the Northern Domain may indicate Bell Beaker autonomy from the other local cultures [Barfield 1998]. All three Domains have evidence of oval-shaped houses, but round and rectangular buildings have also been found [Besse et al. 2005]. The wood and mud houses at Derrière-le-Château in Switzerland are a fortuitous find since Bell Beaker buildings have so rarely been preserved [Hénon 1998].

From what settlement data is available, it is evident that there is a large variation in Bell Beaker habitats across Europe [Barfield 1998]. The houses in Iberia appear related to the pre-Beaker substrate, but in Britain they do not [Barfield 1998]. This finding seems to support the idea that the Bell Beaker Phenomenon originated in the Iberian peninsula.

6.1 Ecology and Subsistence Patterns

The Bell Beaker peoples were heir to the long-established farming traditions of temperate Europe. Agriculture in western Europe most probably originated along the Danube with the

“Bandkeramik” peoples (ca. 5300 BC) [Garrison 2006]. Surely these cultures are the likely source for the domesticated species from the Bell Beaker Northern Domain, but in the Southern and Eastern Domains, this connection is less certain [Garrison 2006]. In these latter areas, farming followed the coastal Mediterranean route. According to Garrison, the Northern Domain associates with the LBK (Linear Bandkeramik) pottery which entered Europe along the Danubian and Rhenish river corridors [Garrison 2006]. The ceramic style associated with the Mediterranean route is considered a type of Cardial Ware, which are ceramics decorated by impressions with *Cardium* species cockle shells (similar to the cockles later used in decoration of the Standard Bell Beaker style) [Garrison 2006, Fagan 2001].

Domesticated crops used by the Beaker probably included barley, einkorn, emmer wheat, and flax [Fagan 2001]. Cattle (used for both milk and farming), ovicaprids (sheep and goats), pigs, and horses were raised domestically as well [Fagan 2001, Garrison 2006, Harrison et al. 1998, Hénou 1998, Ohtenin-Girard 1998]. Hunting for meat and cereal cultivation were also important sources of nutrition [Harrison et al. 1998, Hénou 1998]. There is evidence for grain grinding and cheese production at some sites [Garrido-Pena et al. 2005, Gislén 1998].

Oak forests predominated during Bell Beaker times [Vérot-Bourrély 1998], but there is substantial palynological evidence of deforestation [Garrido-Pena et al. 2005]. Metal tools are much more efficient for land-clearance than stone ones, so metal using peoples, like the Bell Beakers, could have caused deforestation problems much more easily than their predecessors [Garrison 2006]. It appears that the Bell Beaker settlements altered their local landscapes and created huge erosion issues on the steep slopes near where they lived [Vérot-Bourrély 1998].

7. BEAKER PEOPLES

One of the biggest questions about the Bell Beaker Phenomenon is whether or not the fine pots and elaborate funerary assemblages can be associated with a distinct ethnic or cultural entity in Europe. Bell Beakers are so prominent in European archaeology that many investigators initially assumed the existence of a “Beaker Folk” and an independent Bell Beaker Culture; this assumption, however, has recently been questioned (and essentially rejected) in light of current archaeological data [Benz et al. 1998a, Harrison 1980, Kalicz-Schreiber et al. 1998, Salanova 2005]. Nonetheless, some archaeologists still contend that since there are Bell Beaker houses, villages, agricultural enclosures, and funerary traditions, there must also have been an anthropological Bell Beaker Culture [Gallay 1998a, Lemerrier 1998, von Burg 2002].

Despite some thought of the Beakers as an anthropological culture, there seems to be a consensus among many scholars that the Bell-Beaker-using population was actually a composite of many different cultural groups [BBC 2003, Gallay 1998a, Gallay 1998b, Garrido-Pena 2005]. The huge geographic extension and wide cultural variability of Bell Beakers makes it unlikely that the Phenomenon is not a result of a single, homogenous population [Gallay 1998a, Gallay 1998b, Salanova 2005]. Rather many different cultural groups shared a collection of elements, and possibly traditions, which appear in the archaeological record.

Thus far, the best approach to studying the people who used and deposited the Bell Beakers appears to be a regional one [Lemercier 1998]. In most areas, the succession from pre-Beaker times to the Bell Beaker Period does not cause any radical cultural changes and does not correspond with an invasion or population turnover [Czebreszuk 2004, Desideri et al. 2001, Lemercier 1998]. In the Southern Domain, however, there is actually a substantial change between the late Neolithic cultures and the Bell Beakers, and this change does appear indicative of a population shift, renewal, or restructuring of some sort [Besse 2004a]. The variety in the region seems to imply a certain (high) density of population as well [Besse 2003b].

7.1 Mobility

For something like the Bell Beaker Phenomenon to take root and spread across practically the whole of the European continent, mobility is crucial. Whether this movement, however, included ceramic pots, stylistic trends, or actual people has often been questioned. It is very clear from pottery analysis that the Beaker goblets themselves did not move very far and the informational diffusion goes well beyond a simple adoption of taste (see above). Consequently, it seems obvious that people were moving—maybe not very far and maybe not *en masse*, but they were moving.

Several scholars have come to view the Bell Beaker Phenomenon as evidence of a large, inter-regional communication network which could either have been created by or in use before the Bell Beakers [Benz et al. 1998b]. The spread of Bell Beaker technology (and other Beaker traditions and ideas, if not a complete Ideology) also indicates sociability, connections, and

communications between different regional and sub-regional groups during the Bell Beaker Period [Müller et al.1998, Vander Linden 2004].

Even before the arrival of Bell Beakers, there seems to have been some flexibility and openness of borders in Europe [Guilaine 2002]. The lack of distinct boundaries between different cultural groups allows easy diffusion between neighbors [Lemercier 1998], and the Bell Beaker appears to have helped unite (or at least created a commonality between) the various groups across Europe [Salanova 2002]. Bell Beakers have actually been compared to Coca-Cola as a well-known symbol which helped to open up a continent of diverse but fairly self-contained communities [Fagan 1996].

Although many groups were doubtless independent of each other, it is difficult to imagine that neighboring groups would have no contact, communication, or influence with each other [Desideri et al. 2001]. Just by living in proximity to each other, there would certainly be some transmission of ideas and exchange of goods, people, or technology. Bell Beaker groups were concentrated in early Neolithic population centers [Czebreszuk 2004], so these liaisons would have been long-established by the time Beakers and Beaker ideas came around.

The exact mode of transmission of Bell Beaker ideas is still unknown but is crucial [Besse 2003b] since without a firm idea of what (ideas, people, objects) was circulating and why that was important, any efforts to comprehend the Bell Beaker Phenomenon must be in vain [Salanova 2002]. While there is little conclusive evidence to validate theories and suppositions about the Bell Beakers, there have actually been several interesting observations and discoveries.

Bell Beaker circulation is multifaceted, multidirectional, and varies in speed (depending on what is being circulated—e.g. tastes and ideas are slow, the classic Standard pottery is quite fast) [Guilaine 2002]. Bell Beakers are also most common on natural roadways [Garrido-Pena 2005] (like the Derrière-le-Château finding in a narrow valley in the mountains [Hénon 1998]).

Traditionally, it has been very difficult to document the movement of individual people archaeologically [BBC 2003]; new Strontium isotope dating techniques of teeth, however, have allowed analysis of a person's geographic location. Data from Bell Beaker graves in southern Germany [Thomas 2005] indicates that almost a quarter of the deposited bodies grew up somewhere far from their final resting place. Interestingly, the data also showed that mobility and movement were much more common among females than males. Other authors have also documented the long-distance movement of people, especially women, during the Beaker Period [Brodie 1998, Salanova 2002, Salanova 2005].

Historically and ethnographically, marriage is widely recognized as a means to support relations between communities and to cement trade alliances [Brodie 1998]. Foreign women would have been valued for their different artistic and technical skills as well as their abilities (if applicable) to communicate in another language [Brodie 1998]. The movement of marriage partners and the subsequent transfer of gifts and dowries also provides a convenient explanation for the few exogenous ceramics found in Bell Beaker deposits [Convertini 1998b].

7.2 Physical Anthropology and Anthropometry

While faith in these sorts of analysis and data collection seems to have waned over the years, Physical Anthropology and Anthropometry used to be the methods of choice to determine if the Bell-Beaker-using people were a distinct population and to discover where those people went during the Beaker diffusion.

Most of the focus on Bell Beaker skeletons has been focused on the shape of the skull. Several bodies were found with Brachycephalic and Planoccipital craniums (those with large, round skulls and flat occipital bones) [Benz et al. 1998a, Corboud 1986, Desideri et al. 2001, Harrison 1980, Simon 1998], so this trait became widely recognized as the Bell Beaker body type. It is notably different from skulls found both before and after the Beaker Period [Simon 1998], and this discrepancy certainly contributed to the idea of the Bell Beakers as a distinct, ethnic people.

The problems with relying on the qualitative analysis of skulls when studying the Beaker-using peoples are many. Firstly, the skulls were classified without consideration of what characteristics would actually have been important, and the genetic and functional consequences of facial shapes are not yet well-understood [Harrison 1980]. Additionally, Physical Anthropology is not based on purely genetic factors, so data is compounded by environmental influences (climate, diet, nutrition, etc) and does not necessarily indicate close genetic relationships between similar populations [Gallay 1998a, Garrison 2006, Salanova 2005, Simon 1998].

Harrison suggests that a better method of analysis would be to use epigenetic traits which are more genetically regulated and less subject to environmental influence to study links between skeletons [Harrison 1980]. Marie Besse recommends that a genetic analysis is necessary in order to understand Bell Beaker population dynamics with more certainty [Besse 2003b].

Other problems with the data on Bell Beaker skeletons and skulls relate to the selection of the sample population. The bodies buried in the dolmen and finely equipped graves are not necessarily indicative of the whole Bell-Beaker-using population [Simon 1998]. In fact, it seems quite odd that these clearly privileged individuals should be viewed as a representative sample of the population at large. Also, the arbitrary definition of Bell Beaker skeletons as either those with Brachycephalic skulls or those buried with Bell Beaker pottery, assumes the association between pottery and morphology that one desires to prove [Harrison 1980]!

8. RADIOCARBON (^{14}C) DATING

Initially, the chronologies and timeframes established for the Bell Beaker Phenomenon were developed typologically, but the technological advancement of Radiocarbon (^{14}C) Dating has allowed the reexamination of Beaker sequences and a reproposal of important Beaker questions regarding the origins and the diffusion of the Phenomenon [Bailly et al. 1998, Müller et al.1998].

The new ^{14}C data reveal a clear disconnect between the previously-established, typologically-based chronology and the new, radiometrically-established ^{14}C chronology [Müller et al.1998]. This discrepancy shows that style is not necessarily indicative of true chronology during the Beaker Period [Benz et al. 1998b].

Radiocarbon dating also clearly illustrates aspects of the Bell Beaker Phenomenon that were important simultaneously. It shows that the Pan-European, local, and sub-regional styles of Bell Beaker ceramics were all contemporary with each other [Müller et al.1998], but it also reveals that there is a big temporal discrepancy between the presence of Bell Beakers in the southwest of Europe (e.g. Iberia, Southern France, Northern Italy) and in other parts of the continent [Bailly et al. 1998, Müller et al.1998]. The general picture provided by the ^{14}C data is that the Bell Beaker Phenomenon started in the southwest and diffused north and east [Müller et al.1998].

The Bell Beaker Phenomenon dates to 2900-2100 BC using ^{14}C techniques [Müller et al.1998]. Because of the nature of the calibration curve used to calculate dates from radiocarbon data, these methods can accurately date to within a 100-200 year period [Müller et al.1998]. In Portugal, Spain, and Southern France, the Phenomenon shows up from 2900 BC, but in other areas does not begin until after 2500 BC [Bailly et al. 1998, Müller et al.1998].

One important consideration in radiocarbon data analysis is the source of the data. In the archaeological record, older objects are sometimes preserved as inclusions in younger layers because they were used during that later time period. For example, a tree might have been cut down to build a house and then used as firewood a hundred years later when that house was torn down. Consequently, current experts on Bell Beaker radiocarbon dating exclude all charcoal dates and only examine data from short-lived materials (bone, grains, etc.) [Bailly et al. 1998, Barfield 1998, Müller et al.1998].

9. IBERIAN ORIGINS

As indicated by the radiocarbon data, the Bell Beaker Phenomenon is first evident in Portugal, but is Portugal the port of entry or the place of evolution? Kunst argues [1998] that the Bell Beakers were not imported by invaders, rather they evolved indigenously in Portugal. He recognizes that the Bell Beakers show up with objects from older traditions and appear to begin as a new style of decoration. The Bell Beaker Phenomenon spreads through Europe not as a fashion but as a funerary phenomenon of associated grave goods; he cites, however, the difference between the 'homeland' and the manifestation in the 'diaspora' of a phenomenon as a suitable explanation for the discrepancy. In the diffused phenomenon, consistency is very important and the rules are much stricter, whereas in the homeland, a certain artistic license is acknowledged and there is less impetus to conserve tradition. [Kunst 1998]

Aside from such theoretical conversation, there are many findings which indicate Iberian origins for the Bell Beaker Phenomenon. The continuous use of communal graves in Portugal (especially the Tagus Estuary) from the beginning of the Chalcolithic (before the Bell Beakers) all the way through the Bell Beaker Phenomenon strongly suggests that the same communities of people were using them during both periods [Kunst 1998, Salanova 2004]. Bell Beaker pots appear in well-established, substantial settlements from long before Beaker times [Barfield 1998], and the Beaker-using people simply added on to the prior settlements (whereas in other parts of Europe there is a decisive break between Bell Beaker and Late Neolithic settlements)

[Guilaine 2002]. Bell Beakers in Iberia show up in a mix with other local cultures [Kunst 1998, van Schoor 1998], but the derivation of the Bell Beaker from the local, Portuguese substrate is a subject of mild contention. Salanova finds that a clear progression is difficult to trace [Salanova 2005], but Kunst holds that the evolution of one from the other is apparent [Kunst 1998] (yet they both strongly agree that the Bell Beakers are of Iberian origin). Case's comparison [Case 2004] between the Bell Beaker and the Iberian Copos, seems to describe a potential predecessor for the Standard Bell Beaker, and shows that the Iberian substrate is not entirely devoid of possible Beaker antecedents.

Other data in support for Iberian origins stem from and are confirmed by ^{14}C data. Radiocarbon data say that the Bell Beaker Phenomenon is oldest in Iberia and is younger to the north and east [Bailly et al. 1998, Müller et al. 1998], and this pattern is consistent with diffusion north and east along the Atlantic and Mediterranean coasts, respectively [Vander Linden 2004]. Salanova also notes how the Bell Beaker Phenomenon appears to spread from the littoral areas since density of finds decreases with increasing distance from the Atlantic coast [Salanova 2004].

In addition to having the oldest Bell Beakers in Europe [Bailly et al. 1998, Guilaine 2002, Kunst 1998, Müller et al. 1998, Salanova 2005], the density of Bell Beaker finds in Iberia is astounding [Kunst 1998, Salanova 2004]. Salanova reports [Salanova 2004] that Portugal alone has 2500 Bell Beakers, more than three quarters (78%) of which were found in the Estremadura region, home of the Tagus Estuary and possible birthplace of the Bell Beaker Phenomenon. This Estuary has an incredible density and diversity of Bell Beakers [Guilaine 2002, Salanova 2004] and is the hypothesized place of development for the Standard, Maritime Bell Beaker [Case

2004]. Case outlines the similarities between the Copos, a local form of fine pottery made in the Tagus, and the Bell Beakers: oxidized firing, fine slips, flaring, sharp outlines, round bases, and a variety of motifs involving linear and zonal decorations [Case 2004].

10. CONCLUSION

Clearly the Bell Beaker Problem is very complex and does not lend itself willingly to simplification. There is so much data, yet so little regarding the Bell Beakers is certain. Scholars have filled tomes hypothesizing and theorizing, but confirmation of these ideas can be elusive. Nonetheless, the picture of Bell Beakers grows continually clearer (even if always more complex!).

My work in this document has not been to find novel answers to the plethora of classic Beaker Questions; rather I have reviewed the literature, visited appropriate museums, and spoken with archaeologists to try and gain a more complete and holistic understanding of the Bell Beaker Phenomenon. From this effort, I have developed the following concise summary of the most convincing Bell Beaker data:

The Bell Beaker originated in Portugal (probably in the Tagus Estuary) circa 2900 BC and became associated with both domestic and funerary traditions. It spread north and east over the next millennium and became associated with a collection of archery oriented grave goods, copper weapons, and other forms of domestic and decorated pottery. The pots themselves do not indicate an individual's status, but the overall assemblage and burial do appear to denote some degree of status.

The people spreading the Bell Beaker tradition were not from one homogenous anthropological culture but were from many different communities. Analysis of the Common Ware from the Bell Beaker tradition clearly identifies three sub-cultural domains (Eastern, Northern, Southern) within the larger Beaker network. Different groups of Bell Beaker people may not have had the same interpretations for the elements of the Beaker assemblage, but they followed a substantial protocol in their production and deposition.

The Bell Beakers probably had a variety of uses, but they appear associated with Copper Metallurgy. The Beaker-bringing people were not necessarily metal smiths, and they were (in most areas) not the first to introduce copper metal. They do, however, have a significant association with copper metallurgy.

Spread of the Bell Beaker tradition was not the result of *en masse* migration but was more probably caused by the seasonal movements of people or the exchange of marriage partners. While there were no huge population movements at the time, there is evidence of individual mobility.

The significance of the Bell Beaker and the Bell Beaker Set is still unknown.

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