

# Intercâmbio e Comércio: As “Economias” da Idade do Bronze (II)

# L'Europe atlantique et l'Age du Bronze: Vision XX<sup>ème</sup> siècle du problème

JEAN-PIERRE MOHEN\*

Les difficultés que nous avons pour définir une zone atlantique à l'âge du Bronze ressemblent assez bien aux difficultés qu'ont nos contemporains à envisager cette partie de l'Europe dont chacun appréhende l'identité mais dont les limites restent floues. Inspirons-nous d'abord des réflexions de nos géographes, de nos économistes et de nos politiques pour mieux cerner cette vaste région géographique, devenue entité économique et politique.

“L'Europe atlantique géographique va de la limite de l'olivier au sud, à la Norvège au nord”. (“Flatrès, 1993, p. 35). Cette définition comprend un critère négatif (limite de l'olivier) et un pays qui s'étend sur une longue distance du Sud au Nord. Il convient de chercher d'autres notions pour préciser ce qu'est l'Europe atlantique. “L'Arc atlantique” est une commission fondée en 1989 au sein de la conférence des régions périphériques maritimes.

Cette notion d'Arc atlantique est intéressante: elle est “fonctionnelle” et concerne des relations entre les peuples liés entre eux par une zone vidée d'habitants, mais non de passants, la mer comme le désert. En mettant en valeur l'océan, le géographe insiste sur les systèmes de relation et d'échange.

## La géographie physique

L'Europe atlantique est moins reconnue que l'Europe méditerranéenne du fait que la seconde s'étend d'est en ouest sous les mêmes latitudes et que la première s'étend de la zone méditerranéenne à la zone arctique avec toute la gamme des climats même si leurs différences sont beaucoup plus graduelles et atténuées que l'on pourrait le supposer.

- Le critère océanographique: l'Atlantique est compris, au sens large, de Gibraltar au Cap nord. Cela veut dire que la mer de Norvège fait partie de l'Atlantique. Les mers “étroites” comme celle d'Irlande, la Manche et la Mer du Nord font maritiment partie de l'Atlantique.

- Les critères de géographie physique terrestre, en l'occurrence la géologie et la morphologie ne sont pas un facteur discriminant principal.

- Le climat dit “atlantique” et la végétation sont par contre très caractéristiques. Les climats sont pluvieux surtout en saison froide mais l'hiver est partout clément sous l'influence de la dérive atlantique. La variabilité du temps est imprévisible; lors des périodes ensOLEillées, la lumière est de grande qualité.

- La végétation atlantique est limitée au sud par l'olivier selon la proposition de Pierre Birot, mais des espèces méridionales s'avancent vers le nord comme le chêne vert jusqu'en Bretagne du sud, et l'arbousier en Bretagne et en Irlande. Les espèces de la lande de formation anthropique comprennent des bruyères et des ajoncs dont le grand ajonc (*Uex Europaeus*) qui domine du Portugal à l'Ecosse. Un autre caractère spécifique est la basse altitude de la limite montagnarde des forêts, 800 à 900 m en Galice, 350-380 m en Bretagne occidentale, 200 m en Irlande et en Ecosse occidentale. Au dessus de ces altitudes, les montagnes atlantiques sont herbeuses avec des espèces de la lande.

## **La géographie humaine**

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De nos jours, les critères humains retenus sont profondément originaux du fait de la dispersion du semis fondamental de l'habitat. Des formes isolées de l'habitat ou peu regroupées sont caractéristiques. Tout autre bâtiment comme les églises, les chapelles et les étables est également clairsemé dans la campagne faite de bocages dans l'extrême ouest breton mais aussi de champs en Galice ou en Bretagne. Le système agricole atlantique est souple contrairement à celui d'Europe centrale. Il était fait de jachères de nos jours remplacées par des prairies temporaires. Les villes de formation assez récentes, gauloises au plus tôt, son régulièrement espacées. Elles ne concernent pas notre sujet.

Que pouvons-nous tirer comme autres idées impliquant le thème du colloque?

Les relations maritimes apparaissent comme dynamiques et tendent à privilégier les échanges nord-sud. Ces derniers entre les îles et les péninsules favorisent les innovations dans la fabrication des produits. Certaines formes apparaissent, communes de part et d'autre des mers. Ce schéma des échanges n'est pas permanent mais se renouvelle à travers le temps.

D'autres types de relations sont envisageables avec la zone atlantique qui par dynamisme devient une région attractive. Des relations plus lointaines peuvent s'établir dans le sens est-ouest mais elles seront d'une autre nature (diplomatique, royale,...) que les relations nord-sud qui impliquent davantage la population. Les relations est-ouest sont maritimes donc méditerranéennes ou continentales et dans ce cas fluviales ou terrestres. Le rôle des estuaires a été sous-estimé car ce sont eux qui abritent les points de départ ou les points d'arrivée des deux trafics nord-sud et est-ouest. Une attention particulière doit être apportée au rôle des îles britanniques et à leur capacité d'échange avec le continent.

## **Points communs avec l'Age de Bronze**

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Si nous tirons la leçon pour l'âge du Bronze d'une analyse de la situation actuelle, nous devons aussi observer que la zone atlantique est constituée d'un nombre important de pays (ou régions, ou comtés...), parfois assez petits, à pertinence politique et culturelle (faciès céramiques nombreux).

Chacun de ces pays peut-être plus ou moins dynamique et (ou) plus ou moins ouvert sur l'extérieur. La situation de la zone atlantique est donc sur le plan économique ou politique rarement homogène. Certains pays sont donc repliés sur eux-mêmes, d'autres peuvent être dépendants ou assistés de certains autres. Ceci est d'autant plus vrai des pays possédant des ressources naturelles (troupeaux, mines, sel etc...) qui intéressent les autres. Des groupements, des jumelages peuvent se réaliser (exemple de la Normandie et de l'Angleterre avec Guillaume le Conquérant).

Il est intéressant de signaler que la commission de l'Arc atlantique comprend 26 régions: 1 irlandaise, 7 britanniques: les régions écossaises des Highlands et de Galloway-Dunfries, les comtés anglais de Cornwall, Devon, de Somerset et de Dorset, et le Pays de Galles, 5 françaises - Basse Normandie, Bretagne, Pays de la Loire, Poitou-Charentes, Aquitaine, 5 espagnoles - Pays Basque, Cantabrie, Asturie, Falice, Andalousie, 5 portugaises - Nord, Centre Lisbonne et Vallée du Tage, Alentejo et Algarve. Récemment, 2 comtés anglais - Cheshire et Avon et 1 région française - le Centre (région associée).

De nos jours, "l'Arc atlantique" ne correspond donc pas tout à fait à l'Europe atlantique car la représentativité des pays est hétérogène et incomplète. Parmi les activités qui influen-

cent les communications, il y a les activités d'échange (commerce et échange en général) mais aussi la pêche (quelles régions plus exactement ? jusqu'où ?), l'élevage transhumant le long du rivage (troupeaux des Pyrénées jusqu'en Saintonge).

## Conclusion

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Pour Pierre Flatrès, les caractères suivants sont à retenir pour caractériser l'Europe atlantique:

- extraordinaire souplesse des structures avec des possibilités (vérifiées) de développements en des lieux imprévus;
  - dispersion fondamentale de l'habitat avec des réussites et des échecs sans grandes conséquences en raison de la souplesse précédente.
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- Cette analyse de l'Europe atlantique a le mérite d'avoir convaincu nombre de responsables qui travaillent au développement des caractères spécifiques de cette région.
  - Cette prise de conscience n'était certainement pas aussi élaborée à l'âge du Bronze mais:
    - plusieurs diffusions (vases campaniformes internationaux; pointes de Palmela; perles d'ambre);
    - des répartitions de types d'objets en bronze (ceux du type de Vénat);
    - des liaisons ouest-est et nord-sud (exemple de l'étain de Cornouailles et de Bretagne);
    - mais aussi des groupes céramiques très localisés (urnes anglaises et hollandaises) un habitat très mal connu sauf quelques exceptions dans les Iles britanniques mais apparemment très dispersé dans une zone côtière assez large de plusieurs dizaines de kilomètres, avec des centres de refonte des lingots et de mise en forme des armes, des parures et des outils semblent correspondre à ces deux critères de souplesse des structures et de dispersion de l'habitat. Des analyses plus ponctuelles, macro-régionales devraient montrer comment les deux caractères sont liés l'un à l'autre.

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\* Laboratoire de Recherche des Musées de France. Paris. France.

# “Hello Sailor” - Some reflections on the Atlantic Bronze Age

■ DAVID COOMBS\* ■

**ABSTRACT** During the Bronze Age there can be no doubt that voyages were made between the Atlantic countries. We now have increasing evidence for sea transport in the form of wrecks or possible cargoes. There can be no doubt that at times these journeys were hazardous. Contact finds have been discussed many times but the mechanics behind the contacts have rarely been analysed. To do justice to the Atlantic Bronze Age we need to look beyond the metal objects and discuss all aspects of Bronze Age life in the Atlantic communities.

**RÉSUMÉ** Pendant l’Age du Bronze il y a sans doute que voyages avaient lieu entre les pays Atlantique. Maintenant nous avons plus evidence pur les batiments et auss, peut-être les cargaisons. Ces voyages sont dangereux. Les archéologues ont discute les objets de contact plusieurs fois, mais les mécaniques des contacts ont rarement discute. Afin de déterminer l’Age du Bronze Atlantique il est nécessaire étudier les objets du métal mais aussi tous les aspects de vie des sociétés de l’Age du Bronze dans les sociétés Atlantique.

How do we interpret the Atlantic Bronze Age as a concept? We could simply describe the Bronze Age successions in each of the Atlantic regions and that would be the Atlantic Bronze Age but is that what the term really means? Perhaps one should interpret the term as a common thread that links the Atlantic countries together, the furthest west one can get in Europe, the end of the known world for such a long time. The developments within these regions, technologically, socially were obviously different from their interiors as is shown by the material record.

The links are shown by the material record obviously but also probably in shared common beliefs and expectations, they are the texts behind which we have to delve, difficult, as the texts were never meant to have been read by us.

That there was contact between the Atlantic regions going back into at least the Mesolithic is not in doubt, what is up to question is the exact nature and dynamics and driving force of the contacts and there frequency. Trade and exchange are two concepts often brought into play here but do these two words accurately describe the processes behind the contact, does the evidence really substantiate this?

There is no doubt that there was some form of contacting the Bronze Age and that this contact seems to increase with time, also that given the position of the land masses and the distributions, that this contact was in part by sea. This opens up many problems as to the nature of the craft and the inherent problems in sea transport. With the earliest evidence for sail in Atlantic Europe not in evidence until the late Iron Age and then only secondary evidence, we have to look for evidence for other forms of vessel, propelled by other means. The plank built boats from North Ferriby Yorkshire (Wright, 1990) are well known with their <sup>14</sup>C date of 1300 BC, less well known is the large fragment of plank built boat from the waterlogged site at Caldicote, Gwent in Wales (Parry and McGrail, 1991) with a date of 1594-1454 BC. The fairly recent find of the plank built boat from Dover, with an estimated length of 20 m and date of 1300 BC has been interpreted as a sea going boat, locally built. None of these boats have any evidence of sail attachments or keels. We must assume that propulsion was by oars. Coffyn (1985, pl. XIV, p. 1-6) illustrates a number of schematic representations of

boats engraved on rocks and painted in caves from Iberia and dated to 1000-700 B.C. Although schematic they do appear to show oars, masts and riggings. There is also an interesting engraving of a boat with mast and rigging from Santa Maria de Oia, Galicia, on a hill-side overlooking the Atlantic and not far from the Portuguese border (I am extremely grateful to Prof. Richard Bradley for drawing my attention to this example).

Sean MacGrail (1983, 1993) and the late Keith Muckelroy (1981) in their papers have pointed out the dangers and skills needed to venture into the Atlantic or even into the Channel.

From the Classical authors four principal sea passages could be ascertained; from the Rhine to the Thames; the shortest crossing across the Channel; mid Channel routes and from western Brittany to South west Britain and to South-eastern Ireland for vessels going from the Loire and the Gironde. Due to the winds and the currents the Iberian coastal route would not have been an easy one even in summer (see also the maps of the sailing routes taken in the 14th and 15th centuries A.D. by Italian, Spanish, Hanseatic and English sailors, Childs, 1978, p. 150-151).

One must assume that navigation was by landfalls and celestial observations. However cloud cover between the Channel and the Bay of Biscay between late autumn and early spring meant that the whole area may be overcast for several successive days making celestial observations impossible. Sea temperatures, even in summer would have been too low to have made travelling in an open boat unpleasant, low air temperatures and sea temperatures in winter can make conditions almost intolerable. It would have been extremely difficult to have operated an open boat in the channel and the Bay of Biscay between the middle of November and the middle of March.

This begs the question - are we dealing with a group of specialist seamen? Given the knowledge needed of navigation, reading the weather signs, knowing safe harbours and landfalls then one would assume this to be so. Surely we could not expect any landlubber to be able to set forth on such a journey or even every member of a coastal community. Such people would stand out in their community by not only their special skills but also by their knowledge of other lands (Helms, 1988, 1993).

There are other tantalising pieces of direct evidence for contact, the material from Langdon Bay, Dover (O'Connor, 1980; Muckleroy, 1981) with over three hundred pieces of metalwork, many of French type, from the sea bed, presumably a cargo of a vessel that foundered or the finds, including a rod tanged sword from Salcombe, Devon (Muckleroy, 1981; Burgess; Colquhoun, 1988, pl. 137A) which is closely paralleled by an example from the Seine at Ile-Saint-Ouen, France, or even the Ballintober sword found sticking out of the mud on the beach at Oystermouth, Gower, Wales (Burgess and Colquhoun, 1988, pl. 113, p. 775). Even these cargoes present problems in trying to establish the mechanics behind the contacts. Certainly Dover and Salcombe do show undeniable Breton contacts in the form of Rosnoen swords and palstaves but also the former has a large number of median winged axes, rare in the Atlantic zone and almost completely absent from the British mainland (only one other example is known from Britain - from Alexandra Dock, Hull; Burgess, 1968a fig. 7.3) and the latter a rod tanged sword, equally rare in Atlantic Europe. Much of this material is also in a broken state. When and where these so called cargoes were collected is a matter of speculation, even the original destination of the Dover find is a matter of conjecture. If it is trade then it appears to be trade in scrap metal.

As previously mentioned Muckleroy and McGrail have described the possible sea routes taken, using archaeological and literary evidence, largely for the Iron Age but extrapolating back into the Late Bronze Age.

What of the so called contact finds and how can they be interpreted? The finds are by now well known through the publications of Burgess (1968b); O'Connor (1980); Coffyn (1985); Ruiz-Gálvez Priego (1984), however few of these publications really detail the possible mechanics behind them, apart from trade or exchange. Contacts are evident for BF I, II and III. In BF I and II the evidence is overwhelmingly in the form of weapons especially swords and there accompanying chapes (Coombs, 1988) in III also it is the sword and bits and pieces of enigmatic paraphernalia belonging to the Carps Tongue Complex. Taking BF II in detail, the three main areas involved have different axe forms, ferrules are unknown in the Gironde and chapes are rare. Atlantic swords are known in the Iberian peninsula but only one real lozenge chape (Cameselle, 1988).

Can we talk of trade or exchange when what we see in the archaeological data are the same types of objects appearing along the Atlantic sea board, granted that Iberia may be obtaining some of its material in that way but the situation between say Brittany and the South east of England is more complex. There are slight differential preference between the latter areas but by and large the swords chapes and ferrules are the same (England has a much greater variety of spearheads than Brittany) with only the small number of Saint Nazaire swords being candidates for exchange. If localized production centres were located equivalent to the identification of the hard rock sources for Neolithic polished stone axes then the task would be much easier. Even when moulds are located numerous problems exist. An example of this is the discovery of moulds for the production of lozenge sectioned chapes in England, known from Fimber, Yorkshire (Burgess, 1968b, fig. 21.1a-g) and Dainton, Devon (Needham, 1980) both areas outside the main distribution of such chapes and without a chape in their county. Do we take it that there is no demand in the production area for the finished products?

Moulds for the production of Atlantic products exist in England and France, no one area is exclusive.

In trying to explain the Atlantic distributions we also have problems in interpreting the Urnfield objects which occasionally appear mixed with them especially in northern France, not only mixed in hoards but now Rhin-Suisse-France Orientale pottery from Quievrecourt, Haute Normandie (*Gallia Informations*, 1991-2, p. 49-51, fig. 43) associated with moulds for the production of Atlantic type swords.

Although much has been published on the contact finds, few hard statistics have ever really appeared. There are 113 Atlantic swords from Great Britain, 152 from France and the adjacent area to the east, 17 Atlantic leaf shaped swords from Iberia; 412 Ewart Park swords from Great Britain, 25 from France, 26 Carps Tongue swords from Great Britain, and numerous examples from France, and so the story could go on. Sometimes more of one product in one country than another, but generally the same type of object.

From a study of the distributions is it possible to see a breakdown of the Atlantic system at the end of the Late Bronze Age. As far as England is concerned there seems to have been a shift in emphasis to northern and central regions, when the Breton link exists it is with areas in England not previously part of the contact zone.

Metal analysis by Northover (1982) has suggested that the LBA II industries of Southern England and the Northern parts of France along with Brittany are drawing upon copper supplies from the east Alpine zone, but not the St Denis de Pile hoards of the Gironde. This source seems to have been interrupted in stage III by as Northover claims the expansion of the Carps Tongue group.

In spite of what many publications have led us to believe the Bronze Age consists of more than just bronze or other metal artifacts. This is especially seen in the publication

*Bronzezeit in Deutschland* (Jockenhövel and Kubach, eds., 1994) where the large majority of the photographs are of metal objects, or indeed in Andre Coffyns magisterial publication *L'Age du Bronze Atlantique* (1985). Thus we still lack the overview of the Atlantic Bronze Age in all its facets. Surely to fully understand the meaning of the contacts we need to know about other aspects of society; settlements, economic organisation, ritual systems, social organisation, gender relations etc otherwise we are only dealing with part of the whole, home events surely would have influenced external contacts.

Perhaps a study of the context of the metal within the Atlantic societies could throw an insight into the contacts or provide another contact link. Some of the similarities in other cultural aspects have also been alluded to by Ruiz-Gálvez Priego (1991), the lack of metal in burials or indeed the lack of a real recognizable burial rite throughout the whole region. Certainly the Urnfield practice of cremation does not seem to have been wholly adopted, yet we do know from England the existence of a few cremations with early 1st Millennium dates, but not really in the area of the main metal distributions. When inhumations do occur with metal they appear as anomalies (Burgess, 1976; see also Brück, 1995).

The overview of the period has always hidden discrepancies. Hoarding which we have always associated with the Bronze Age especially the Late Bronze Age really has a varied distribution. Common in Brittany (Briard, 1965) and Northern France (Blanchet, 1984) and south eastern England (Coombs, 1972) but almost absent in the Poitou (Pautreau, 1979) but picking up again in the Charente (Gómez de Soto, 1980; see also Chevillot, 1981, 1989 for Perigord). The situation in Iberia seems to me to be strange with so few hoards, although their overwhelming Atlantic distribution is surely significant (Ruiz-Gálvez Priego, 1984). Within England the situation of hoarding within the Late Bronze Age is uneven. Certainly there are a number of areas where hoarding was absent in the late Bronze Age but with adjacent areas practicing it. Certainly for England hoards concentrate in the South east of the Country where a single county can have as nearly as many hoards as the whole of Scotland.

Thus, although we can say that hoarding was a necessary aspect to the lives of all or some Late Bronze Age communities its intensity varied just as did the composition of the hoards themselves. Hoarding however strong or weak can be regarded as another linking factor in the chain of contact.

The metal obviously existed in a commercial and economic sphere but also was of prime importance within the ritual life of the communities. Such objects used in ritual in the past have been traded objects, buffalo head dresses, or objects in mica used by American Indians. These objects formed an important and necessary part of the interaction sphere. In the ritual aspect Atlantic Europe was part of a wider net, still largely confined to the west, of watery deposits, whether they be in rivers, bogs or mires etc. This aspect has been expertly covered by Richard Bradley in a number of articles and culminating in the book 'Passage of Arms' 1990. There is no doubt that deliberate deposits were being made into rivers, but how widespread was it?

In England only a few rivers have any evidence, the finds being totally dominated by the River Thames. A number of factors have played their part in this not all of them ancient, however taken at face value such a tradition must have largely flourished either side of the Thames (Ehrenburg, 1980).

Other ritual places have come to light which contain a range of similar objects to those found in the rivers, namely weapons and ornaments. Here one has to cite Flag Fen and the Alignment (Pryor, 1991; Pryor [et al.], 1992) with its range of material spanning 1300 B.C. down until the middle of the Iron Age, including objects which do appear to be unique and imported types. Now there has also recently been discovered another site akin to Flag Fen

from Shinewater Park, Eastbourne in Sussex with bronze deposits. Down the Atlantic seaboard there are concentrations of weapons in the Loire (Briard, 1965) and surely the Huelva find must be similar ritual deposit (Ruiz-Gálvez Priego, 1995).

Not only weapons but a whole range of material goods appear to have been used in such a way, or at least their apparent deliberate deposition would appear to indicate this. This material ranges from animal bones and human bones, being found as complete skeletons and single bones, differential distributions of decorated and undecorated pottery across a site, broken clay moulds and midden material (Coombs, 1996). Practices that we have already seen in the Neolithic, sometimes using similar locations, especially the terminals of ditches.

Such material is certainly worth looking for all the way down the Atlantic coast.

We have only tantalising hints of the society involved, heroic and noble who felt no need to express their power and prestige at death but were more concerned with the living. Tantalising hints of a pale reflection of happenings and changes way to the East can be seen in feasting habits as published by Gómez de Soto (1991) in the Atlantic distribution of roasting spits, flesh hooks and cauldrons, linking the Atlantic west through Sardinia to Cyprus and to lands far to the East. Surely the importance of the feast as exemplified in the Iberian engravings showing scenes of eating, drinking, gymnastics and sexual congress is replicated at other times on the situlae from the former Yugoslavia (Kastelic, 1965), from Hallstatt Europe and ultimately to the Near East, has the East here met the West? The recent find of a single pronged flesh hook from Flag Fen, covered by a timber with a dendrochronological date of 1300 B.C. of a type found inside a cauldron at Feltwell Fen, Norfolk (Gerloff, 1986) and also in the Hio, Pontevedra deposit, Spain (again associated with a metal vessel, Coffyn, 1985, pl. LX; LXI, p. 1-14) indicates the early date of some of these objects.

In reviewing the literature on connections it is surprising at the lack of discussion produced about the mechanics of the contacts, or indeed of the society responsible for them. Although the introduction to Jay Butlers "Bronze Age Connections Across the North Sea" begins with the words "This study is an approach towards an history of the trade and industrial connections of the British Isles with Northern Europe during the Bronze Age" (1963) there is no real discussion of the dynamics involved at all. Similarly Brendan O'Connors thesis "Cross Channel Relations in the Later Bronze Age" (1980) the word relations is used a lot without further consideration or elaboration.

It is only recently with the publications of Rowlands (1976), Kristiansen (unpublished) and Ruiz-Gálvez Priego (1991) that we have a fuller discussion of the mechanics. Rowlands concentrated largely on the weapon complex, so evident in the Late Bronze Age of Atlantic Europe. He saw the weapon types as being produced under the control of elites located at the head of fairly extensive socio-political groupings and alliance networks, largely in the lowland riverine locals with the upland communities being dependent upon them for supplies of metal and other resources.

Within such a network exchange played a major role. To quote "In essence we seem to be dealing with a situation in which weapons combining both prestige and utilitarian function, (since warfare is a status pre-occupation), ornaments, livestock and other items are being circulated and exchanged in complex, if as yet unknown systems of social prestations and rivalry in the acquisition of personal status" The weapon complex according to Rowlands was widely used in forming alliances between elites along the Atlantic seaboard. Certainly the concept of simple trade seems to inadequate to explain away the distributions. Also there would have been political and ideological symbolism attributed to geographically distant

peoples, places and things. The acquisition of long distance trade goods falls either directly or indirectly under the auspices of specific individuals, usually of exceptional personal prestige and political influence, in other words elites. Elites would have also been in control of craft production, and by craft one can include not only the production of material goods but also other skills, singing, instrumental musicianship, oratory, activities of bards and poets, dance, hunting and navigation.

Just as Rowlands hinted at, the Atlantic Bronze Age was part of a known Bronze Age world economy, especially linked to the East via the Phoenicians. This World Systems approach is also enlarged by Kristianson in an as yet unpublished book.

That voyages did take place, for one reason or another, there can be no doubt and we must really be in awe of the courage of those bold Atlantic adventurers in the Bronze Age for as Eugene O'Neill wrote "The sea hates a coward" (*Mauning becomes Electra*, 1931).

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\* Department of Archaeology, University of Manchester, U.K.

# Produção local e relações a longa distância na Idade do Bronze Atlântico do Oeste da Península Ibérica

■ PHILINE KALB ■

**RESUMO** A autora esboça, numa rápida síntese, a história de investigação dos últimos 30 anos sobre o Bronze Atlântico. Passa depois a uma caracterização dos próprios achados bem como dos seus contextos, numa perspectiva geral. Seguidamente, lista indícios arqueológicos, tanto para uma suposta extração local de minério quanto para uma suposta produção local de artefactos metálicos. Para terminar, exemplifica em alguns casos o vasto leque de interpretações daquilo que convejámos chamar “relações a longa distância”.

**ABSTRACT** Die Autorin gibt zunächst einen kurzen Überblick über die Forschungsgeschichte der Atlantischen Bronzezeit in den letzten 30 Jahren. Es folgt eine zusammenfassende Charakterisierung der Fundtypen und ihrer Kontexte im allgemeinen. Danach werden die archäologischen Fakten aufgezählt, die als Hinweise auf Abbau von Rohmaterial und auf Anfertigung von Metallgegenständen gedeutet werden können. Mit einigen archäologischen Beispielen sogenannter “weiträumiger Beziehungen” werden deren grundverschiedene Interpretationsmöglichkeiten aufgezeigt.

## História da investigação

Mário Cardozo<sup>1</sup> apresentou, há 25 anos, ao II Congresso Nacional de Arqueologia em Coimbra, os achados da Penha de Guimarães, e atribuíu, então, os objectos de metal ao Bronze Atlântico, classificando os machados de talão no Bronze Atlântico I e as pontas de lança no Bronze Atlântico II.

No III Congresso Nacional, no Porto, em 1973, Celso Tavares da Silva<sup>2</sup> mostrou, como contributo para a cultura castreja, imagens do rico espólio procedente do castro da Senhora da Guia, Baiões: dois machados de talão, uma ponta de lança, um bracelete de bronze, fragmentos ornamentados de bronze que, posteriormente, seriam identificados como pertencentes a um carro votivo, restos dum recipiente de bronze e uma placa de guarnição do mesmo material, todos eles encontrados, em 1970, durante as terraplanagens à volta da Capela da Nossa Senhora da Guia. Completou a sua apresentação com material procedente de escavações efectuadas no verão de 1973, como outras duas pontas de lança, um coto de lança, anéis de bronze, pontas, fragmentos de fibulas, fragmento dum espeto, cabos de “tranchets”, além de muita cerâmica.

Tanto no caso da Penha, como no caso da Senhora da Guia, trata-se, sem dúvida, de sítios de habitat. No entanto, até aos anos 80 predominou, na investigação científica como na bibliografia, a ideia de que relativamente ao Bronze Atlântico nem se conheciam povoados nem sepulturas, e que esta época da pré-história portuguesa e espanhola seria, unicamente, representada por achados isolados e depósitos (esconderijos) de armas ou utensílios de bronze. Na colectânea “Prehistoria e Arqueoloxía de Galicia, estado da cuestión”<sup>3</sup> por ex., ainda em 1979, se lê “Eiqui, a falla total dunha documentación de base, poboados

ou necropolis, limitaron o estudo. Os unicos vestigios a disposición da investigación constituen os achados de bronze". (citação abreviada)

Para a investigação, o Bronze Atlântico da Península Ibérica existia nos achados que Hubert N. Savory<sup>4</sup> tinha enumerado no seu trabalho sobre o Sudoeste da Europa, de 1949, e cujas relações atlânticas Eoin MacWhite<sup>5</sup> tinha apontado, em 1951. Os dois investigadores tinham-se orientado pela classificação categórica de Julio Martinez Santa-Olalla<sup>6</sup>, formulada, em 1941, no "Esquema paletnológico de la Península Hispánica":

Bronze Atlântico I = 1200 - 900

Bronze Atlântico II = 900 - 650

e, ou confirmaram ou apresentaram pequenas variações a este esquema, sem ultrapassar a noção meramente tipológica. Savory apresenta umas centenas de objectos como machados de talão, machados de alvado, foices, espadas, bainhas, punhais, e MacWhite aponta os paralelos europeus de alguns destes tipos.

Esta estagnação manteve-se por quase quatro décadas.

Além de novos achados, ou de publicações de outros, já existentes nos museus, a investigação centrou-se, ainda durante muito tempo, apenas em questões tipológicas e cronológicas. Um bom exemplo disto é a obra de Luís Monteagudo<sup>7</sup>, publicada em 1977, sobre os machados de bronze da Península Ibérica, obra que reúne a documentação de mais de 1800 machados, ordenados por critérios cronológicos e tipológicos.

## **Os achados de bronze**

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Os abundantes e variados achados metálicos de Penha, Guimarães, e Senhora da Guia, Baiões, e seus contextos, deram o pontapé de saída para uma revisão de outros achados do Bronze Atlântico e dos seus possíveis contextos<sup>8</sup>. O resultado deste exame reconheceu que grande parte dos achados arqueológicos de bronze (tanto achados isolados como depósitos), recolhidos na Península Ibérica, provêm de povoados pré-históricos ou das suas imediatas vizinhanças. Neste ponto existe uma profunda diferença entre a Península e as outras regiões atlânticas: na Europa Ocidental (França, Ilhas Britânicas), a maioria dos achados procede de depósitos terrestres e aquáticos, e no Norte e Centro de Europa também, embora em menor escala, de depósitos desta natureza, mas, sobretudo, de contextos sepulcrais.

O mapa, elaborado naquela altura, reúne quase uma centena de prováveis sítios de habitat, juntamente com achados de bronze. Entretanto, as escavações em Baiões, São Pedro do Sul (1977)<sup>9</sup>, São Julião, Vila Verde (1981-1985)<sup>10</sup>, Santa Luzia, Viseu (1981-1982)<sup>11</sup>, Castelo de Matos (1982-1983)<sup>12</sup>, Crasto de São Romão, Seia<sup>13</sup>, Moreirinha, Alegrios<sup>14</sup>, etc. (todos representados na exposição, que acompanhou o Colóquio que deu origem ao presente volume) confirmaram plenamente a existência de povoados do Bronze Atlântico em Portugal.

Ao cartografar os artefactos de bronze, achado por achado com base na Carta Militar 1:25000, tentou-se, na altura, obter uma primeira ideia do povoamento do Bronze Final em Portugal. Resultado suplementar era a identificação de vários achados que, em diferentes épocas tinham dado entrada nos museus, com diferentes designações, e, afinal, eram de um mesmo local.

Os mapas de distribuição elaborados então, foram, posteriormente, confirmados e densificados, mas não essencialmente alterados, pela obra exaustiva de Coffyn<sup>15</sup>, de 1985, e por novos achados mais recentes:

Os machados de talão, os machados de talão de uma face plana, os machados de alvado, os brazaletes de bronze e os espetos de tipo Alvaiázere acusam uma distribuição pre-

dominante no Centro e Norte de Portugal, enquanto espadas, pontas de lança, machados de aletas e outros evidenciam uma distribuição mais equilibrada em todo o país. Para machados de talão e machados de talão de uma face plana surgiram indícios de produção local. Como prova de produção de machados de talão lembramos o molde de fundição de Castro Daire, publicado por Carlos Teixeira<sup>16</sup>, e, para produção de machados de talão de uma face plana, o molde de Baiões, encontrado em 1983<sup>17</sup>, ambos moldes em bronze.

## **Os povoados**

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Dos povoados do Bronze Atlântico, identificados, em 1980, através da localização de achados em mapas de grande escala (1:25000) e da revisão bibliográfica, muito poucos, entretanto, foram objecto de investigações recentes. É o caso, para além de Baiões, do Castro de Santa Luzia<sup>18</sup>, Viseu, e de São Julião de Caldelas<sup>19</sup>, Vila Verde. No entanto, realizaram-se escavações noutros sítios que, entretanto, foram descobertos como sendo, também, da época do Bronze: no Castelo de Matos<sup>20</sup>, distrito do Porto; Cabeço do Crasto de São Romão<sup>21</sup>, na Beira Alta; e Alegrios, Castelejos, Monte do Frade e Moreirinha na Beira Interior<sup>22</sup>. Em relação ao grande número de potenciais povoados, estas escavações apenas nos podem facultar uma primeira perspectiva limitada sobre o que são os povoados do Bronze Atlântico.

Já as escavações de Baiões, em 1977, evidenciaram uma série de características dos povoados deste âmbito cultural.

Aqui é de mencionar, em primeiro lugar, a situação topográfica dos povoados. Baiões, Crasto de São Romão, São Julião de Caldelas, Santa Luzia, Alegrios, Castelejos, Monte do Frade e Moreirinha, assim como o entretanto identificado povoado do Monte Airoso<sup>23</sup>, Penedono, situam-se todos, sem exceção, em altos inóspitos, ventosos e rochosos.

Os estratos arqueológicos encontram-se, normalmente, entre grandes blocos ou afloamentos de rocha, em espaços pouco apropriados para arquitecturas de envergadura. Até é difícil imaginar casas ou cabanas cobertas, nestes buracos. Restos de estruturas habitacionais raramente foram detectadas e, quando os há, normalmente a sua interpretação é difícil. Existiam, no entanto, lareiras e outros sítios de combustão. Em contraste com esta escassez de arquitectura pública ou doméstica, a abundância de achados é notável e, entre eles, sobretudo, o relativamente grande número de achados de metal. Que esta abundância de achados não reflecte acumulações pós-depositionais provenientes de áreas mais amplas, situadas em cotas mais altas está, entre outros aspectos, testemunhado pelas fracturas angulosas de muitos fragmentos de cerâmica e, pela já mencionada existência de lareiras que, em alguns casos, sem dúvida, estão em relação com parte dos achados.

## **Produção local**

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Há fortes suspeitas, que nestes sítios, recuados, inóspitos e ventosos, foram produzidos pelo menos algumas das armas, dos adornos e dos utensílios que agora servem aos arqueólogos para circunscrever o “Bronze Atlântico”.

Quais são os indícios arqueológicos para uma produção local de objectos de metal?

Uma primeira questão levanta-se relativamente à existência e a extracção da matéria-prima. Cobre e estanho, elementos constituintes do bronze, existem em abundância no Oeste da Península, e, até, de modo a poderem ser extraídos com métodos pré-históricos:

o cobre em forma de malaquitas, azuritas etc., e o estanho em aluviões fluviais. A prova ou demonstração de trabalhos de mineração são difíceis, para todas as épocas pré-históricas, uma vez que vestígios antigos, normalmente, foram arrasados por trabalhos posteriores de época romana, medieval ou moderna.

Para o Bronze Atlântico de Portugal temos um indício de extração mineira no machado de talão, que foi encontrado, à profundidade de 12 m, num poço da mina de Quarta Feira<sup>24</sup>, perto de Sabugal, Centro-Norte de Portugal. Um machado plano de bronze foi encontrado nas aluviões estaníferas do rio Zêzere, perto da Quinta das Flores<sup>25</sup>, Verdelhas, Guarda. Temos ainda a notícia dum machado de talão, encontrado na “Mina Velha” em Albergaria-a-Velha<sup>26</sup>. Normalmente, no entanto, deduz-se a extração mineira pré-histórica da vizinhança entre sítios arqueológicos e recursos naturais, como, por ex., no caso do Monte Airoso, Penedono, onde foi encontrada uma jóia de ouro, e que se situa perto duma mina moderna de ouro.

Desconheço, por enquanto, no Oeste peninsular indícios de lugares de tratamento metalúrgico (restos de fornos, escórias em grandes proporções) da época do Bronze.

Já não é o caso de indícios de sítios de fundição. Conhecemos cadiños de fundição, em Portugal, desde a época calcolítica, nos povoados calcolíticos ‘clássicos’ de Vila Nova de São Pedro, Zambujal, Leceia, Santa Justa, Monte da Tumba, etc. Em contextos do Bronze Final, R. Vilaça decobriu-os, na Beira Interior, em Castelejos, Moreirinha e Alegrios e reuniu, a propósito destes achados, outros tantos exemplos<sup>27</sup>.

Como outro indício para fundição temos a existência dos chamados pingos de fundição, pequenos restos (gotas) do metal fundido, que se espalharam, provavelmente, ao despejar o metal líquido do cadiño no molde. Em Baiões encontrámos uma quantidade destes restos, junto a uma lareira que, por isso, interpretámos como provável sítio de fundição<sup>28</sup>.

Lareiras, cadiños e pingos de fundição servem de indício de lugares de fundição, mas quase nunca permitem afirmações sobre carácter e forma dos objectos produzidos. Isto é diferente nos casos dos moldes de fundição.

Em Portugal conhecemos moldes para machados de talão (por ex., Castro Daire), para machados de talão com uma face plana (por ex. Baiões), para foices, para pontas de lança (por ex. Baiões, Crasto de São Romão, Castelo de Matos), para varas de bronze (Baiões, Monte do Frade). Na Corôa do Frade<sup>29</sup>, Évora, conhecemos um molde múltiplo em pedra que, no entender do arqueólogo que o estudou, serviu, possivelmente, para produção de espadas, machados planos, machados de aletas e outro objecto indeterminado.

Seria permitido pensar, no caso dos moldes intactos, sobretudo os exemplares fabricados em bronze, que podiam ter sido transportados de sítio em sítio, de modo que o lugar do achado não indica de maneira nenhuma o lugar de produção. Isto já não é tão lícito no caso do molde de machados de uma face plana, encontrado em Baiões: a descoberta de várias peças, procedente deste molde, no próprio sítio, indica claramente que este era o lugar de fabricação. O mesmo se aplica aos restos de moldes, em cerâmica, para o fabrico de pontas de lança, encontrados em Baiões, Crasto de São Romão e Castelo de Matos.

À existência de produtos defeituosos (que no caso da cerâmica podem eventualmente indicar um sítio de produção), no caso de objectos de bronze não se pode recorrer, uma vez que estes exemplares constituíram matéria-prima para ulteriores fundições. No entanto, estou segura que um olho treinado pode, entre os vários e variados restos informes de bronze que existem nos museus e colecções, descobrir uma ou outra peça que se podia incluir nesta categoria.

Ainda a existência de matéria-prima, de produtos fabricados em bruto e peças semi-acabadas poderiam indicar lugares de produção. Os indícios são raros, se excluirmos alguns tipos como machados planos, machados de talão, anéis maciços, às vezes e por alguns auto-

res considerados como tendo a função de lingotes. Pessoalmente só conheço os meniscos ou bolos de metal do esconderijo de Veatodos<sup>30</sup>, concelho de Barcelos, que corresponderiam a essa categoria. No entanto, também estes são móveis, e só podem ser considerados indícios de produção local em determinadas circunstâncias.

### **Ferramentas e provável produção ambulante**

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Por fim, há de mencionar, como indício para produção local, as ferramentas utilizadas no fabrico de peças. São raras, o que, provavelmente, resulta da nossa falta de experiência ou ignorância neste campo. Barbara Armbruster, arqueóloga e ourives, no âmbito dos seus estudos sobre a tecnologia da Idade do Bronze<sup>31</sup> conseguiu identificar, entre os materiais de Baiões, uma pedra perfurada, considerada por nós “pendente”, como sendo uma “pedra de ensaio” para ouro. Sendo assim, esta pedra é um indício de trabalhos de um ourives, provavelmente em Baiões. Existem outras pedras semelhantes em alguns dos povoados já mencionados.

Na Moreirinha, R. Vilaça encontrou um punção oco, instrumento para trabalhar metal, que também só foi reconhecido como tal por B. Armbruster.

Um interessante achado de ferramentas existe no Museu de Figueira da Foz<sup>32</sup>:

Em 1913, nas dunas de Leiria, mais exactamente no sítio chamado Pinhal do Urso, foi encontrado um conjunto de peças de bronze (Figs. 1 e 2), sem outro contexto. Trata-se, em total, de doze peças de bronze. Na interpretação “profissional” de B. Armbruster trata-se de três ferramentas (punções, 3/4, 5 e 7), três “lingotes” cortados à medida e preparados para serem trabalhados (1, 2 e 6), outras três peças de “sucata” (8-10), para serem fundidas e duas

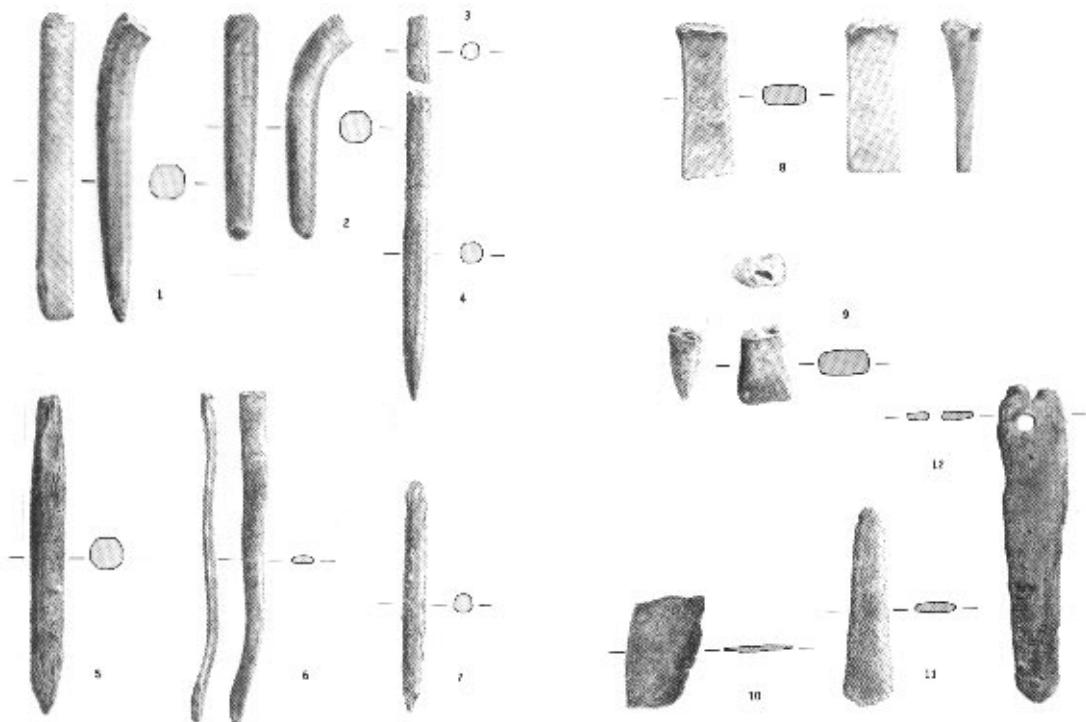


FIG. 1 – Pinhal do Urso, Leiria.

Fig. 2 – Pinhal do Urso, Leiria.

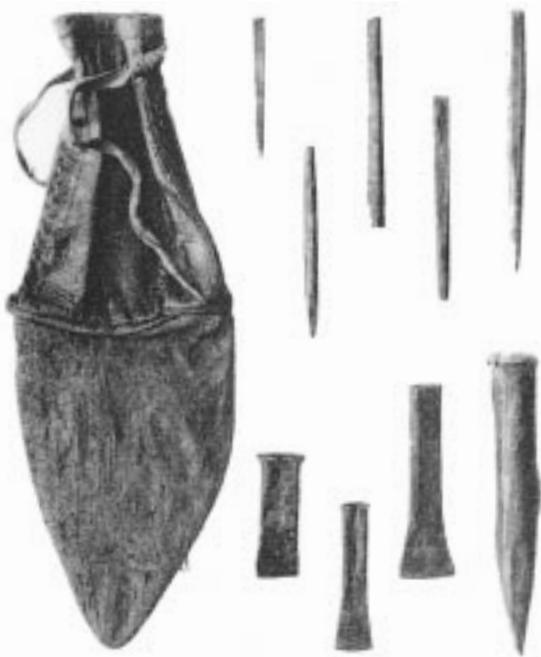


Fig. 3 – (1:1) Ferramentas de um ourives tuareg do Norte de África (seg. KUML, 1962, p. 46)

peças de produto final (punhais 11 e 12). A peça nº 8, provavelmente fragmento de um cinzel, merece especial atenção pela ornamentação, que é invulgar numa ferramenta. O “ornamento” também não tem, por enquanto, paralelos conhecidos. Será que neste fragmento de “sucata” o ourives experimentou um punção oco, antes de o aplicar na peça que estava a fabricar?

O achado do Pinhal do Urso chama a atenção para um conjunto, publicado há algum tempo na revista dinamarquesa Kum<sup>33</sup>, dos haveres dum ourives actual, tuareg, do norte da África (Fig. 3). Será que o ourives do Pinhal do Urso também guardava os seus utensílios num saquinho semelhante? Será que se perdeu nas dunas de Leiria? E perdeu o saquinho, ou perdeu a vida e o que resta é só o conteúdo do saquinho, porque este último também desapareceu com o tempo? Será que podemos interpretar o achado do Pinhal do Urso como indício de ourives ambulantes na Idade do Bronze?

## Relações a longa distância

As semelhanças tipológicas de alguns objectos e a sua vasta distribuição e concentração geográfica deram origem à designação “Bronze Atlântico”. Foram compiladas e discutidas por autores como Almagro<sup>34</sup>, Hawkes<sup>35</sup>, Savory<sup>36</sup>, MacWhite<sup>37</sup> e, em tempos mais recentes, por Coffyn<sup>38</sup> e Ruiz Galvez<sup>39</sup>. A estas obras pouco ou nada há de acrescentar.

Estas “relações” do Oeste da Península Ibérica apontam, como o nome indica, em primeiro lugar para a área atlântica (França, Ilhas Britânicas), mas, ao mesmo tempo, nunca se negou também “influências” mediterrânicas (o que, aliás, deve ser um dos argumentos pelos quais o título do nosso colóquio acaba com um ponto de interrogação).

Agora, “relações, influências” é, pelo menos arqueologicamente, um conceito muito vago. Quando se trata de cultura material, este conceito pode incluir tanto semelhanças tipológicas, com imitações, com verdadeiras importações. O que fica em aberto é a questão: quem eram os agentes destas “relações”? Havia intercâmbio activo dos dois lados, havia interferências de um lado só (de cá para lá, ou de lá para cá?) ou, como aventa ainda outra hipótese, as “relações” foram estabelecidas por terceiros?

Parece-nos que cada caso tem que ser discutido individualmente, antes de nos atrevirmos a esboçar o quadro geral.

Gostaria de demonstrar isto com três exemplos de descobertas e estudos relativamente recentes, que a meu ver iluminam bem esta complexidade:

Num trabalho recente, Fulvia Lo Schiavo<sup>40</sup>, compilou, mais uma vez, os achados de Itália, Sardenha e Sicília que revelam relações com a Península Ibérica. Na sua lista, ela distingue entre peças imitadas e peças importadas. Entre as peças importadas, quer dizer “transportadas”, ela chama a atenção para o espeto articulado, de tipo Alvaiázere, encontrado, em 1986, num túmulo de poço da necrópole de Amathus, Chipre. Esta peça é, provavelmente,

um produto fabricado no Centro de Portugal. Foi encontrado, em Chipre, num contexto indígena e o túmulo, de cujo espólio fazia parte, insere-se bem, como outras tantos, no quadro daquela necrópole<sup>41</sup>. Espetos deste tipo, em Portugal, nunca foram encontrados em contextos sepulcrais, e não fazem parte de oferendas funerárias. É, portanto, pouco provável que o sepultado de Chipre fosse “português”. O facto de o espeto ter sido incluído no espólio funerário indica que lhe foi atribuído um valor de estimação ou, pelo menos, de importância que, muito bem pode ter ultrapassado a mera curiosidade. Este espeto, portanto, não chegou a Chipre como simples “sucata” (transporte duma peça curiosa).

O segundo exemplo diz respeito a uma observação de Júlio Roque Carreira<sup>42</sup>, no âmbito do estudo de materiais procedentes de antigas escavações no Abrigo Grande das Bocas, Rio Maior. Existe ali uma fíbula de cotovelo, de tipo cipriota. Carreira, em busca de paralelos, chegou a identificar então, entre os materiais do fundo do MNA procedentes de antigas escavações de J. Leite Vasconcelos em Mondim da Beira, fragmentos de outras duas fíbulas de cotovelo, estas, no entanto, de variante siciliana. As análises metalográficas das três peças, pelo seu alto teor de estanho (Bocas 27%; Mondim da Beira-1 47%; Mondim da Beira-2 28%) sugerem um fabrico local, “português”, destas peças. Sendo assim, tratar-se-ia, neste caso, da imitação dum objecto forasteiro, cujas forma e utilização foram, provavelmente, importadas, de tal maneira que para o seu fabrico aqui existia, pelos vistos, um “mercado” que o justificou (transmissão duma prática).

Como terceiro exemplo, quero mencionar as investigações de Raquel Vilaça<sup>43</sup> sobre análises de âmbar procedente de povoados do Bronze Final. As análises deram como resultado que os objectos estudados consistem em âmbar do mar Báltico. Neste caso, estes objectos, ou a matéria-prima para eles, foram transportados ao longo de milhares de quilómetros desde o Norte da Europa para cá. Sendo assim, as “relações” comerciais do Bronze Atlântico do Oeste da Península Ibérica chegaram mais longe do que normalmente se tem pensado (transporte de valores comerciais).

Desta maneira, as minhas anotações acerca de paralelismos entre as xorcas de Baiões - Berzocana e xorcas de bronze na região do Mar Báltico (Pomerânia) vêem-se reforçadas: o âmbar nórdico, encontrado em Portugal, testemunha um movimento de pessoas entre as duas regiões.

Resta-nos saber quem foram os autores de tais viagens longínquas, que transportaram as matérias e os objectos de um lado até Chipre e, de outro, até ao mar Báltico e para além dele.

O que se deve deduzir da realidade arqueologicamente visível é, de qualquer maneira, que não se trata de acontecimentos isolados e fortuitos.

<sup>1</sup> Cardozo, 1970; 1971.

<sup>2</sup> A comunicação não foi publicada nas Actas do Congresso. cf. Silva, 1979; 1980.

<sup>3</sup> Prehistoria, 1979, p. 53.

<sup>4</sup> Savory, 1949; 1951.

<sup>5</sup> McWhite, 1951.

<sup>6</sup> Martinez, 1941; 1946.

<sup>7</sup> Monteagudo, 1977.

<sup>8</sup> Kalb, 1980; 1979.

<sup>9</sup> Kalb, 1978.

<sup>10</sup> Martins, 1984.

<sup>11</sup> Silva, *et al.*, 1984B; 1985.

<sup>12</sup> Queiroga, 1984.

<sup>13</sup> Guerra, *et al.*, 1989.

<sup>14</sup> Vilaça, 1995.

- <sup>15</sup> Coffyn, 1985.
- <sup>16</sup> Teixeira, 1939.
- <sup>17</sup> Silva, 1983, 113; Silva, [et al.], 1984a.
- <sup>18</sup> vide nota 11.
- <sup>19</sup> vide nota 10.
- <sup>20</sup> vide nota 12.
- <sup>21</sup> vide nota 13.
- <sup>22</sup> vide nota 14.
- <sup>23</sup> Carvalho, 1989, p. 63.
- <sup>24</sup> vide nota 7, p. 216, nffl 1368.
- <sup>25</sup> Cardoso, 1959.
- <sup>26</sup> Este machado encontra-se no Museu Mineiro em Freiberg/Sachsen, R. F. A. , ao qual foi oferecido, (em fins do século passado?), pelo Bergdirektor Breithaupt. Ignoro as razões ou circunstâncias desta oferta. Agradeço a informação a G. Weisgerber, Bergbau-Museum Bochum, R. F. A.
- <sup>27</sup> vide nota 14, p. 364-366.
- <sup>28</sup> Kalb, 1979.
- <sup>29</sup> Arnaud, 1979.
- <sup>30</sup> Russell, 1946, p. 37-52.
- <sup>31</sup> Armbruster 1996. Agradeço a Barbara Armbruster muitas frutíferas trocas de ideias sobre o tema.
- <sup>32</sup> Agradeço o conhecimento deste conjunto a Isabel Pereira, que me convidou a publicá-lo.
- <sup>33</sup> Nicolaisen, 1962, p. 46.
- <sup>34</sup> Almagro, 1940.
- <sup>35</sup> Hawkes, 1952.
- <sup>36</sup> vide nota 4.
- <sup>37</sup> vide nota 5.
- <sup>38</sup> vide nota 16.
- <sup>39</sup> Ruiz-Gálvez, 1984.
- <sup>40</sup> Lo Schiavo, 1991.
- <sup>41</sup> Karageorghise; Lo Schiavo, 1989.
- <sup>42</sup> Carreira, 1994.
- <sup>43</sup> Becke; Vilaça, 1995.

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\* Instituto Arqueológico Alemão, Lisboa.

# Une entité contestée: le Bronze atlantique

■ ANDRÉ COFFYN\*

**RÉSUMÉ** Depuis un demi-siècle que le terme de Bronze atlantique est utilisé, se pose maintenant la question de son existence en tant que complexe culturel par opposition à l'entité du Rhin-Suisse-France orientale.

Outre le fait qu'aucun des deux complexes ne peut être qualifié de culturel dans son intégralité car il s'agit d'ensembles de cultures différentes unies par des relations privilégiées, la simple comparaison de leurs productions métalliques permet de constater qu'il s'agit de deux entités dont l'existence ne peut être contestée.

Le Bronze atlantique forme, dans l'Extrême-Orient européen, une communauté où l'on peut distinguer des groupes septentrionaux et méridionaux dont l'identité s'inscrit dans leurs productions standardisées dont les meilleurs exemples sont les épées, pistilliformes puis en langue de carpe.

Mais chaque groupe possède ces propres produits spécifiques plus ou moins répandus dans la totalité du complexe ou seulement dans les groupes voisins. Ainsi les chaudrons irlandais et les haches à talon et deux anneaux s'exportent que dans les régions proches tandis que les haches à douille et deux anneaux se limitent à l'Ouest de la Péninsule ibérique. Enfin, les ateliers atlantiques s'approprient des modèles continentaux, les améliorent en les transformant comme les broches à rôtir.

Le Bronze atlantique apparaît donc comme une communauté géographique caractérisée par des bronzes originaux d'une composition particulière. La richesse de ses diverses provinces en cuivre, en étain et en or provoque l'attraction des groupes continentaux et méditerranéen.

Le plus bel exemple de cette attraction est le Portugal, qui représente à la fois le réceptacle d'influences diverses et un centre actif de productions particulières (haches à talon unifaces, fauilles, haches à douille et deux anneaux...) mais également un marché de diffusion des ces divers bronzes vers les îles de la Méditerranée centrale, surtout la Sardaigne. Un courant de retour y introduit, en dehors des fibules italiques, des objets précieux comme les petits chars cultuels du dépôt de Nossa Senhora de Guia, Baiões, Viseu, Beira Alta.

Ainsi, du Xe au VIIIe siècles av. J.-C., s'effectue par l'Estremadure portugaise, la liaison entre le Bronze atlantique et le Bronze méditerranéen par la voie maritime empruntée par les Mycéniens et les Chypriotes avant les Phéniciens.

**ABSTRACT** The word Atlantic Bronze Age is used since half a century. Now there is a question about its reality as a cultural complex comparatively whith Rhine-Swizerland-Eastern France (R.S.F.O.) entity.

No one of these two complexes can be said a cultural complex in its integrality, because each of them is made of different cultures united by privilegious relations. Comparison of their metallurgical productions gives evidence that they are two different entities.

In extrem Occident of Europe Atlantic Bronze Age is a community inside of it we can distinguish northern and southern groups. Their identities are evident when taking care of their standardised productions like leaf-shape blade swords and carps tongue ones.

Each group have its specific productions more or less diffused inside of its neighbouring groups. It is the case for irish cauldrons or two ringed palstaves which are exportated in proximity while two ringed socked axes are only known in western Iberic Peninsula. Atlantic workshops copy continental models and ameliorate them. It is the case with spits.

Atlantic Bronze Age appears a geographical community characterized with particular artefacts types and bronze composition. Its wealth in raw materials (copper, tin, gold) have created interest of continental and mediteranean groups.

The more famous exemple of this interest is Portugal. This country is the converging place of influences, a busy place of specialized productions (single side palstave, sickles, two ringed socked axes,...), and a diffusion place in the way to central mediteranean isles, specialy Sardinia. On the other way come italic fibulas and precious objects like a little cultual wagon of the Nossa Senhora de Guia, Baiões, Viseu, Beira Alta hoard.

Between tenth and eighth centuries before Christ in portuguese Estremadure is made the liaison between Atlantic and Mediteranean Bronze Age, on the same way which was used by Mycenians and Phenicians.

## **Origines**

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Le terme de Bronze atlantique aura bientôt cinquante ans. C'est en effet en 1946 que J.M. Santa-Olalla l'utilise pour la première fois en distinguant pour la Péninsule ibérique un Bronze méditerranéen et un Bronze atlantique<sup>1</sup>. Quelques années plus tard, H.N. Savory complète ce travail en étudiant le contexte et la chronologie des épées en langue de carpe et, soucieux de rattacher bronzes et habitats, crée deux phases: Penha-Cogotas I et II, correspondant au Bronze final et au Premier âge du Fer<sup>2</sup>.

Mais c'est E. Mac-White qui donne au Bronze atlantique péninsulaire sa véritable dimension dans le temps et dans l'espace. Il met en valeur les contacts entre la Péninsule et les régions atlantiques ainsi qu'avec les îles de la Méditerranée centrale<sup>3</sup>.

Depuis cette appellation a été adoptée partout sans aucune restriction.

## **Une contestation**

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En 1988, au Colloque de Nemours sur le complexe Rhin-Suisse-France orientale, nous avons eu la surprise d'entendre ceci de la part de J. Roussot-Larroque: «Un préjugé tenace voudrait qu'à cette période moyenne du Bronze final, la France soit partagée entre deux entités culturelles: une France orientale, liée au Rhin supérieur et à la Suisse d'un côté, et une France atlantique de l'autre»<sup>4</sup>.

La critique devient encore plus acerbe: «En conclusion, la notion de Bronze atlantique comme entité culturelle à part entière, parallèle au R.S.F.O. et occupante d'un territoire distinct, apparaît donc comme fragile et artificielle. Elle repose pour l'essentiel, sur quelques caractères propres à certains types d'objets métalliques auxquels on a peut-être accordé une valeur exagérée... La valeur de l'épée pistilliforme comme fossile directeur d'une entité culturelle "Bronze atlantique" nous paraît discutable comme la délimitation d'une frontière séparant R.S.F.O. et France atlantique»<sup>5</sup>.

C'est la seule voix qui se soit élevée contre cette notion de Bronze atlantique surtout prise comme *entité culturelle*, ce qui n'a jamais été affirmé par tous ceux qui ont utilisé ce terme. Il est d'ailleurs possible de poser la question: existe-t-il des entités culturelles au Bronze final plutôt qu'une mosaïque de peuples?

Nous avons trouvé sous la plume de V. Rychner, qui sait de quoi il parle: «Le phénomène R.S.F.O. correspond avant tout à un style de poterie. Les formes et les décors en question ne sont pas également distribués dans toutes les provinces du R.S.F.O. et, d'autre part, n'ont pas le même inventaire métallique. Il est donc difficile de considérer le R.S.F.O. comme une culture»<sup>6</sup>.

Voici donc, Bronze atlantique et R.S.F.O. renvoyés dos à dos pour une raison identique: ils ne représentent pas des entités culturelles; il est d'ailleurs vain de vouloir comparer deux ensembles fondés, l'un sur la céramique, l'autre sur les productions métalliques.

## **Le Bronze atlantique existe-t-il?**

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Le Bronze atlantique n'est-il qu'une vue de l'esprit? Pour mieux cerner le problème il convient de revenir aux définitions des notions de culture, de communauté et de complexe.

Une culture se construit à l'aide des habitats, des productions diverses (céramiques, métallurgiques) et des nécropoles, le tout uni par des éléments techniques, sociaux et cul-

turels. Autrement dit, à l'intérieur d'une aire géographique, s'établissent des relations privilégiées entre des groupes d'humains. La délimitation spatiale de la culture s'obtient par la concentration des types spécifiques.

Un ensemble de cultures voisines forme un groupe tandis que le rassemblement de plusieurs groupes permet d'établir un complexe. C'est ainsi que P. Brun dans son étude sur le Bronze atlantique, auquel il croit, distingue dans le complexe atlantique un groupe de cultures septentrionales et un groupe de cultures méridionales. Chacun compte plusieurs cultures auxquelles nous souscrivons (Fig. 1). Pourtant le second nous semble contenir une culture inutile, celle de la Meseta. En effet, Delibes de Castro et Fernández Manzano voient dans tous les bronzes atlantiques de la Meseta septentrionale des importations et non des productions locales<sup>7</sup>. Cela semble confirmé par la carte des habitats du Bronze final atlantique bien qu'elle soit déjà ancienne (Fig. 2).

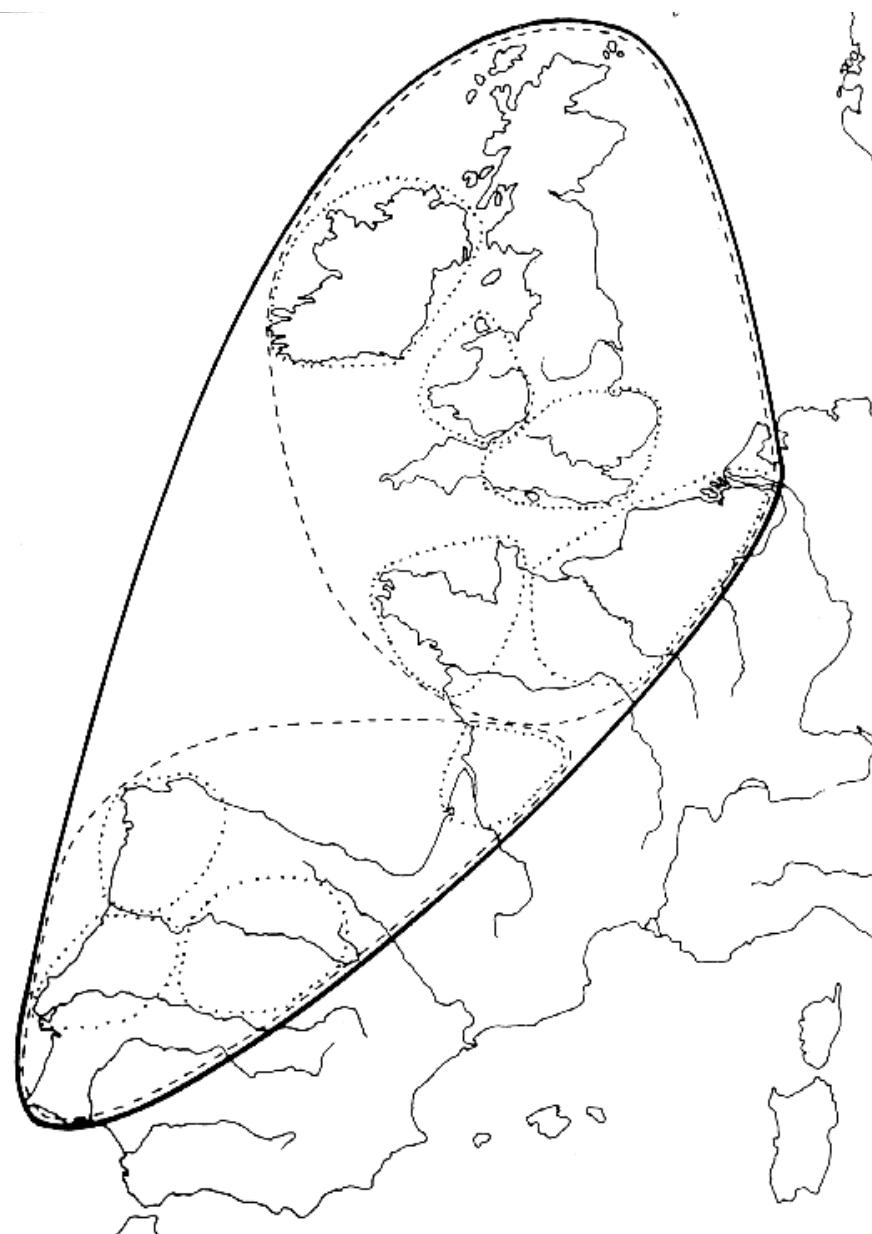


FIG. 1 – Le Bronze atlantique au B. F. III b d'après P. Brun (1991).

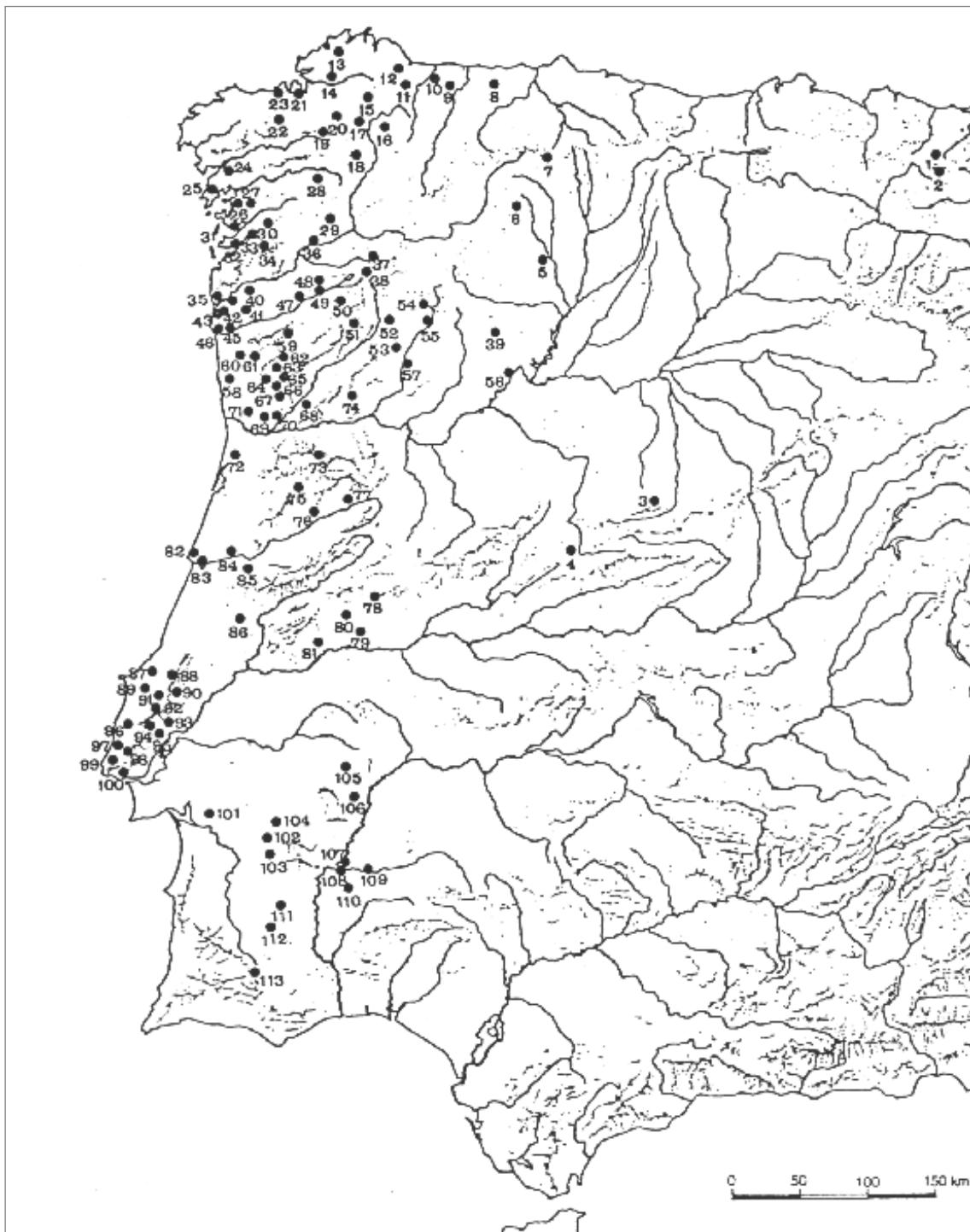


FIG. 2 – Répartition des habitats du Bronze final atlantique en Péninsule ibérique.

Le Bronze atlantique n'est pas un ensemble culturel car les groupes qui le composent ne peuvent encore prétendre au terme de culture. Mais il est indéniable que ce complexe existe. Pour le définir nous reprendrons la définition que nous avions élaborée: "Le Bronze atlantique est un ensemble de régions unies par leur grande richesse en minéraux divers, leur situation à l'Extrême occident de l'Europe et les vocations spéciales de leurs peuples à la navigation.

Mais cette communauté recèle de profondes divergences par la situation géographique même de ses composantes (îles ou presqu'îles, pays riches ou pauvres) mais aussi par les mentalités particulières des habitants des finistères, souvent avides d'indépendance, de particularisme ou de conservatisme.

C'est cet ensemble de "différences" qui fait le Bronze atlantique avec son fond commun aux productions standardisées et ses provinces aux fabrications spécifiques: fauilles à douille de type britannique, haches à douille armoricaines, épées de type Vénat, haches à talon unifaces portugaises<sup>8</sup>.

## Le Bronze atlantique

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### Les productions communes (Fig. 3)

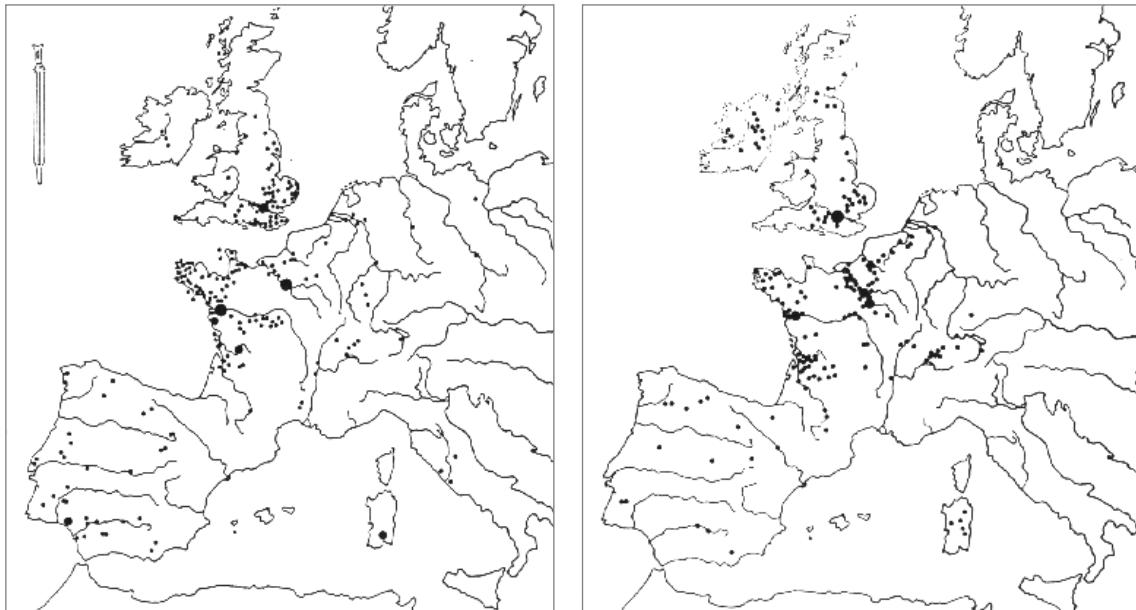


FIG. 3 – Répartition des épées.

Il s'agit essentiellement d'épées soit pistilliformes au milieu du Bronze final soit en langue de carpe à la fin (Fig. 3). Les cartes de répartition sont explicites et n'ont besoin d'aucun commentaire. Précisons toutefois que, dans chaque région, les épées possèdent des formes originales, subissent des techniques différentes avec une très grande diversité d'alliages à cause de la plus ou moins grande richesse en minerai de la région. Ainsi les pays riches en étain comme la Bretagne et la Péninsule ibérique n'utilisent que peu de plomb.

## Les spécialités régionales

### Iles britanniques

*Haches à douille à décor de cannelures verticales.*

Ces instruments, abondants dans les îles britanniques, ont une extension limitée la France de l'Ouest (Bretagne, Normandie, France du Centre-Ouest) et du Nord jusqu'en Belgique<sup>9</sup> (Fig. 4).

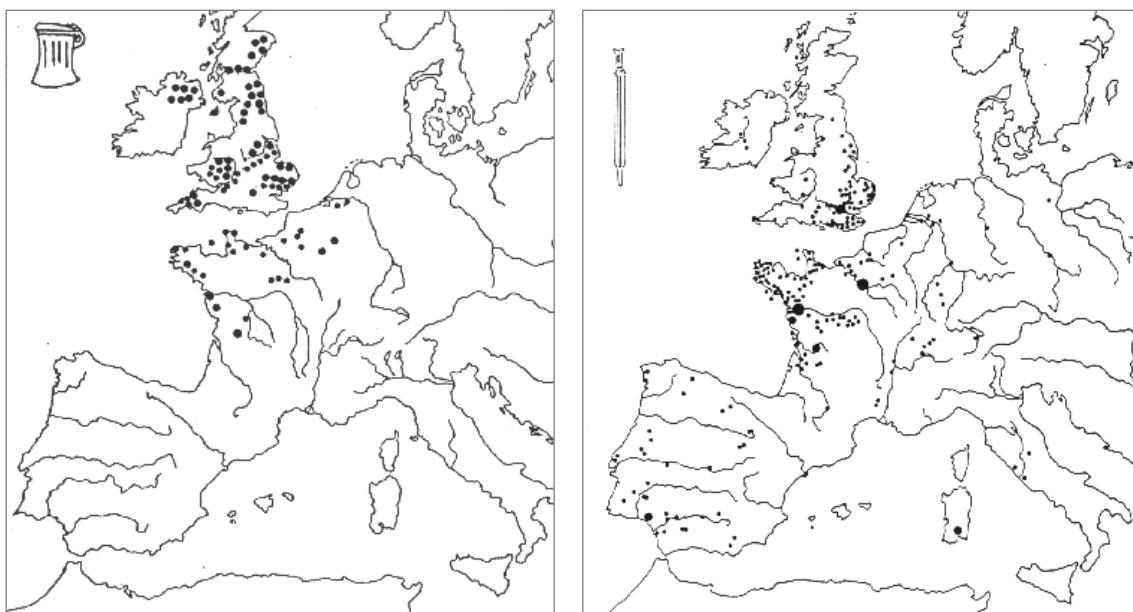


FIG. 4 – Le Bronze atlantique dans les îles Britanniques. Productions remarquables.

*Chaudrons rivetés de type irlandais.*

Dans le monde atlantique la diffusion des chaudrons, depuis l'Irlande jusqu'à la Péninsule ibérique, permet de jalonner une voie de circulation des échanges. Si, en France, la découverte de débris de chaudrons dans les dépôts laisse supposer que ces récipients ont perdu leur caractère sacré, certains chaudrons d'Espagne, enfouis profondément dans des mines paraissent l'avoir conservé (Cabarceno; Lois).

### France de l 'Ouest

*Haches à douille bretonnes* (Fig. 5).

Tous types confondus, ces haches possèdent une très vaste répartition dans les îles britanniques, la France, la Belgique, la Hollande et même l'Allemagne de l'Ouest. En revanche, l'expansion vers le Sud-Ouest français est plus légère et la Péninsule ibérique n'en compte que quelques exemplaires dont deux sont sans origine<sup>10</sup>. Néanmoins la Galice et le Portugal en ont de nombreuses dont l'origine remonte à quelques haches de type Taunton-Hademarchen.

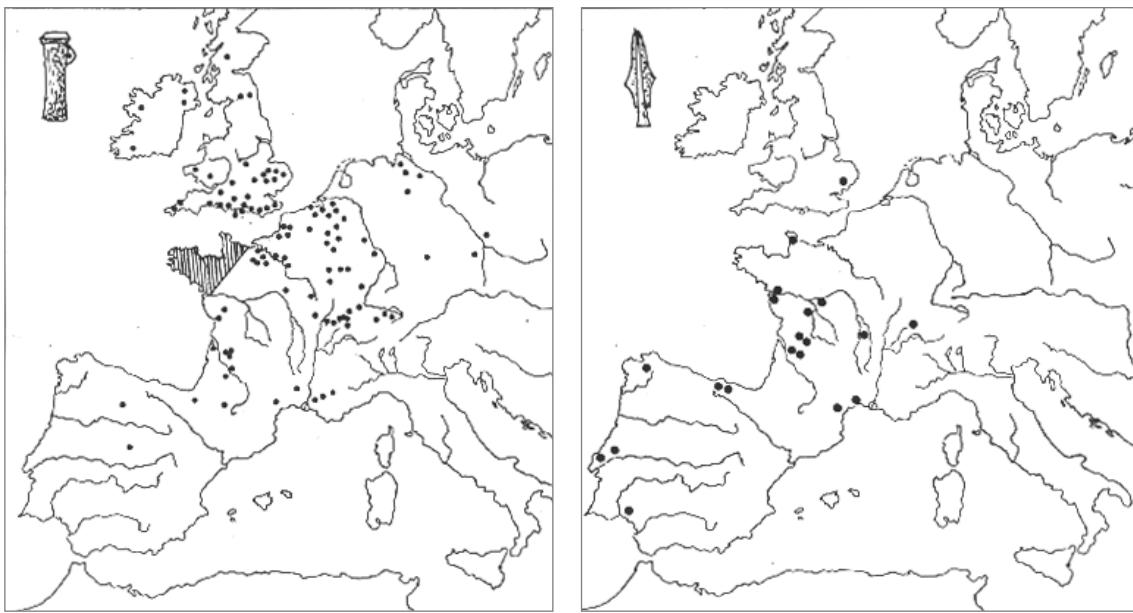


FIG. 5 – Les productions remarquables du Bronze atlantique dans l'Ouest français.

#### *Pointes de lance de type Vénat*

C'est l'exemple caractéristique de l'objet régional dont la propagation est restée limitée. Seule la Péninsule en renferme un certain nombre le long de la côte atlantique.

#### La Péninsule ibérique (Fig. 6)

Elle est ici caractérisée par deux pièces d'origine incontestable: les haches à talon unifaces et les haches à talon et deux anneaux.

##### *Haches à talon uniface*

C'est une spécialité portugaise et même du Centre-Portugal. Cet outil présente sur une face toutes les caractéristiques d'une hache à talon et anneau tandis que la seconde est absolument plate. Nous connaissons 36 haches de ce type au Portugal avec une hache de Monforte-da-Beira qui se distingue par ses appendices latéraux au lieu de l'anneau habituel<sup>11</sup>.

Ce type lusitanien ne se retrouve qu'à un exemplaire dans le dépôt sarde de Monte-sa-Idda. Dans le nord de l'Irlande existe un petit groupe de haches à talon unifaces mais il est impossible d'affirmer qu'il s'agit de haches exportées du Portugal<sup>12</sup>.

##### *Haches à talon et deux anneaux*

Les deux anneaux, invention hispanique, comme les appendices, semblent d'abord utilisées sur des haches plates, avant de passer sur les haches à talon puis à douille et d'autres outils<sup>13</sup>.

Ces outils ou leur mode se propagent en Méditerranée vers la Sardaigne mais surtout dans l'Ouest français à partir de l'Ariège, le Sud de la Grande-Bretagne, et en suivant

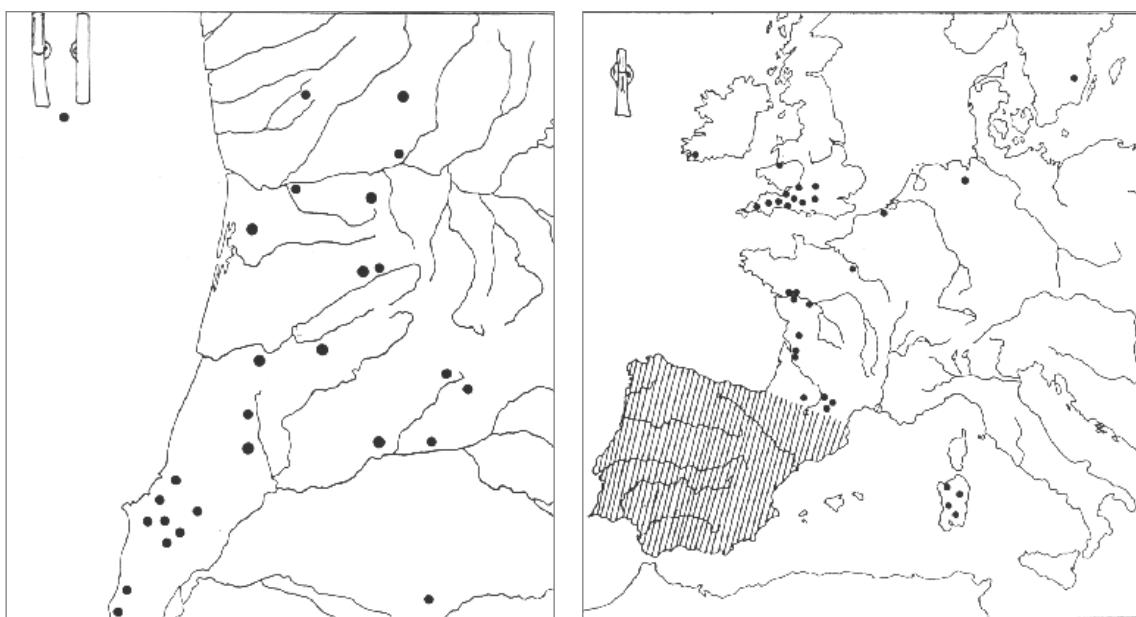


FIG. 6 – Bronze atlantique. Les productions en Péninsule Ibérique.

les côtes de la Mer du Nord quelques haches atteignent la Suède, sans doute à titre de curiosité.

Ainsi que l'on peut le constater, certains objets comme les épées se propagent d'une extrémité à l'autre du complexe atlantique tandis que d'autres ne se diffusent que dans les régions voisines (lance de type Vénat) et enfin, certains ne dépassent pas la zone de production. Ce dernier cas se situe beaucoup au Portugal avec en plus, les poignards Porto-de-Mós et les fauilles de type Rocanes.

### Copies, imitations et transformations

Des relations d'échanges s'établissent avec le Bronze méditerranéen comme on vient de le voir mais aussi et surtout avec le Bronze continental. Certains objets jugés remarquables sont adoptés et souvent copiés ou transformés sur place dans le Centre-Ouest français. Ainsi des bijoux particuliers imitent-ils les bracelets alpins ou suisses à décor complexe, les épingles à tête vasiforme deviennent des épingles à nodosités fondues en séries. Dans les armes, une épée à antennes "bricolée" plutôt que fabriquée n'est qu'une pâle copie des épées continentales. En somme, entre les deux complexes s'introduit une sorte d'espionnage industriel qui semble surtout le fait du Bronze atlantique<sup>14</sup>.

De plus, certains objets, adoptés à l'Ouest sont transformés plusieurs fois. Ainsi la broche à rôtir fixe du Bronze continental devient-elle articulée dans l'Ouest français et la Péninsule ibérique ou deux nouveaux modèles fixes apparaissent dans l'Alentejo portugais et la vallée du Guadalquivir<sup>15</sup> (Fig. 7).

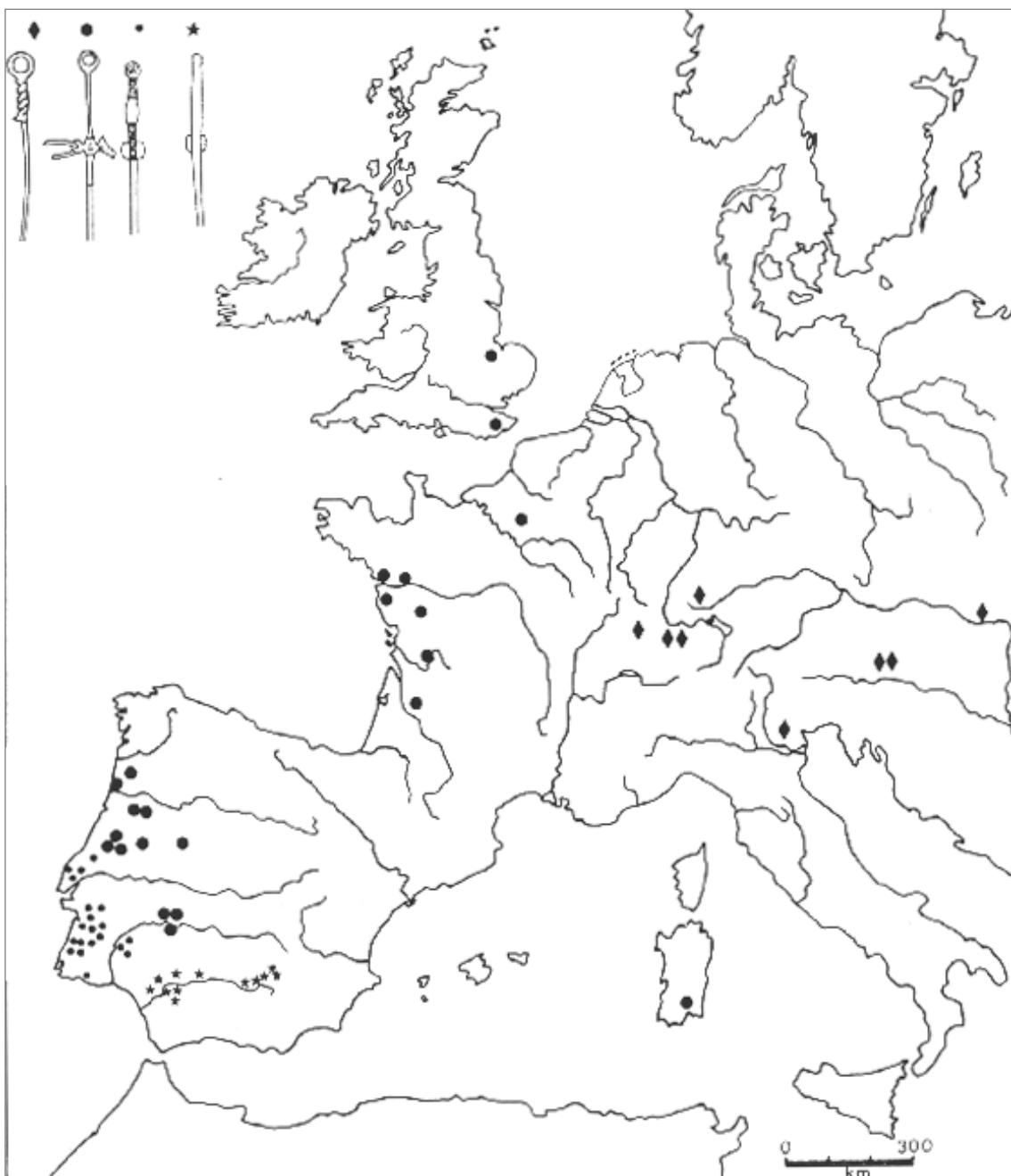


FIG. 7 – Les broches à rôtir en Europe. Différents types.

Le Bronze atlantique apparaît donc, non comme une entité culturelle, mais comme une communauté unie par la situation, les ressources minérales et les relations privilégiées des groupes qui la composent.

Les échanges s'effectuent à la fois par la mer et par des cheminements terrestres, toujours les mêmes depuis des siècles, que nous dévoilent les cartes de répartition. Aucune épave ne provient de la côte atlantique, celles de Douvres et de Salcombe étant sur la Manche et le bateau marchand de Huelva se dirigeant vers la Sardaigne pour y échanger des bronzes atlantiques et ibériques.

## Le Portugal et le Bronze atlantique

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Le Portugal occupe une place privilégiée dans le Bronze atlantique. Il demeure la région la plus réceptive d'influences diverses et la plus productrice d'objets spécifiques. La Lusitanie se prête admirablement bien à notre définition du Bronze atlantique car toutes les productions communes du complexe s'y rencontrent: épées, casques, outils, bijoux. Y arrivent aussi certaines importations des autres foyers atlantiques: chaudrons irlandais, haches à talon, fauciilles à douille, épées et lances de type Vénat.

De plus, les productions spécifiques portugaises sont multiples: haches à talon unifaces, haches à douille et deux anneaux, poignards Porto de Mos, fauciilles de type Rocanes, diverses pointes de lances et un type particulier d'épée pistilliforme (Evora, Vila Maior).

De même arrivent au Portugal les broches à rôtir articulées qui sont fabriquées sur place mais encore transformées en un type fixe produit dans l'Alentejo (Fig. 7).

L'Estrémadure portugaise sert de comptoir pour l'exportation de toutes les productions atlantiques et lusitaniennes vers la Méditerranée centrale, la Sardaigne en particulier. En retour, parviennent les objets sardes et italiens dont les petits chars cultuels du dépôt de Nossa Senhora da Guia à Baioes sont l'expression<sup>16</sup> (Fig. 8). Pour ces échanges nous croyons davantage à la navigation locale plutôt qu'au commerce phénicien dont on ne connaît aucune preuve archéologique avant la fin du VIII<sup>e</sup> siècle av. J.-C.<sup>17</sup>.

L'étude métallurgique porte sur deux dépôts: Coles de Samuel, Soure, Beira Litoral et Quinta de Ervedal, Alpedrinha, Beira Baixa, quatre objets de celui de Porto de Concelho, Mação, Beira Baixa et des pièces de l'habitat de Castelo de Caratão, Mação, soit seize analyses effectuées par le laboratoire de Rennes que nous assurons de notre gratitude.

Origine Object	Cu	Sn	Pb	As	Sb	Ag	Ni	Bi	Fe	Zn	Mn
Faucilles Coles	85,5	11,2	0,20	0,20	0,05	0,04	0,05	0,005	-	0,001	-
Faucilles Coles	84,7	10,5	0,025	0,50	0,15	0,10	0,05	0,008	-	0,005	-
Rio Moinhos	88,50	10,90	0,025	-	tr.	0,03	0,01	-	0,001	-	-
Rio Moinhos	(88,8)	11	0,04	-	0,005	0,04	0,03	-	0,002	-	-
H.D.2 Coles Moyenne	85	12,1	0,21	0,375	0,056	0,037	0,013	0,013	-	0,001	-
h.u. Coles	85,5	12,7	0,07	0,15	0,04	0,06	0,02	0,007	-	0,008	tr.
Castelo de Caratão	(82,8)	15	0,03	0,003	0,05	0,05	0,07	0,001	-	-	-
Castelo de Caratão	85,05	14,65	0,04	0,005	0,08	0,08	0,07	0,001	-	-	-
H.T.1 Ervedal	83,8	14,1	0,03	0,50	0,15	0,06	0,005	0,01	tr.	-	tr.
Lance Caratão	82,6	17,1	0,015	tr.	0,02	0,04	0,03	tr.	-	-	-
Ciseau Coles	84,7	13,7	0,07	0,25	0,05	0,04	0,01	0,006	-	0,02	-
Caratão	(87,6)	12	0,03	0,03	0,02	0,08	0,20	-	-	-	-
Bracelet Coles	84,6	13,7	0,02	1	0,06	0,015	0,005	0,005	-	0,10	-
Tranchet Caratão	(85,9)	14	0,03	tr.	0,008	0,04	0,015	-	-	-	-
Bracelet Caratão	75,9	4,80	18,65	-	0,10	0,03	0,02	-	0,01	-	-
H.T.2 Abelheira	42,2	7,4	46,7	0,20	0,06	0,20	0,005	0,002	-	-	-
-id- jet	20,5	0,02	73,0	-	0,06	0,003	tr.	-	0,05	0,001	tr.
Langue de carpe Caratão	90,5	8,80	0,04	-	0,002	0,06	0,05	-	0,05	-	-

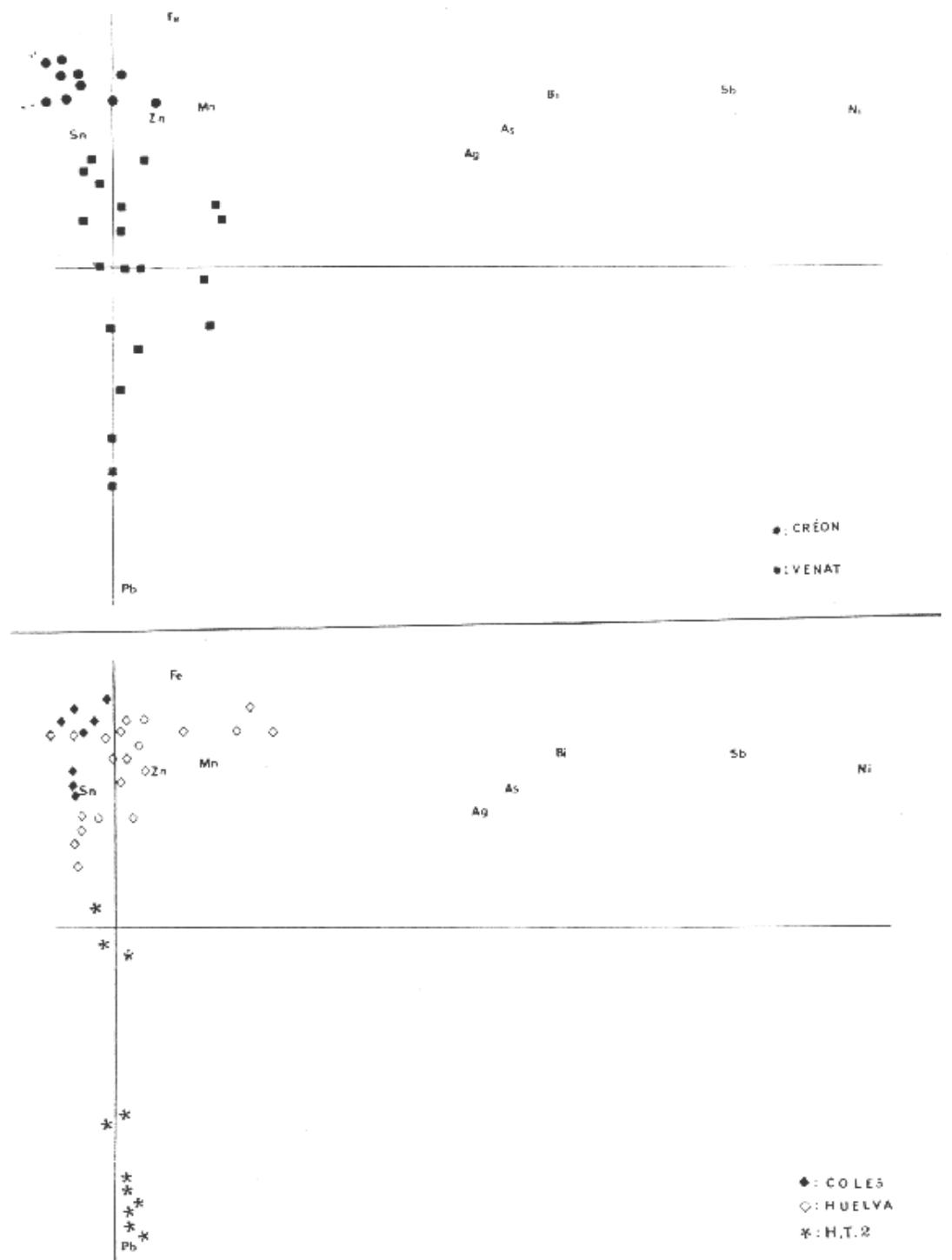


FIG. 8 – Analyse des correspondances entre les bronzes du B.F. III dans le Sud-Ouest français et la Péninsule ibérique.

Malheureusement, pour la majeure partie des bronzes du Castelo Velho de Caratão, nous ignorons la place dans la stratigraphie relevée.

Ce que nous constatons d'abord, c'est l'utilisation constante d'un alliage de cuivre et d'étain jusqu'à l'extrême fin de l'Age du Bronze: 12,24% d'étain à Coles de Samuel et 13,26% à Porto de Concelho, le plomb restant une impureté. Toutes les productions lusitanienes ont été analysées: fauilles de type Rocanes, haches à talon un anneau, haches unifaces,

haches à douille et deux anneaux, lance de type Baiões, ciseaux, tranchet à manche évidé, bracelets massifs. Toutes présentent le même alliage binaire avec des impuretés négligeables dont font partie le plomb et l'arsenic.

Ce n'est que vers le VII<sup>e</sup> siècle av. J.-C. qu'apparaît un bronze ternaire avec un bracelet à tampons de Caratão, pauvre en étain (4,8%) mais riche en plomb (18,65%) et les haches à talon allongées du type Abelheira (jusqu'à 73% de plomb). Pourtant un fragment de lame d'épée en langue de carpe de Caratão ne comporte que 8,8% d'étain pour 0,04% de plomb, preuve du conservatisme des bronziers.

Quelques analyses d'objets identiques ou similaires au Portugal et en Galice permettent de différencier deux ateliers métallurgiques. Les fauilles de type Rocanes présentent un métal binaire à 10,98% d'étain alors qu'une fauille de Castropol est un bronze avec 10,40% d'étain et 20,50% de plomb, composition analogue aux haches à talon et deux anneaux tardives de Galice. Il en est de même pour les haches à douille et deux anneaux car celle de Navelgas, Galice, contient 8,8% d'étain et 6% de plomb d'après P.T. Craddock<sup>18</sup>.

Malgré le petit nombre d'analyses et la dispersion des laboratoires, il nous a paru intéressant d'essayer de comparer les résultats connus avec ceux du Sud-ouest français (Fig. 8). Au-dessus se situent les analyses des faciès d'ateliers de Crémon et de Vénat, au-dessous ceux des dépôts de Coles, de Huelva, ainsi que ceux des haches à talon et deux anneaux tardives. Les graphiques obtenus par analyse des correspondances sont très semblables à cela près que les objets de Huelva restent en bronze binaire.

## Conclusions

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Existe-t-il à l'Age du Bronze, un Bronze atlantique dans l'Ouest européen par opposition à un Bronze continental qualifié de Rhin-Suisse-France orientale?

La simple comparaison typologique et technologique de leurs productions métalliques permet effectivement de différencier deux complexes même si à l'Ouest, ces deux ensembles peuvent s'assembler dans les dépôts. Cette mixité est uniquement due à l'attraction que le groupe oriental éprouve envers la richesse en minéraux des groupes occidentaux. Les relations qui s'établissent provoquent des échanges d'objets qui sont adoptés, imités ou transformés à l'Ouest.

Le Bronze atlantique se présente comme un vaste ensemble de l'Ecosse au sud du Portugal dont l'identité est prouvée par l'utilisation d'objets identiques comme les diverses épées, tout en gardant par région une originalité propre qui se manifeste par des productions locales plus ou moins répandues ailleurs.

Le complexe atlantique ne peut être qualifié de culturel car il s'agit de cultures différentes bien que proches et unies par des liens privilégiés séculaires. En effet, les échanges technologiques se doublent de transmission d'idées cultuelles aboutissant au Portugal, à l'association fourche à viande-chaudron et chars cultuels italiques.

Car le plus beau fleuron de ce complexe atlantique est sans aucun doute le Centre-Portugal, comptoir actif qui a utilisé, fabriqué et imité les bronzes atlantiques avant de les transmettre avec ses propres productions, au Bronze méditerranéen entre les X<sup>e</sup> et le VII<sup>e</sup> siècles av. J.-C.<sup>19</sup>.

Le problème du Bronze atlantique n'est pas dans son existence mais réside dans son organisation économique et sociale. Existait-il un chef unique, politique et/ou religieux, des potentats locaux, une aristocratie de marchands soutenus par des guerriers ou un sorte de Conseil comme dans notre modème C.E.E.? Nous ne le saurons jamais, ce qui laisse libre cours à toutes les suppositions.

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- \* Centre Pierre-Paris, Université de Bordeaux III. Bordeaux. France.
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# DEBATE

m o d e r a d o r ■ STUART NEEDHAM ■

## STUART NEEDHAM:

We have had an extremely exciting morning, very rich in evidence, and evidence of a variety of different types. I think it has been quite rewarding for us to see these different components and to try to piece them together, to see what really is the character of this zone we are calling the Atlantic façade or this concept of the Atlantic Bronze Age.

P. Kalb showed us the tremendous potential, in Iberia in particular, which will come from metalwork in settlement context analysis.

Is it not this opportunity a wonderful one to get down to the matter of identifying different regional material's value systems?

It can come from the settlements and it will come. I think that settlements in Iberia are - from this particular of metalwork in context, at least - showing a completely different picture from that shown at the other end of the Atlantic façade, in Britain.

I think there is tremendous potential there, and it is down to us to start look at that in detail and exploit that potential.

André Coffyn gave us an eloquent demonstration of the superficiality of the similarities sometimes found in the material, even among the well treated and well-known types that run all the way down through the Atlantic.

William O'Brien gave us an illuminating exposition of the social role of metal extraction and its primary distribution. He stressed the importance of recognising the areas that were exploiting metalwork, but also those areas which were not exploiting metal resources. That is something where we have to focus more and more attention on, as fieldwork identifies more mining and exploitation sites.

He also suggested that the exploitation and the control over the primary supply of metal were not a necessary part of establishing social power. I think that is a very interesting suggestion, but I would like to say the picture is, perhaps, more complex than that. Maybe in some regions that is the case, but we may find some areas where it became necessary to bring exploitation of mineral resources into the fabric of society; it could happen for whatever reasons, economical, political, all these things intertwined. In other areas there may have been no necessity to do so. Perhaps that is the strength of the local and regional approach to these things.

Can we consider the possibility that there is variability even in that perception of the role of metal extraction?

It also refreshed me to see that a sense of proportion has now entered the discussion of metal production, in terms of the area over which the material was disseminated; no more bulk export of Irish copper to the Continent.

David Coombs came up with what I think is a very important term for us at this conference: he called it the ritual world of the Later Bronze Age. I think this is an important concept for us to put alongside with the geographically determined of the Atlantic Bronze Age in the Atlantic façade. He reminded us also about Helms' crucial work and the role of

long distance traders. I would like to suggest to you that perhaps we should stop thinking about long distance traders.

Is it beneficial to refer to these people in the Late Bronze Age as long distance communicators?

Should one think of them as communicating both ideas and technologies, through the media of artefacts?

David touched on some ideas about the geographical background, a little worried that geography was not in to our deliberations and because the geography underpins everything that we are discussing here; the problem is that, for some of us, environmental or geographical determinism is a dirty concept, no longer acceptable.

Nevertheless, geographic determinism is crucial, and I would like to come back to this in a minute; in fact, Marisa Ruiz-Gálvez started off by introducing a geographic component; that was important.

Jean Pierre Mohen gave us some factual bases about the variations and commonalities of geography and environment up the Atlantic façade.

I want to suggest that we should try and put ourselves in the eyes of a group, of a community that lived in the Atlantic façade.

The important thing for **us** is **here**; so let's consider this notion of geographic determinism, in some awful schematic theoretical way: one hypothesis assumes that all points are of equal importance - which they are not, but it is a kind of null hypothesis. What we can suggest is that if all points were of equal importance, under the same social conditions, each community would have certain ties of various kinds with neighbouring communities and occasionally with communities a bit further removed.

The interesting thing is that communities on the façade have fewer opportunities to form those ties because on one side they have sea; if there is a need for those ties, either social, political or economical, they have to start bridging around the coastline, navigating. In contrast to the interior, this creates a more deeply interwoven web, running all the way along the coastland.

I do not want to suggest that this is a model for the Atlantic Bronze Age *per se*.

We assume that we start with this kind of scenario, with small scale polities, and these kinds of local links as typical. In addition, we have sporadic long distance displacements; to say that it is sporadic doesn't mean it is unimportant at all, but it is unplanned and uncontrolled, to a large degree. The question is: what possible model of development is there?

Patrice Brun touched, among others, the point that we see increasing exploitation of the benefits of these longer distance displacements, as means of supporting the development of regional hierarchies. The classic problem, of course, is chicken and egg. Which of these came first?

I do not know if you have feelings whether we can ever discern that from the archaeological record, perhaps it is matter for debate; I suggest that, whichever the answer is, they are closely intertwined.

If we are right about this as a development through the Bronze Age, perhaps we end up with certain areas with paramount groups and leaders. By this stage, longer distance exchange becomes more focused on nodal points and it habitually leap-frogs the lower status areas between higher status ones. So here I have suggested some high status communities emerging out of that trajectory. Is this a possible explanation to the appearance of what we see up and down the Atlantic façade?

Even so I do not think that it means that if we are **here**, in southern Portugal, we see much by means of direct contact with northern Scotland, **up there**. I still think that infor-

mation and objects from one extreme to the other are going to be fairly infrequent occasions, and so we are looking at a network where any similarities and commonalities abound to be diffused and drift with geographic space. That is exactly the case of what you see in a lot of detail evidence from the Atlantic zone.

There are perhaps some important points to make about the necessary preconditions of this development, and David Coombs and others touched them this morning.

Some of these necessary preconditions involve the investment in boat technology. We are talking about a more systematic exploitation of these links for our purpose, if you are going to sustain that on a permanent basis, you have to invest in technology and experts (e.g. sailors) to engage in the long distance communication.

We should ask the question: Why was it such a successful system?

Or indeed, do you feel it was a successful system?

And thirdly, what are the inherent limitations?

I think there were two main ones.

First, I think this system was rather fragile, probably through the reasons you have with any small scale polities and social hierarchies evolving out of them, you are always going to get competition and rivalry. This is inherent instability, changing the balance of power...

I think there is a second one in our special case of the Atlantic façade. That has to do with the need to maintain this specialist service of maritime, sea-worthy vessels and sailors. I suspect that it would add another component of fragility to this whole system. It is worth perhaps to give that some thought.

#### VÍTOR OLIVEIRA JORGE:

In the beginning, in the introduction, Jean Pierre Mohen, read by Christianne Eluère, talked about an Atlantic arc. We already heard about an Atlantic façade and also of an Atlantic corridor. Yesterday, Marisa Ruiz-Gálvez suggested that the Atlantic world was to be treated as Braudel treated the Mediterranean one. They are two completely different entities, completely different geographical settings and I suppose it is just to pass from a metaphor to another one, it explains absolutely nothing. Portugal is in a good position to question these things, because Portugal is a real mosaic of so-called Atlantic and Mediterranean characteristics in every point of view.

What is the point in showing a boat; or two boats; or one hundred boats; if we do not know exactly what was the palaeo-climatology of every moment of this so-called period we are treating here?

In order to know what were the navigation conditions between parts of Europe, in the Atlantic so-called-façade, we should know precisely what were the palaeo-climatological conditions, contextualizing them and come to a more detailed reality. Then we can discuss these things.

If I do not believe in a Bronze Age, at all, I can not believe in an Atlantic Bronze Age. That happens because I do not know what that is.

The similarities of objects, and even of sets of objects, do not mean at all any similarities between other aspects of social reality, as we all know. In many cultural contexts, all over the world, people use not only the same objects but even the same behaviours in certain times or certain points of their trajectories, because they are sometimes forced to do it. For instance, Turnbull shows that the Pygmies in Zaire, when they contact with the Bantu, they even submit themselves to certain rituals. After that, when they come back to the bush they use their supposedly own culture in a very different way. So they may, in certain epochs

of the year, use precisely the same objects and even the same behaviours as if they were Bantu, and in other epochs of the year they behave as Pygmies.

The fact that the same kind of sword, or the same kind of dagger, or the same kind of anything is similar, no matter where, does not mean that there is any kind of unity.

I ask you, I beg you: please never come back with these ideas.

#### KRISTIAN KRISTIANSEN:

I have to come back with this idea.

I think this is a fundamental issue; if we can not agree on this, if you have this point of view we simply can not discuss; there is no platform for discussion if this is the point of departure.

It is absurd to make comparisons to Bantu or Pygmies.

We have to realise that we are in a historic period. In the later phases, in the X-IX centuries, which is what we are talking about mainly, state systems are penetrating the West Mediterranean. We have almost two hundred and fifty years of Bronze Age. That means that much of development of rather complex types of societies, well organised, where there were, over large regions, cores of social values' systems that are more or less similar.

We are dealing with societies where we can talk about the difference, for instance, of kind of social complexity; the point has been made. We can talk about the difference between a southern Portuguese type of social and political environment and a more north-western environment. There are obvious differences in the South of Portugal, where we have important Mediterranean influences. We should discuss examples of hierarchy, here in the Iberian area, that will make contrast with the north-western façade even more clear.

But please remember that we have the palaeobotanical evidence in many regions. We know that this is a period where we have an extensively open, well-organised landscape, where there was investment of labour for millennia. We already have evidence for ecological crisis due to over exploitation, with large regions without forests. There were well organised field systems. Recently, from the South, from the Huelva estuary, we had palaeobotanical evidence showing very clear expansion, in the IX-X centuries, of exploitation of landscape.

We are talking here of a period where we have the first hill-forts, where we have complex settlement systems emerging in southern England, integrating lowland settlements and highland, more pastoralized economies. That is the suggestion that has been made.

We are talking here, as a base line, about societies that are already complex societies, they are not state societies but they are complex tribal societies and have been so for millennia.

So, please, let that be the point of departure for discussion.

#### STUART NEEDHAM:

Two thoughts:

One - were the state societies penetrating West Mediterranean or were they invited?

Second, about the meaning of artefacts - if (I think there is an if) the two participants at the moment of exchange agree on a meaning for an artefact, even if their comprehension is the same, once that transaction has taken place, and the object then resides in another region, it may be utilised with yet another meaning, or in a different fashion.

That is in part an answer to a comment Kristian Kristiansen made yesterday, I think.

This question of changing means is still vital and we have to look at it empirically, seeing what evidence we can find to bear it out, or suppress it.

**JOÃO CARLOS SENNA-MARTINEZ:**

Even if I very much agree with your last comment, I would like to point out something else.

The question with typology is that if we take the original definition by Gordon Childe of what a type is (something that got a social recognition as such), maybe it is not so indifferent that, on the basis of morphological similarity that everyone recognises that exist, we draw distribution charts. These tell us that something that was made according to a model, was made according to parameters socially recognised as such. So these surely mean something, and what recent research is showing us, is that the same model was then done in very different regions with the same technology even if it means locally a different thing.

**MICHAEL SHANKS:**

Is there a point of contact between the positions we have heard here (typology being challenged and social archaeology being proposed), in the recognition of the fact that what we are after - to pick up Stuart Needham's point - is a more sophisticated appreciation of the role of artefacts in society?

Typologies do not tell you very much. I beg to differ that even if you agree on a description of an artefact it does not tell you very much about how it was made, about "chaines operatoires", about the modes of workmanship or indeed about typological similarities that not upheld in technical differences, a point we heard from André Coffyn.

In some papers there is a hint that really there is a lot more to the social place of artefacts than we are talking. For instance, the Mary Helms issue, over the transportation of goods: what I read in her work, and she is just the tip of a great iceberg of anthropological work on exchange, is that exchange is this category we have, and we are challenging these categories.

But what about the experience of the movement of goods?

We have been hearing about these things; David Coombs was talking about it; Stuart talked about world-views and their attitudes, but the point is not "transporters turned communicators": it is the experience of travel, movement. These social experiences are not just about functionalities, about resources, about hierarchy, they were about the lives people were living.

If we look also not just at trade as communication, as travel, but look at these goods, these so-called prestige goods, what are they? They are not just value.

What is that value? Value in social terms is all sorts of things. Using a sword or owning a sword can mean a whole range of things as value, from its commodity value, to such things as the value it gives to the experience of dressing-up.

Consumption is a complex, multifaceted thing in society, as is production. So, my point is simply that the complexity of the things we are talking about really is what unites K. Kristiansen and Vítor Oliveira Jorge. We need to take seriously our role as anthropological social archaeologists and start thinking more than one dimension about society.

**RICHARD BRADLEY:**

I was going to make a comment that has now been made by Michael Shanks, but could I add one other point.

We are taking in our discussions two things as given.

One are the typologies, whatever the metaphysical difference between what we feel is similar and what is different.

The other is the distribution maps. The objects essentially raise the problem of the practices to which they belong. How do you use a sword? How do you use feasting equip-

ment? Do you use the same types in the same way in different regions? The real problem is how do we compile our distribution maps.

We have said remarkably little about how this material ever came down to us; we are taking our distribution maps for granted. And yet the biggest problem, as David Coombs made very clear, is why this material should ever survive, why was it not recycled. It was deposited, and we have a series of just-so stories, which explain the formation of the archaeological record, so that we can then go back to an essentially traditional project of plotting the material in time and space. While doing that we are avoiding perhaps the one practice in which it was used which leaves an archaeological signature, and that is the process of deposition.

There are many models for deposition, one of the simplest, because is the most generalised, is that all this material carries a social significance. That is why its dissemination must be restricted. After its life history is over it must be taken out of circulation in perpetuity.

That is the one practice that leaves an archaeological signature and it seems to be the one practice that we are most reluctant to deal with. Somehow it is easier to plot the two dimensions of time and space, as we have been doing for one hundred years, but it does seem to be an awful waste of an extremely rich resource.

#### **ANDRÉ COFFYN:**

J'entends beaucoup parler de commerce, d'ailleurs je crois pas qu'il y a eu du commerce à l'Âge du Bronze Ancien - même les Phéniciens c'était du troc. Il faut rester simple.

Je peux aussi vous donner un exemple, des calculs de tête et rapidement, j'espère que je ne me suis pas trompé. Il y a des objets que je connais bien, ce sont les haches médo-caines: j'en connais, à peu-près, deux mille, dont mille sont dessinées et mille autres qui sont plus ou moins perdues. En considérant que durant les quatre siècles du Bronze médo-cain, on a deux mille haches mais qu'elles ne représentent plus que le cinquième de ce qu'a été fabriqué, ça ferait dix mille haches en quatre siècles. En prenant une moyenne de cinq cent grammes par hache, tous types confondus - les petites, les grosses et les moyennes - ça nous donne cinquante tonnes de bronze à douze pour cent d'étain, ça fait six cent quilos d'étain pour les quatre siècles; si vous divisez, ça fait six quilos pour quatre ans; si je compte bien, ça fait un quilo cinq-cent par an. J'ai pas fait le calcul pour le cuivre, vous savez, je compte mal, mais ça représente très peu de chose.

Ce matin il y avait David Coombs qui nous montrait des bateaux de dimension moyenne et ça pouvait très bien convenir pour ce cabotage. Il faut pas en faire d'énormes choses que ces échanges à l'Âge du Bronze.

#### **STUART NEEDHAM:**

I think this kind of calculations is extremely instructive, in terms of telling us the infinitesimal small fraction of the material that survives for us to study.

#### **VÍTOR OLIVEIRA JORGE:**

I would just like to say a brief word about social complexity and complex societies, trying to answer to the intervention by Kristian Kristiansen.

I do not know what is complexity, because I see this term applied to hunter-gatherer societies of the upper Palaeolithic, at least, down till the present. I do not know exactly when complex societies emerge.

When I started to talk about the case of the Bantu-Pigmy relation may I remember that the Bantu are complex, they have an Iron Age technology, and we are here just with Bronze Age people.

**STUART NEEDHAM:**

When, as discussant of a session at the conference I dared to put forward an Atlantic Bronze Age cosmological map it was not in any way intended to trivialize the subject. It is true that I hoped in this way to cause a stir, but my point was meant entirely seriously. As late 20th century archaeologists, we are so preoccupied with the shape evidence takes against our modern cartographic masterpieces that we barely begin to situate ourselves within the cognitive framework of the communities in question with respect to their own constructed geographies.

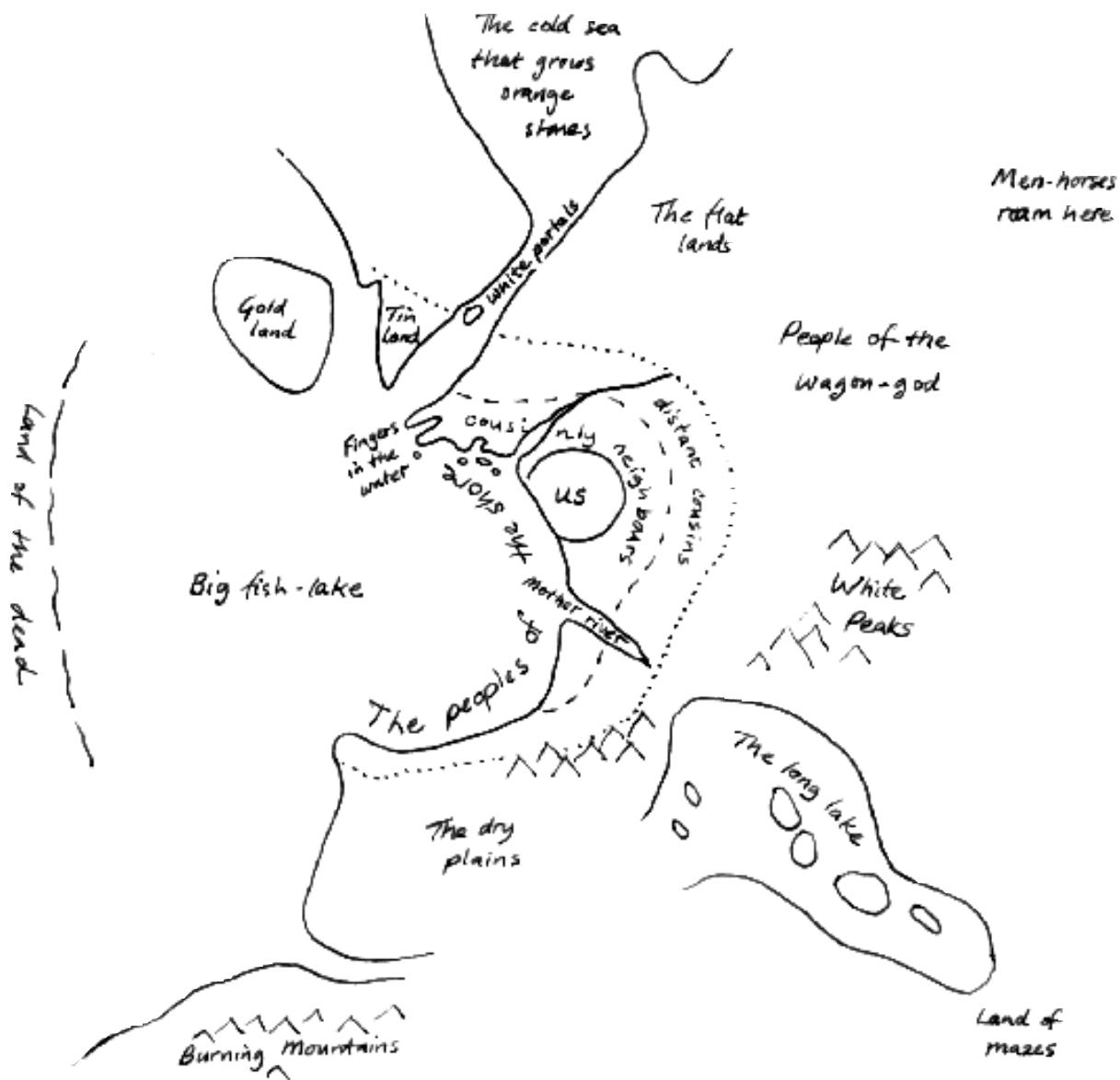
As I pondered this problem during the earlier stages of the conference I became more and more intrigued by the idea of seeing the world as a Late Bronze Age Atlantic community might do. It occurred to me that archaeology does offer the means by which the different mental maps of the world might be constructed. The 'map' presented here is a very crude attempt at doing so; it is close to the one shown at the conference (drawn late the previous evening). It does however serve to confront our stereotyped view of Bronze Age European geography.

To represent this presumed (and very partial) set of knowledge as a map is in itself problematic since it can be at the same time enlightening and potentially misleading. It enlightens because it can readily alter our perception of their evaluation of the origins of people, objects, knowledge and stories. It misleads in that it may never have been conceived as an integrated whole by people totally untainted by cartographic convention. Instead, their cosmography needed only to be 'bit-mapped' according to what was most relevant to their spiritual and physical well-being. It is thus only a useful vehicle for portraying a set of knowledge to enable discussion and visualization. Furthermore, of course, their cosmography was concerned primarily with the connotations of places rather than their spatial interrelationships. This is not to say that some members of a community, namely those engaged in travel, would not have developed a detailed sense of geography, but even so their ability to synthesize it into the convention of a map (had this indeed been desirable) would have been severely constrained by the limitations of personal first-hand knowledge combined with the increasingly distorted form of that passed on orally by others.

So the detail of the configuration I have drawn is of no importance. More important is what elements constituted their experience of the outside world and to what degree could they place them in relation to themselves and their directly known surroundings, not just in spatial terms but also in terms of 'us-ness' and 'other-ness'.

I chose to center the map on a tribe who had the good fortune to live in the Vendée of modern France during the Late Bronze Age. This is contrived in the sense that the region lies halfway along the Atlantic facade of Europe. It is inevitable that their world map would place themselves in the middle simply because of the distribution of their direct, collective experience of the world. They would not see themselves as 'peripheral' or 'marginal'. Moving away from 'us', although not necessarily in any steady radial progression, their knowledge is portrayed as becoming more generalized, more inaccurate and moving towards the fantastic.

The fact that occasional individuals, such as sea-farers, from the given society, might have traveled afar and recounted some of their first-hand experience back at home, would not necessarily aid the sedentary population's comprehension of the alien and his environ-



ment. Hence I have allowed little moderation of the mythical nature of their knowledge of the remoter lands: the 'land of mazes', being the mudbrick/stone densely packed cities of the Near-east and beyond the comprehension of Late Bronze Age folk on the western fringe of Europe'; 'men-horses' - the inseparability of man and horse amongst pastoral economies being construed all too literally through down-the-line oral transmission.

Assessing what 'remote' knowledge would have been held will always be a highly speculative matter for the simple reason that it would have rarely been accompanied by the transmission of material goods or other tangible influences. Even where long distance displacements were found to have occurred there will remain the problems of whether these in fact stemmed from multiple shorter displacements. Nevertheless, where the archaeological evidence exists for the wide distribution of a material or type of good that is specific to place of origin, then we can begin to conjecture the state of knowledge at given points in the system.

Amber is an obvious case. It circulated widely in the Atlantic world (and elsewhere) and it is hard to imagine that it was not widely appreciated that it originated in the ‘cold sea’ that lay beyond the ‘white portals’.

Without the insights and discoveries of Renaissance times, I would hazard that our Vendéan community would not have discriminated accurately between ‘oceans’ and mere ‘seas’. The Atlantic is portrayed simply as a vast lake, plundered for its endless supply of food, but also as a common point of access (physical and conceptual) for all the ‘peoples of the shore’ spread around its eastern margin. A western margin, in the direction of the setting sun, is hypothesized as being inhabited by the souls of the dead. This could for example have been reinforced by those occasions when mariners swept out to sea never returned.

As we move into the close geographical scale we will inevitably find much more tangible archaeological evidence to help us with world view reconstructions. This will obviously require careful distillation of the evidence to decide precisely what relevance each category is likely to have had. At least some of our Vendéan folk will have enjoined from time to time with people in southern Brittany, and it is difficult to imagine that the fingered coastline of Brittany would not have been very familiar to Vendéan mariners, and thus by report to other Vendeans.

The ‘map’ presented here is unsophisticated and ill-researched, but I hope it conveys the point. By considering carefully the external finds from a specific region in the context of both the local belief system and materials value system, and by adding a certain amount of ‘reasonable’ deduction given current understanding of the wider cultural network, we can begin to reconstruct how each group might have seen their world.

As I reflected back on the map so rapidly drawn, I began to realize that it owed much to other conceptions; I acknowledge therefore my subconscious debt to Tolkein, *Mappa Mundi* and the graphical rendering of Herodotus’ world (Kristiansen and Jensen, 1994<sup>1</sup> - front cover).

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<sup>1</sup> Kristiansen, K. and Jensen, J., eds. (1994) - *Europe in the First Millennium BC*. Sheffield: University (Sheffield Archaeological Monograph; 6).