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Brandherm, D. (2019). Almost lost between the lines: The concept of the Atlantic Bronze Age. In D. Brandherm (Ed.), *Aspects of the Bronze Age in the Atlantic Archipelago and Beyond: Proceedings from the Belfast Bronze Age Forum, 9–10 November 2013* (Archaeologia Atlantica – Monographiae; Vol. 3). Curach Bhán Publications.

### Published in:

Aspects of the Bronze Age in the Atlantic Archipelago and Beyond: Proceedings from the Belfast Bronze Age Forum, 9–10 November 2013

**Document Version:** Publisher's PDF, also known as Version of record

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# Almost lost between the lines: the concept of the Atlantic Bronze Age

## **Dirk Brandherm**

Since its inception in the 1930s, the concept of an Atlantic Bronze Age has repeatedly undergone considerable change. Different authors have conceptualized it along very different and sometimes diametrically opposed lines, not least because hardly any explicit definitions have ever been put forward. Some scholars evidently conceptualized it purely in geographically and temporally circumscribed terms, while others perceived it very much as a culturally defined nexus. The old conundrum of viewing Britain either as apart from or a part of Europe also had to play its role in this. While until relatively recently the majority of British scholars used to envisage the Insular Bronze Age as something quite distinct from the Bronze Age of Atlantic Europe, the default perspective in Continental scholarship has always been to situate the Atlantic Archipelago at the heart of the Atlantic Bronze Age nexus.

### Introduction

The concept of an Atlantic Bronze Age was first formulated by Adolf Mahr in his 1937 presidential address to the Prehistoric Society.<sup>1</sup> He used the term 'Atlantic' not merely as a generic geographical reference, but as a label for what he saw as a distinctive cultural sphere, and it is perhaps no coincidence that it was someone who had spent his formative years working on Continental Bronze and Iron Age archaeology to first discern the specific character of the Bronze Age on Europe's Atlantic façade, with Britain and Ireland perceived as constituting an integral part of a wider European Atlantic sphere. For scholars brought up primarily on a diet of Insular Bronze Age archaeology, it was naturally much less of a concern to try and characterize the distinctive features setting apart the Bronze Age of the Atlantic seaboard from Bronze Age cultures elsewhere on the Continent.

Also subsequent to Mahr's seminal synthesis, it continued to be mainly Bronze Age archaeologists working in Iberia, France, Belgium, and the Netherlands, ie in regions where Atlantic and Continental Bronze Age cultures share common land borders, who felt the need to conceptualize the differences – and, by extension, commonalities – between the Atlantic and Continental spheres. Symptomatically, the only two major international conferences dedicated explicitly to conceptual issues surrounding the definition of the Atlantic Bronze Age were organized by French and Portuguese institutions respectively.<sup>2</sup>

Obviously, the conceptual parameters used to characterize the Atlantic Bronze Age have changed quite considerably over the years. If Mahr had based his vision of the Atlantic Bronze Age as a culturally defined entity mostly on its distinctive metalwork industry and other elements of portable material culture, the focus has since shifted to also include settlement features and funerary practices.<sup>3</sup>

It is not without a certain irony that Mahr saw the Early and – particularly – Middle Bronze Age periods as the heyday of the Atlantic Bronze Age, when most later scholars used this label quite specifically to refer to the Late Bronze Age.<sup>4</sup> The historical reasons behind this fundamental shift in its conceptualization – which strangely seems to have escaped the attention of most authors subsequently working on the subject – will be explored further below.

For Mahr, the Atlantic Bronze Age effectively ended with what most of his predecessors and contemporaries perceived as evidence of a veritable invasion of the Atlantic Archipelago by bellicose Celtic-speaking 'sword bearers' originating from Urnfield lands around the western Alps or further east,5 bringing the Bronze Age cultures of Britain and Ireland in line with Continental developments and thereby diminishing their distinctive 'Atlantic' character.<sup>6</sup> In contrast to the then mainstream view, however, Mahr's model was considerably more nuanced, in that he rejected the simplistic notion of a uniform Urnfield people and insisted that the Atlantic Bronze Age, as he conceived it, was brought to an end by 'a vigorous cultural, not [...] racial expansion'.<sup>7</sup> While he still saw the epicentre of that expansion in central Europe, it was its knock-on effects on the Urnfield periphery along the Middle and Lower Rhine, in eastern and northern France, and beyond, that in his view would have brought about the cultural transition from the Middle to the Late Bronze Age in Britain and Ireland.8

A lot has changed since Mahr's original conceptualization of the Atlantic Bronze Age. We now know that many of the typo-chronological tenets that underpinned both the original notion of an 'Urnfield invasion' and Mahr's more

- <sup>3</sup> cf Burgess and Miket 1976; Gibson et al, this volume
- <sup>4</sup> eg Gibson *et al*, this volume, who quite explicitly place the Early and Middle Bronze Age on Europe's Atlantic façade 'before the emergence of the so-called "Atlantic Bronze Age". A rare exception in this respect is Craddock's (1978) examination of Atlantic Bronze Age metallurgy, which chronologically included Chalcolithic to Late Bronze Age material under this umbrella term; it is probably quite telling that this came from a materials scientist rather than from a cultural archaeologist
- <sup>5</sup> Crawford 1920, 27–8, Peake 1922, 130–1, Evans 1930, 157–71; Macalister 1935, 54–87; Dunlop 1938, 472; eadem 1939–40, 37

7 ibid

<sup>&</sup>lt;sup>1</sup> Mahr 1937, 397

<sup>&</sup>lt;sup>2</sup> Chevillot and Coffyn 1991; Oliveira Jorge 1998

<sup>&</sup>lt;sup>6</sup> Mahr 1937, 397

<sup>&</sup>lt;sup>8</sup> *ibid*, 401

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sophisticated alternative model were false, eg that Deverel-Rimbury pottery is by no means a provincial Urnfield derivative and indeed considerably predates the beginning of the Late Bronze Age, that carp's-tongue swords do not originate in the western Alps and that they date to the later part of the Late Bronze Age rather than to its beginning. This is not to say that the onset of the Late Bronze Age on Europe's Atlantic façade was not characterized by a notable increase in elements whose origin can be traced back to central Europe, specifically where metalworking is concerned (eg leaf-shaped swords, cauldrons and other sheet-bronze objects),<sup>9</sup> and there is also evidence to suggest that we are not only looking at the arrival of new ideas and technical skills but also of people,<sup>10</sup> but today we tend to think very differently about the social and economic framework within which these changes took place.

However, the general tendency to equate the Atlantic Bronze Age only with the Late Bronze Age period, in contrast to Mahr's original conceptualization, has little to do with changing perspectives on the mechanisms driving cultural change, but is mainly due to Julio Martínez Santa-Olalla's hijacking of Mahr's label and conceptually turning it on its head. In the broad-brush overview of Iberian prehistory which Martínez Santa-Olalla presented in his 'Esquema paletnológico de la Península Hispánica', he used the labels 'Bronce mediterráneo' (Mediterranean Bronze Age) and 'Bronce atlántico' (Atlantic Bronze Age) to refer to a generic binary division within the Iberian Bronze Age sequence, a division to which he attributed both cultural - and by extension ethnic - as well as chronological significance, whereby the Mediterranean Bronze Age corresponded to an earlier (Chalcolithic to Middle Bronze Age) phase, during which the author had all of Spain and Portugal inhabited by a population of Ibero-Saharan stock, whereas the Atlantic (Late) Bronze Age saw the arrival of Indo-European speakers to the Iberian Peninsula.11

Thus, in contrast to the more nuanced model Mahr had developed to explain cultural change at the Middle/Late Bronze Age transition in north-western Europe, Martínez Santa-Olalla's broad-brush approach once again used migration as the only device to explain any significant change in the archaeological record. Its monolithic outlook, equating individual chronological phases with specific archaeological cultures and trying to apply these equations across the whole of Iberia, regardless of any regional variations in the archaeological record, subsequently went on to become a stumbling block that would take Iberian archaeology several decades to overcome.<sup>12</sup> In neither of the two editions<sup>13</sup> of his scheme did Martínez Santa-Olalla include any reference to Mahr's 1937 presidential address or otherwise credit Mahr with the original conceptualization of the Atlantic Bronze Age, but given the close collegial ties between the two men,<sup>14</sup> it is quite inconceivable that Martínez Santa-Olalla should not have been aware of Mahr's authorship of this concept.<sup>15</sup>

Only a few years after the publication of Martínez Santa-Olalla's 'esquema', Hubert Savory re-introduced the notion of an Atlantic Bronze Age into Anglophone archaeology, now based entirely on its equation by Martínez Santa-Olalla with the Late Bronze Age of the Atlantic façade.<sup>16</sup> Also Eoin MacWhite, in his seminal study of the Atlantic relations of

the Iberian Peninsula from the end of the Neolithic to the end of the Bronze Age, published a few years later, in essence stuck to the concept of the Atlantic Bronze Age that his doctoral supervisor Martínez Santa-Olalla had presented in his scheme.17 However, in contrast to the very coarse approach employed by the latter, MacWhite painted a much more granular picture of regional developments, introducing the notion of a 'Proto-Atlantic Bronze Age' for northwestern Iberia, which during the Early and Middle Bronze Age would have existed alongside Martínez Santa-Olalla's south-eastern Mediterranean Bronze Age.18 This, of course, was still radically different from Mahr's original conceptualization. In Anglophone archaeology the concept of a Proto-Atlantic Bronze Age only ever seems to have been adopted by Richard Harrison.<sup>19</sup> It did not gain any wider acceptance, and in consequence, when John Koch several decades later again made a case for the notion of an Atlantic Early and Middle Bronze Age, he did so oblivious of Mahr's and MacWhite's earlier attempts.<sup>20</sup>

In retrospect it is not entirely clear if references to Mahr's original concept of an Atlantic Bronze Age are lacking from almost all subsequent studies employing that label because Mahr formulated it on the periphery of a much wider-ranging overview of Irish prehistory, or if authors approaching the subject matter in the aftermath of World War II may have chosen to minimize references to Mahr's work because of his objectionable political leanings and his wartime role as a propaganda operative with the German Foreign Office.<sup>21</sup>



- 9 Jockenhövel 1975, 140-7; Gerloff 2010, 334-6; Brandherm 2011, 43
- <sup>10</sup> Brandherm 2013, 148–50; *idem* 2017, 414
- <sup>11</sup> Martínez Santa-Olalla 1941, 152–4
- <sup>12</sup> cf Tarradell 1950; 1965; 1969
- 13 Martínez Santa-Olalla 1941; 1946
- <sup>14</sup> cf Brandherm and Mederos forthcoming
- <sup>15</sup> The first edition of the scheme (Martínez Santa-Olalla 1941) was published entirely without any bibliographical references, while the second edition (*idem* 1946) came with the benefit of a bibliography which, however, amounted to no more than a concise list of further readings
- <sup>16</sup> Savory 1948, 158; idem 1949, 128; idem 1968, 221-7
- 17 MacWhite 1951
- <sup>18</sup> ibid, 59
- <sup>19</sup> Harrison 1974, 52. In Hispanophone archaeology, MacWhite's notion of applying the Atlantic Bronze Age label also to the Early and Middle Bronze Age periods had a somewhat more lasting impact, but here as well, subsequent authors seem to have been unaware of Mahr's original conceptualization; eg Ruiz-Gálvez 1979, 151; Almagro 1997, 219–21
- <sup>20</sup> Koch 2013b, 120
- <sup>21</sup> cf Mullins 2007; the first study in several decades crediting Mahr with first having developed the notion of an Atlantic Bronze Age seems to be Gerloff 2010, 24. While Martínez Santa-Olalla's political leanings were not at all dissimilar from Mahr's (Vera 2009), his profile in this respect – to an Anglophone archaeological readership at least – would likely have been less prominent

### The Atlantic Bronze Age as metalwork industries

Following the excessive reliance on population movements as an explanatory device in prehistoric archaeology over previous decades and the abuse of ethnic interpretations of the archaeological record for political purposes during the interwar period and World War II, most authors touching upon the Bronze Age on the Atlantic façade from the mid-1940s onwards fell back either on more abstract interpretative frameworks or on detailed chrono-typological studies.<sup>22</sup> As a consequence of this, and to some extent also because of the general dearth of funerary evidence characterizing most of Europe's Atlantic seaboard from the Middle Bronze Age onwards, subsequent discussions of the Atlantic Bronze Age for several decades tended to revolve mostly around the subject of metalwork typologies, and to a lesser extent also around metalwork depositional practices.

It is worth pointing out that initially most of those discussions centred on the Insular and on the Iberian evidence, while - with the notable exception of Savory's reconsideration of the sword-bearer issue<sup>23</sup> – Atlantic France was only brought into the picture from the mid-1950s onwards. There is a variety of reasons for this. Firstly, other than Martínez Santa-Olalla, it was scholars based in Britain or Ireland, but with a keen interest in Peninsular prehistory, who initially developed and embraced the concept of an Atlantic Bronze Age. Secondly, French Bronze Age archaeology by the midtwentieth century had not advanced a very great deal bevond the state of affairs set out by Joseph Déchelette in his seminal 'Manuel d'archéologie préhistorique, celtique et gallo-romaine' forty years earlier,24 which identified the Late Bronze Age population of all of mainland France as Proto-Celts. This, together with the national doctrine of 'nos ancêtres les Gaulois' and the suppression of regional identities under the French Third Republic left little room for acknowledging any significant dichotomy between Continental and Atlantic Bronze Age cultures, let alone the possibility of different ethnic identities in the Late Bronze Age, within the national territory of Metropolitan France. Even Margaret Dunlop in her insightful survey of the French Bronze Age, despite identifying three separate cultural traditions within that territory and interpreting these as evidence for distinct ethnic ('racial') groups, had felt compelled to attempt and reconcile her interpretation with that official ideology, by describing those traditions 'as a unique example of unity in diversity in the history of Europe'.<sup>25</sup> A final reason for the somewhat belated inclusion of northern and western France in the conceptualization of the Atlantic Bronze Age may have been that the rich register of Bronze Age metalwork from Atlantic France at the time remained relatively poorly published, with few systematic attempts to remedy that situation.26

Things in this respect only started to change after Wolfgang Kimmig<sup>27</sup> had brought an outsider's perspective to French Bronze Age studies and a new generation of French prehistorians set out to break the existing stasis. At the 1956 Congrès Préhistorique de France, Jacques Briard introduced the notion of the 'Bronze atlantique' as a culturally conceptualized entity into Francophone archaeology, referring to an Atlantic 'facies' within the French Bronze Age that was clearly distinct from the Continental Urnfield cultures.<sup>28</sup> While Briard evidently recognized that the geographical distribution of many Middle Bronze Age types remained very much limited to France's western seaboard, he envisaged the formation of what he perceived as a specifically Atlantic cultural facies only during the developed stages of the Late Bronze Age.<sup>29</sup> Arguing along very similar lines to Briard, in her survey of French Late Bronze Age cultures Nancy Sandars distinguished between an eastern and western French sphere, equating the latter with the 'important Atlantic province of metallurgy'.<sup>30</sup>

Soon after his contribution to the 1956 Congrès Préhistorique de France, Briard initiated the systematic publication of Breton hoard assemblages through the 'Travaux du Laboratoire de Anthropologie de Rennes' which would significantly expand the published corpus of Atlantic Bronze Age metalwork readily accessible to an international readership.<sup>31</sup> By 1963 Jacques-Pierre Millotte was using the label 'Bronze final atlantique',32 subsequently to become standard parlance, and two years later Briard's seminal monograph 'Les dépôts bretons et l'âge du Bronze atlantique' established a much more detailed chronological framework for Atlantic Bronze Age metalwork than had previously been available.<sup>33</sup> Despite the fact that in focusing largely on the metalwork industry it followed a very traditional approach, Briard's study opened up a new chapter not only in French Bronze Age archaeology, but through its subdivision of the Late Bronze Age of Brittany into three distinct chronological phases would also exert significant international influence.

In Britain, the chronological insights offered by Briard's study were much more readily absorbed than the conceptual implications of his work. Colin Burgess, in his influential attempt to align metalwork sequences on both sides of the English Channel, drew heavily on Briard's chrono-

<sup>30</sup> Sandars 1957, 261. The text of this volume was very much based on Sandars' B.Litt thesis, completed several years before Briard presented his contribution to the 1956 Congrès Préhistorique de France (M Tomlinson pers comm). Both scholars thus seem to have applied similar concepts independently from each other. An isolated reference to the 'Atlantic Middle Bronze Age' in one of her figure captions (Sandars 1957, fig 14) appears purely as a geographical indicator, rather than conceptualizing a cultural epithet

<sup>&</sup>lt;sup>22</sup> eg Hawkes 1948; Savory 1949; Sandars 1957; Harbison 1967; Burgess 1968a; 1968b

<sup>&</sup>lt;sup>23</sup> Savory 1948

<sup>&</sup>lt;sup>24</sup> Déchelette 1910

<sup>&</sup>lt;sup>25</sup> Dunlop 1939–40, 38

<sup>&</sup>lt;sup>26</sup> eg Marsille 1913; 1921; 1937; Coutil 1921; 1922; Bénard Le Pontois 1929; Giot 1949

<sup>&</sup>lt;sup>27</sup> Kimmig 1951; 1952; 1954

<sup>&</sup>lt;sup>28</sup> Briard 1957, 315

<sup>&</sup>lt;sup>29</sup> ibid

<sup>&</sup>lt;sup>31</sup> Briard 1958; 1961; 1966

<sup>&</sup>lt;sup>32</sup> Millotte 1963, 175

<sup>&</sup>lt;sup>33</sup> Briard 1965. At the centre of this study was Briard's attempt to devise a chronological reference framework for the Bronze Age hoards of Brittany that was separate from, but aligned with, French Urnfield chronology (cf Hatt 1961). It would be another twenty-five years until Gomez de Soto (1991) demonstrated the existence of a chronological setoff between Hatt's Urnfield phases and Briard's Breton hoard record phases

logy but interestingly, like John Coles before him,34 did not view the Insular Bronze Age as an integral part of the Atlantic sphere.35 Where he used the label 'Atlantic', Burgess invariably referred to the Continental Atlantic façade, viewing it as a region of origin for influences he considered 'exotic' within the British Bronze Age and that exerted little influence beyond south-east England.<sup>36</sup> This was not only diametrically opposed to Mahr's original concept of the Atlantic Bronze Age, but also stood in stark contrast to Briard's conceptualization of the Atlantic sphere, which explicitly included Britain and Ireland as one of its 'provinces'.37 Throughout the 1970s and into the 1980s, most subsequent British authors engaging with the subject would follow very much in the same vein, using 'Atlantic' as convenient shorthand for 'Atlantic Europe', but implicitly excluding Britain and Ireland from that notion.38 With some notable exceptions, it was only in the wake of the Beynac and Lisbon conferences, <sup>39</sup> from the 1990s onwards, that British and Irish scholars began to conceptualize the Bronze Age of the Atlantic Archipelago not as something to be distinguished from, but as a constituent part of the Atlantic Bronze Age sphere.

Prior to this, the focus particularly of British scholarship considering the links between the Insular Bronze Age and that of continental western Europe, for the most part had been on transmanche connections rather than on wider Atlantic relations, with the English Channel rather than the land borders between the Atlantic Bronze Age sphere and neighbouring Continental Bronze Age culture areas perceived as the more significant interface.<sup>40</sup> This shift of perceptions ties in with an increasing realization both of regional variability within the Bronze Age along the Continental Atlantic facade and of the existence of distinct registers with different social and geographical reach within the metalwork record.<sup>41</sup> Even during the heyday of Atlantic Bronze Age metalwork commonalities, truly pan-Atlantic types remain limited almost exclusively to the registers of warrior equipment, feasting paraphernalia and metalworking implements, eg swords, spearheads, cauldrons and specialpurpose anvils. More mundane object types, such as axes, are generally associated with distribution areas which in geographical terms remain much more narrowly circumscribed, and it is either on those latter types or on objects from the final phases of the Late Bronze Age, when the Atlantic Bronze Age had ceased to function as a unified interaction sphere (see below), that the attention of scholars conceptualizing the Late Bronze Age of Britain and / or Ireland as distinct from that of the Continental Atlantic façade was generally focused.

Beyond Britain and Ireland, Briard's tripartite subdivision of the Atlantic Late Bronze Age, despite having been developed almost exclusively based on material from Brittany and never explicitly having been intended by the author as a template for chronologically structuring the material from other Atlantic regions, quickly became just that. More specifically, Marisa Ruiz-Gálvez<sup>42</sup> and André Coffyn<sup>43</sup> during the 1980s attempted to apply Briard's Breton chronology also to Atlantic Iberia, which at that point was still largely lacking a functioning chronological framework for its metalwork industries.<sup>44</sup>

One significant issue with these attempts was that they did not question or test the applicability of Briard's chronological scheme to the Iberian material, despite the much smaller number of closed assemblages from Iberia and obvious differences in the composition of the latter when compared to the hoards from Brittany. Rather, Ruiz-Gálvez and Coffyn used the Breton chronology as a ready-made chest of drawers into which they proceeded to sort the Iberian material, with varying degrees of success. As might be expected, this generally worked well enough with types shared between Atlantic France and Iberia and firmly tied into the Breton hoard sequence, but less so with others. Problems resulting from the attribution of some of those latter types to one or the other of Briard's chronological phases based on mere conjecture, from unrecognized chronological setoffs between episodes of hoard deposition north and south of the Bay of Biscay and from the lumping together of different and chronologically diverse types under the same undifferentiated label, eg 'carp's-tongue' swords, were only realized and addressed much later.45 Nevertheless, the studies by Ruiz-Gálvez and Coffyn constituted major advances compared to the previous state of affairs, which had remained largely static since Martínez Santa-Olalla's and MacWhite's work.

As already emphasized above, Briard's work on Breton metalwork assemblages, along with Hawkes earlier scheme for the British Bronze Age,<sup>46</sup> was also hugely relevant for Burgess' influential attempt of aligning the Insular and northern French metalwork chronologies with each other. Here again, while this endeavour was largely successful, some misalignment between individual metalwork assemblages on both sides of the Channel was not recognized until much later.<sup>47</sup> On the back of Briard's and Burgess' work, subsequent studies by Albrecht Jockenhövel<sup>48</sup> and Sabine Gerloff<sup>49</sup> went on to introduce further chronological detail and to establish a much better defined temporal correspondence between the Continental and the Atlantic Bronze Age sequences.

- 42 Ruiz-Gálvez 1984
- <sup>43</sup> Coffyn 1985
- 44 cf Kalb 1980; Monteagudo 1983
- <sup>45</sup> Brandherm 2007, 10–15; Milcent 2012, 47–51
- <sup>46</sup> cf O'Connor and Gerloff, this volume
- 47 Burgess 2012
- 48 Jockenhövel 1975
- <sup>49</sup> Gerloff 1980–81

<sup>&</sup>lt;sup>34</sup> Coles 1959–60, 22, where the author rejects an Atlantic source for Wilburton swords and argues for their British origin instead

<sup>&</sup>lt;sup>35</sup> Burgess 1969

<sup>&</sup>lt;sup>36</sup> *ibid*, 3, 16

<sup>&</sup>lt;sup>37</sup> Briard 1965, 196

<sup>&</sup>lt;sup>38</sup> On the odd occasion, both conceptualizations can be found side by side, used by different authors within the pages of the same volume; eg Taylor (1978), conceiving Britain as separate from Atlantic Europe, and Craddock (1978), including Britain and Ireland in the Atlantic Bronze Age sphere, both in the proceedings of the 5th Atlantic Colloquium

<sup>&</sup>lt;sup>39</sup> Chevillot and Coffyn 1991; Oliveira Jorge 1998

<sup>&</sup>lt;sup>40</sup> eg Burgess 1968b; 1987; O'Connor 1980

<sup>&</sup>lt;sup>41</sup> Brun 1991

BC	PHASE		BRITAIN HOARDS/FINDS	MILCENT 2012	NW FRANCE	SW FRANCE	IBERIA
300	LBA1a	APPLEBY	Appleby	Bfat anc.	ROSNOËN Chailloué		ISLA DE CHETA Foios Stela
200	LBA1b	PENARD	Penard Ffynhonnau	Bfa1 rec.	Abbeville Grigny		LOS CASCAJOS La Era
100	LBA2a	LIMEHOUSE	Mickleham	Bfa2 anc. Caix	ST BRIEUC Kerguérou Combon	ST-DENIS- DE-PILE	ALHAMA DE ARAGÒN Catoira
	LBA2b	WILBURTON	Guilsfield Skidby West	Bfa2 rec.	BRÉCY St Nazaire Canteleu	CÉZAC Braud-et- St-Louis	HÍO San Esteban
1000			Isleham				
	LBA3a	BLACKMOOR	BROADWARD Waterden Llancarfan	Bfa3 anc.	LONGUEVILLE		HUELVA Camino de Santiago
900	LBA3b	EWART PARK	Boughton Malherbe	Bfa3 rec.	VÉNAT Nantes c-t	Cubzac- les-Ponts	SAFARA Fiéis de Deus
			Thames swords		swords		M.S. Idda c-t swords
00	IRON 1 Ha Ci	E LLYNFAWR	Gündlingen swords	1er Fer a1	Gündlingen swords BRANDIVY Armorican axes		Ocenilla

Fig 1 The Atlantic Late Bronze Age sequence (modified after Burgess 2012, table 2)

Save for some later adjustments,<sup>50</sup> these works established the general outline for a relative chronology of the Atlantic Bronze Age that still operates today, and which in recent years was synthesized authoritatively by Pierre-Yves Milcent,<sup>51</sup> providing a more nuanced vision than Briard's earlier studies, and by Lothar Sperber,<sup>52</sup> building on Jockenhövel's and Gerloff's attempts at aligning Continental and Atlantic Late Bronze Age chronologies (Fig 1).<sup>53</sup> This did not prevent some authors from perceiving the long-standing focus on metalwork studies as rather unproductive, to the extent of writing off the Atlantic Bronze Age as a meaningful concept altogether.<sup>54</sup>

### The Atlantic Bronze Age beyond metalwork

While until the 1980s most studies employing the concept of the Atlantic Bronze Age had been concerned primarily with metalwork, this was not the only type of evidence considered in its conceptualization. The funerary record also has been called upon to provide diagnostic criteria for characterizing the Bronze Age on Europe's Atlantic façade, mostly stressing the dearth of archaeologically visible burials compared to Middle and Late Bronze Age cultures in other parts of Europe.<sup>55</sup> For the Early Bronze Age this contrast is less pronounced, but the extensive flat cemeteries typical of many continental European Early Bronze Age cultures are largely unknown on the Atlantic façade.

Other than the lack of extensive flat cemeteries and, from the Middle Bronze Age onwards, the altogether dwindling numbers of archaeologically detectable burials, there is relatively little in the funerary record that would provide a common denominator across all of Atlantic Europe. Those commonalities that do exist remain largely limited to the Early Bronze Age, and include burials in stone cists and under cairns or earthen barrows. None of these, however, are ubiquitous throughout the Atlantic sphere, and none of them are exclusive to the Atlantic Bronze Age.<sup>56</sup>

Over the last few decades, in line with more general shifts in Bronze Age archaeology, other sectors of the archaeological record have increasingly been called upon to complement the picture offered by the artefactual and funerary registers when it comes to characterizing the Bronze Age

<sup>&</sup>lt;sup>50</sup> Gomez de Soto 1991; Burgess 2012; Brandherm and Moskal-del Hoyo 2014

<sup>&</sup>lt;sup>51</sup> Milcent 2012

<sup>&</sup>lt;sup>52</sup> Sperber 2017

<sup>53</sup> cf Gerloff and O'Connor, this volume

<sup>&</sup>lt;sup>54</sup> eg Bettencourt 1998, 29–30

<sup>&</sup>lt;sup>55</sup> Coles and Harding 1979, 468-84

<sup>&</sup>lt;sup>56</sup> Brandherm 2002

on the Atlantic façade. Interest in land-use, settlement and subsistence patterns in particular has increasingly gained ground,<sup>57</sup> and it was not least this shift in focus which led some authors to advocate a coarser chronological periodization, distinguishing only between an earlier and a later – rather than Early, Middle and Late – Bronze Age.<sup>58</sup> Initially devised primarily with a view towards the Bronze Age in Britain and Ireland, this binary division in recent years has come to be applied to the Atlantic Bronze Age more widely.<sup>59</sup>

One of the settlement features cited most often as a diagnostic element of the Atlantic Bronze Age, and indeed diachronically of the Atlantic sphere throughout most of prehistory, has been the roundhouse, vis-a-vis a predominance of different architectural layouts in other parts of Europe.<sup>60</sup> However, this holds true only for some of the regions along the Atlantic façade: Britain, Ireland and northwestern Iberia in particular. In most of Atlantic France and much of Atlantic Iberia other than the Northwest, roundhouse architecture remains very much the exception rather than the norm, and land-use patterns – where not dictated by elevation and surface geology – vary widely between regions and over time.<sup>61</sup>

In the wake of earlier megalithic connections,<sup>62</sup> specific motifs and stylistic features of Bronze Age rock art have long been identified as providing another diagnostic link between different Atlantic regions, specifically northwestern Iberia and Ireland, and even between areas as far flung as western Iberia and Scandinavia.63 Incidentally, Martínez Santa-Olalla, despite his championing the idea of a culturally defined Atlantic (Late) Bronze Age, rejected Bronze Age rock art as admissible evidence for longdistance connections along the Atlantic seaboard.<sup>64</sup> More recently, the notion of Bronze Age links between Iberia and Scandinavia has seen a revival, and rock art has once again been called upon as a key witness.65 However, even more than with roundhouse architecture, the distribution of Atlantic rock art remains limited to specific geographical areas within the wider Atlantic sphere, and this is clearly not just because of regionally different surface geologies.66 As a further complication, rock art remains notoriously difficult to date, and while most Atlantic Bronze Age rock art conventionally has been attributed to the Early Bronze Age, there is now increasing evidence that many of the more distinctive 'Atlantic' motifs date to the end of the second or even to the early first millennium BC.67

So, while some regions along the Atlantic façade certainly share similar architectural layouts and a common style of rock art, these elements are by no means ubiquitous throughout Atlantic Europe. They are really only found together in north-western Iberia and parts of the Atlantic Archipelago. In comparison to Atlantic Bronze Age metalwork then, their distribution is much more limited, and for the most part they do not offer the same chronological resolution. Consequently, while funerary and settlement evidence, along with rock art provide crucial context, when it comes to identifying the geographical reach of Atlantic exchange networks and for detecting changes in the direction and intensity of contacts along the western seaways, metalwork still provides the best indicator. Beyond culturally diagnostic typological features of metal objects, metalwork deposition practice can also offer insights into shared cultural traditions.

On the other hand, we must not forget that this particular sector of the archaeological record is only accessible to us through the filter of intentional deposition, which in itself did not remain constant over the course of the Bronze Age. Even within the relatively limited time frame of the Atlantic Late Bronze Age, it is now becoming increasingly clear that hoarding practice at a regional level is best understood as an episodic rather than a continuous phenomenon, and that the untested assumption that multi-piece metalwork deposition was a more or less continuous practice, at least from the later phases of the Middle Bronze Age onwards, lay at the heart of many of the problems encountered in the course of trying to build relative chronological frameworks from metalwork assemblages.<sup>68</sup>

Diachronic change also needs to be taken into account when considering the geographical delimitation of the Atlantic Bronze Age sphere.<sup>69</sup> While changes between the Early, Middle and Late Bronze Age in this respect have generally been recognized, few authors have considered territorial fluctuations within these individual periods. One notable exception is a study of changing culture-area boundaries in Late Bronze Age France undertaken by Patrice Brun and co-workers, based on an extensive database of culturally diagnostic metalwork finds and complementary settlement data.<sup>70</sup> Their study not only identified shifts in the territorial delimitation of the Atlantic culture area between different phases of the Late Bronze Age, but also defined an interface zone along its borders where transit between the Atlantic and Continental spheres along riverine corridors was controlled by gateway communities centred on major hillfort settlements.71

- <sup>63</sup> eg Obermaier 1925; Norden 1925, 154–61; cf also Enlander, this volume
- 64 Martínez Santa-Olalla 1942, 142
- <sup>65</sup> Ling and Uhnér 2014
- <sup>66</sup> Bradley 1997, 49-79
- <sup>67</sup> Santos 2008; Santos and Seoane 2010
- 68 Burgess 2012; Brandherm and Moskal-del Hoyo 2014
- <sup>69</sup> Some authors have explicitly adopted a static geographical rather than dynamic cultural approach in defining what is and what is not 'Atlantic', occasionally to the extent of using the terms 'Atlantic Europe' and 'western Europe' synonymously, and even subsuming France's and Spain's Mediterranean seaboard under the 'Atlantic' label (eg Moore and Armada 2012). While a purely geographical approach is of course entirely legitimate, any definition extending the 'Atlantic' label to regions beyond Europe's Atlantic watershed seems hardly justifiable on geographic grounds
- <sup>70</sup> Brun 1993; Brun et al 1997

<sup>&</sup>lt;sup>57</sup> cf papers in Burgess and Miket 1976 and Barrett and Bradley 1980a

<sup>&</sup>lt;sup>58</sup> Barrett and Bradley 1980b, 9; González et al 1992, 102–6; Bradley 2007, 178–81

<sup>59</sup> Driscoll 2008, 199; Gibson 2013, figs 3.3, 3.6, 3.7; Joy 2014, 341

<sup>&</sup>lt;sup>60</sup> Moore and Armada 2012, 38-9; Bradley 2012, 52-61, 195-203; Bradley et al 2016, 175-95; Ruano forthcoming

 $<sup>^{\</sup>rm 61}$  cf papers in Mordant and Richard 1992 and Richard et~al 2002

<sup>&</sup>lt;sup>62</sup> cf Eogan 1990

<sup>&</sup>lt;sup>71</sup> Brun *et al* 1997

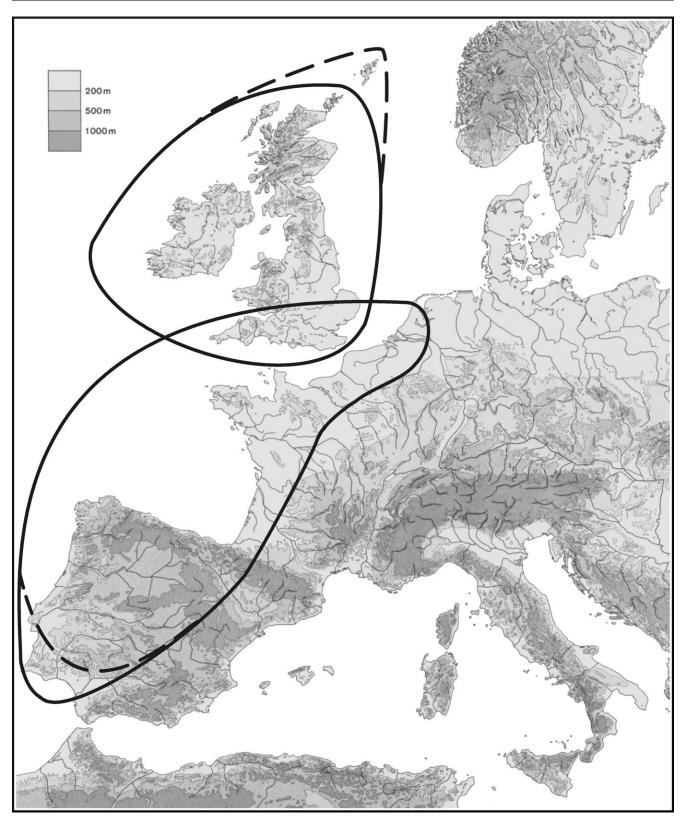


Fig 2 Spatial extension of the two separate Atlantic Bronze Age domains during LBA 3; continuous lines indicate approximate culture area boundaries during 3b; the inclusion of Shetland only in the latter is not necessarily due to a shift in culture area boundaries but to the lack of diagnostic evidence allowing a definite ascription prior to LBA 3b

The subject of geographical boundaries also raises the issue of the dynamics of internal divisions within the Atlantic Bronze Age, and these likewise were very clearly subject to diachronic change. From the metalwork record in particular, it is evident that, if we understand the Atlantic Bronze Age as a nexus of inter-regional relations translating into a cultural interaction sphere, the intensity of those relations, as measured through the exchange of objects and technical as well as ritual knowledge, appears to increase from the thirteenth to the eleventh century BC, but dramatically drops off soon thereafter.<sup>72</sup> After the turn of the millennium, the wide-ranging nexus of inter-regional relations underpinning the Atlantic Late Bronze Age quickly starts to disintegrate. By the late tenth century BC, we really are no longer dealing with a single interaction sphere comprising all of the various regions girdling Europe's Atlantic façade. Instead, we now observe what effectively amounts to a breakup of the Atlantic Bronze Age nexus into at least two separate domains.

The driving forces behind this development are still imperfectly understood, and they are clearest for the processes that unfold on the southern flank of the Atlantic Bronze Age sphere, where the arrival of the Phoenicians to the shores of southern Iberia triggers a realignment of trading networks towards the Mediterranean that removes much of south-western Iberia from the Atlantic Bronze Age nexus.<sup>73</sup> Less clear are the dynamics behind changes affecting interregional relations further north along the Atlantic façade, where the relative cultural unity that existed during the earlier stages of the Late Bronze Age, as expressed in its metalwork industry and concomitant depositional practices, from the tenth century onwards gives way to two increasingly separate interaction zones.

Centred on Atlantic France, but extending into southern Britain on the one hand and into western Iberia on the other, we now witness the emergence of the Boughton-Vénat complex,74 while in Ireland and in Britain north of the Thames valley and Bristol Channel axis, the Dowris and Ewart Park industries form very much a distinct metalwork province, not just in terms of object morphology, but also with regard to the composition of assemblages and to some extent regarding the peri-depositional treatment of objects.75 In southern Britain, these two provinces overlap, but there can be little doubt that the Atlantic Bronze Age as a single socioeconomic interaction zone had begun to disintegrate at least two centuries before the Bronze Age / Iron Age transition in north-western Europe, reversing the general trend towards increasing integration seen during the earlier stages of the Late Bronze Age (Fig 2).

This is a very different picture from that envisaged by earlier generations of scholars, who generally tended to view the final phases of the Late Bronze Age as the apex of the Atlantic Bronze Age.<sup>76</sup> It is also a very different picture from that presented by Brun<sup>77</sup> in his map of cultural divisions for the final phase of the Late Bronze Age, LBA 3b, at the Beynac conference (Fig 3). Arguably, the divisions outlined in his otherwise well-informed mapping exercise reflect the state of affairs during the preceding stages of the Late Bronze Age much better than they do for its very end, which mainly serves to illustrate the significant advances made in the relative chronology of Atlantic Bronze Age metalwork industries over the last couple of decades.

In any case, Brun very much deserves credit for having offered the only systematic attempt so far at teasing out the internal structure of inter-regional relations within the Atlantic Bronze Age nexus, and his map is a poignant reminder that the relevant networks operated at more than one geographical level, within a broad socio-economic interaction zone composed of a range of different and on occasion overlapping territories and maritories<sup>78</sup> joined by the western seaways.

There is no doubt that maritime connections within this nexus were important, but they were not necessarily always more important than links with inland communities. This is demonstrated not only by the wide-ranging adoption of Urn-field technologies and cultural practices at the beginning of the Late Bronze Age,<sup>79</sup> but also by the movement of objects and ideas in the inverse direction towards the end of this period.<sup>80</sup> Therefore, while the coastal communities inhabit-ing Europe's Atlantic seaboard during much of the Bronze Age may well be viewed as facing the ocean,<sup>81</sup> this should by no means be taken to imply that those communities had turned their backs on their landlocked neighbours.

### The Atlantic Bronze Age as a Proto-Celtic koiné?

Traditionally, theories of Celtic language spread have envisaged a westerly expansion from an area extending - in broad geographical terms – between the western Alps, the upper Rhine and the Paris Basin. Conventionally this expansion was assumed to have taken place during the Hallstatt and / or La Tène periods, although its beginnings have also been sought in the Late Bronze Age.82 Where maritime trajectories along the Atlantic façade have been considered as part of this process, they were mostly relegated to a complementary role, in order to help explain the presence of Celtic languages in Britain and Ireland at the dawn of the historical period.<sup>83</sup> However, in recent decades the Atlantic Bronze Age nexus has increasingly been called upon not only as a network of inter-regional relations that contributed to the spread of Celtic languages along Europe's Atlantic seaboard, but as providing the geographical and historical context for the original formation of Proto-Celtic.84 This idea has further been fuelled by John Koch's identification of Celtic personal names in inscriptions found on south-west Iberian Early Iron Age stelae.<sup>85</sup> Not least based on that particular line of

73 Burgess and O'Connor 2008, 56-8

- <sup>76</sup> eg Briard 1957, 315; Ruiz-Gálvez 1984, 293–4; Coffyn 1985, 213; Ruiz-Gálvez 1987, 258; Coffyn and Sion 1993
- 77 Brun 1991, 16-20, figs 3, 4
- <sup>78</sup> cf Needham 2009, 13
- <sup>79</sup> Brandherm 2013, 148–50
- <sup>80</sup> Milcent 2009, 466
- <sup>81</sup> Cunliffe 2001
- <sup>82</sup> cf Brandherm 2013, 147–8
- <sup>83</sup> eg Monteagudo 1983, 377–8 note 13; Cunliffe 1997, 154–6
- <sup>84</sup> Almagro 1992, 8–20; *idem* 1994; Ruiz-Gálvez 1998, 348–59; Cunliffe 2001, 109–58; *idem* 2010; 2018, 58–60
- <sup>85</sup> Koch 2011; 2013a; 2016; Gibson et al, this volume

<sup>&</sup>lt;sup>72</sup> cf Bettencourt 1998, 25

<sup>&</sup>lt;sup>74</sup> Brandherm and Moskal-del Hoyo 2014, 24–37; for non-metalworkrelated cross-Channel commonalities in this phase see Marcigny and Talon 2009

<sup>&</sup>lt;sup>75</sup> cf Coles 1959–60; Eogan 1964; Burgess 1968a; Eogan 1983; Burgess 2012

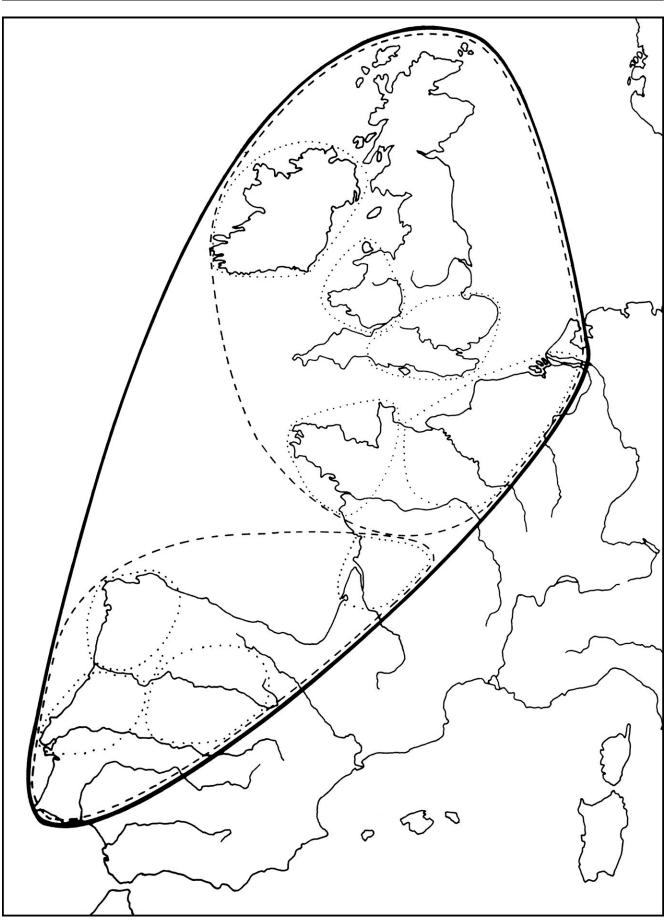


Fig 3 Spatial extension of the Atlantic Bronze Age sphere during LBA 3b according to Brun (after Brun 1991, fig 4)

D Brandherm: Almost lost between the lines ...

evidence, the notion that Celtic languages originated on the Atlantic façade and subsequently spread eastwards into continental Europe has most recently triggered what one might be tempted to call a new Atlantic Celtomania.<sup>86</sup>

There undeniably are long-standing issues with the conventional Hallstatt-La Tène model of Celtic language spread, particularly in relation to the presence of Celtic languages in both the Atlantic Archipelago and in the Iberian Peninsula at the beginning of the historical period, when there is little archaeological evidence to suggest any significant population influx into either over the course of the Iron Age.<sup>87</sup> The situation is further complicated by the fact that in both cases we are dealing with the presence of more than one Celtic language in the respective areas, and that the languages concerned differ in a range of features which are usually taken to reflect different stages of language development. Prehistorians in the past have attempted to tackle this issue by proposing multi-wave Celticization models for both the Atlantic Archipelago and Iberia, and by pushing back the beginning of this process into the Late Bronze Age.<sup>88</sup> However, while there now seems to be at least some limited archaeological evidence for Urnfield incursions deep into the Iberian Peninsula,<sup>89</sup> the same hardly holds true for Britain and Ireland, as Mahr had already recognized.

Things evidently were more complicated than envisaged by past generations of scholars. Most recently, the 'Atlantic Europe in the Metal Ages' project has begun to pull together a copious amount of evidence in trying to overcome the limitations of previous models, and the argument that the presence in the Iberian Peninsula of archaic Celtic alongside other Indo-European languages, specifically Lusitanian, which share some significant developments with the Celtic branch of the Indo-European language family, is exactly what one would expect to find close to the epicentre of the emergence of Proto-Celtic certainly makes sense.<sup>90</sup> That said, while simply reversing the direction of language spread assumed by the conventional Hallstatt-La Tène model might solve some of the long-standing issues relating to the presence of Celtic languages in Atlantic Europe, and particularly in Iberia, it does create exactly the same kind of problems in other parts of the Celtic language area.

If the early development of Celtic languages took place on Europe's western seaboard, and Celtic only subsequently spread eastwards into the heartland of the Hallstatt and La Tène cultures, we are very much left struggling to explain the close relationship between the Celtic and Italic branches of the Indo-European language family.91 In the 'Celtic from the West' scenario, the Celtic and Italic languages during the early stages of their development from late Proto-Indo-European would have been separated from each other by a broad zone of non-Indo-European languages, primarily Iberian.92 Even if one viewed the shared linguistic innovations of Celtic and Italic as motivated by close contact rather than by having gone through a common Italo-Celtic stage of language development, the fundamental difficulty they pose for any 'Celtic from the West' scenario remains very much the same.

There is also the case of Lepontic, an archaic Celtic language first attested in north-western Italy in inscriptions dating from the sixth, possibly even seventh century BC

onwards, ie only marginally later, if at all, than the southwest Iberian Early Iron Age inscriptions in which Koch has identified Celtic personal names.93 We have absolutely no evidence to suggest that Lepontic was introduced from the Far West just before the first inscriptions in that language appear. Quite the opposite: the area from which early Lepontic inscriptions are attested corresponds closely to the Early Iron Age Golasecca culture, which shows a remarkable degree of cultural continuity from its predecessor, the Canegrate group, harking back to the beginning of the Late Bronze Age. Because of its sudden appearance and the great similarity of Canegrate objects with the material culture of early Urnfields north of the Alps, the Cangegrate group is generally seen as the material fallout of an intrusive population crossing the Alps from the Swiss Plateau around the Middle / Late Bronze Age transition.94

Finally, the assertion that only the Iberian Peninsula presents the kind of linguistic patchwork map that one would expect to find close to the epicentre of the emergence of Proto-Celtic is simply incorrect. If the close relationship between Hispano-Celtic and Lusitanian is to be taken as an argument to suggest that Celtic languages emerged around the general area in which these two coexisted, one has to accept that more or less the same argument can be made for other parts of the Celtic language area, for example the northern reaches of the Paris Basin, based on the relationship between Gaulish and the language(s) of the 'Nordwest-block', the latter, like Lusitanian, retaining pre-Celtic /p/, and also showing a number of other features that in comparison to Celtic appear rather archaic.<sup>95</sup>

So, while the 'Celtic from the West' hypothesis may seem to offer a convenient fix to some old and inconvenient problems, trying to relocate the original homeland of Proto-Celtic to Europe's Atlantic fringe and simply reverse the direction of Celtic language spread does create at least as many and no less inconvenient problems as it promises to solve.<sup>96</sup>

- 88 Mahr 1937, 389-402; Bosch Gimpera 1942, 8-43
- 89 Brandherm 2013; 2017
- <sup>90</sup> Gibson *et al*, this volume
- <sup>91</sup> cf Watkins 1966; Kortlandt 2007, 149–80; Schrijver 2016
- <sup>92</sup> cf Gorrochategui 2013
- <sup>93</sup> Lejeune 1971; Eska 1998; Uhlich 1999
- <sup>94</sup> Sperber 1987, 91–2; De Marinis 1991
- 95 Kuhn 1962, 127-8; Meid 1986
- <sup>96</sup> This is why some authors have come to suggest that the genesis of the Celtic languages should be pushed back further, into the Bell Beaker period of the third millennium BC (eg Almagro 2004, 95; Brun 2006, 30; Cunliffe 2010, 34). However, this would not only require an extremely condensed succession of multiple linguistic changes from Proto-Indo-European to Celtic within a very short period of time, but also imply that relatively little linguistic development occurred over the subsequent two millennia (cf Mallory 2013, 27–30). The notion of

<sup>&</sup>lt;sup>86</sup> Incidentally, prior to the current bout of Atlantic Celtomania, Ruiz-Gálvez (1990) had fervently argued for the introduction of Lusitanian to its historically documented confines as the *lingua franca* of the Atlantic Late Bronze Age; cf also Senna-Martinez 1999

<sup>&</sup>lt;sup>87</sup> But see Lenerz-de Wilde (1991, 208–9) for the possible influx of small groups of Celtic speakers across the Pyrenees into Iberia during the Iron Age, and Mac Eoin (2007, 123) and Schrijver (2015, 206–12) for linguistic scenarios envisaging the introduction of Celtic into Ireland during the Iron Age

This evidently does not mean that a form of Proto-Celtic could not have been spoken by some of the communities forming the Atlantic Bronze Age nexus, but the evidence at hand certainly does not suggest a simple 'Atlantic Bronze Age = Proto-Celtic *koiné*' equation. If the linguistic map of the Atlantic seaboard at the end of the Iron Age is anything to go by, we should expect a much more complex situation, with perhaps an early form of Lusitanian spoken along the shores of central Portugal, and Vasconian languages current along the Atlantic coastline between Cantabria and the mouth of the Garonne.<sup>97</sup> For the Late Bronze Age, an even more diverse picture seems likely, based not only on classical sources pointing in that direction,<sup>98</sup> but also on the possibly non-Indo-European character of the matrix language documented in the south-west Iberian inscriptions.<sup>99</sup>

### Conclusions

In these pages we have attempted to trace the development of the concept of the Atlantic Bronze Age, from when it was originally formulated by Mahr to the present day, when it is once again being imbued with cultural – and even linguistic – significance that goes far beyond a mere distribution area of certain categories of metalwork objects, to which it had temporarily been reduced. We have tried to show how the changing conceptualization of the Atlantic Bronze Age was informed by broader intellectual trends and diverging conceptual reference frameworks, often underpinned by different national traditions of scholarship, without always making those reference frameworks sufficiently explicit.

One of the main difficulties with which almost all authors have struggled is that we are not dealing with an archaeological culture in the conventional sense, but with a nexus of inter-regional relations that translate into a broad socio-economic, and by extension cultural, interaction zone, held together to a large extent by maritime contacts along the western seaways. The tale of the Atlantic Bronze Age is, however, not a tale of geographical predetermination, in which diachronic variation only arises from advances in maritime technology. That we are dealing with much more complex dynamics, in which the relations of Atlantic communities with their landlocked neighbours had an important part to play, is borne out not least by the changing boundaries of the Atlantic Bronze Age sphere over time, from the Early Bronze Age onwards, and its breakup into two largely separate geographical domains at the height of the Late Bronze Age.

A side effect of the strong focus on inter-regional relations in most research invoking the concept of the Atlantic Bronze Age has been that the internal social dynamics of Bronze Age communities on Europe's Atlantic façade have received little attention as a potentially significant factor in wider processes of change. This is despite the evident limitation to very specific social registers of the key artefact groups underpinning the notion of the Atlantic Bronze Age nexus. The existence of distinct registers with different social and geographical reach within the metalwork record certainly seems to indicate unequal access to material as well as ideological resources, with the concomitant potential for social friction and conflict, whose effects rarely remain confined to individual regions within a wider interaction sphere. Without a better grasp of the internal dynamics of Atlantic Bronze Age societies at a regional scale, our understanding of wider processes must inevitably remain both fragmentary and biased. That grasp will only come with a more systematic and integrated analysis of the different registers comprising the archaeological record, and with a significantly improved chronological resolution of that analysis.

### Acknowledgements

The author is much indebted to Jim Mallory for his gracious and insightful comments on an earlier version of this text. All omissions and remaining errors are the sole responsibility of the author.

### Bibliography

### Almagro Gorbea, M 1992

'El origen de los celtas en la Península Ibérica: protoceltas y celtas', Polis, 4, 5–31

### Almagro Gorbea, M 1994

"Proto-Celtes" et Celtes dans la Péninsule Ibérique', Aquitania, 14, 283–96

Almagro Gorbea, M 1997

'La Edad del Bronce en la Península Ibérica: periodización y cronología', *Saguntum*, **30**, 217–28

Almagro Gorbea, M 2004

'Los celtas en la Península Ibérica', in *Celtas y Vettones: Torreón de los Guzmanes, Iglesia de Santo Tomé el Viejo, Avila, septiembre-diciembre 2001* (eds M Almagro Gorbea, M Mariné and J R Álvarez Sanchís), 94–113, Diputación Provincial, Ávila

## Barrett, JC and Bradley, R (eds) 1980a

Settlement and Society in the British Later Bronze Age, British Archaeological Reports (British Series) 83, BAR, Oxford

Barrett, JC and Bradley, R (eds) 1980b

°Preface: the ploughshare and the sword', in Barrett and Bradley (eds) 1980a, 9–13

Bénard Le Pontois, C 1929

*Le Finistère préhistorique*, Publications de l'Institut International d'Anthropologie 3, Nourry, Paris

cumulative Celticity (Hawkes 1973, 617–23; cf Waddell 1995, 159–61) does little to provide a satisfactory solution to the issues raised by such a scenario. It of course goes without saying that all language development is inherently cumulative. The crucial question here is if the defining characteristics which set the Celtic languages apart from the other branches of the Indo-European language family could plausibly have been in place before the end of the third millennium BC. If the answer to this question is negative, then evidently it does not really make any sense to try and associate the carriers of the Bell Beaker phenomenon with Celtic, be it Proto-, Para- or otherwise (cf Falileyev 2015)

<sup>97</sup> This seems to be the main reason why Koch (2016, 434, fig 15.1) excluded the coastal areas between Cantabria and the Garonne from the Atlantic Bronze Age sphere. The incidence of Atlantic Bronze Age metalwork depositions in comparison to most other Atlantic regions here is indeed relatively low, but the same holds true for other parts of the Atlantic façade, to which the same criterion is not applied

<sup>98</sup> eg Strabo III.1.6

<sup>&</sup>lt;sup>99</sup> For the pertinent debate see Eska 2014; Koch 2014a; 2014b; Prósper 2014; Valério 2014

### Bettencourt, AMS 1998

'O conceito de Bronze Atlântico na Península Ibérica', in Oliveira Jorge (ed) 1998, 18–39

### Bosch Gimpera, P 1942

*The Two Celtic Waves in Spain*, Sir John Rhŷs Memorial Lecture 1939, Proceedings of the British Academy 26, London

### Bradley, R 1997

Rock Art and the Prehistory of Atlantic Europe: signing the land, Routledge, London

### Bradley, R 2007

The Prehistory of Britain and Ireland, Cambridge University Press, Cambridge

### Bradley, R 2012

*The Idea of Order: the circular archetype in prehistoric Europe*, Oxford University Press, Oxford

## Bradley, R, Haselgrove, C, Vander Linden, M and Webley, L 2016

The Later Prehistory of North-West Europe: the evidence of development-led fieldwork, Oxford University Press, Oxford

### Brandherm, D 2002

'Zur Kultur der älteren Bronzezeit im Nordwesten der Iberischen Halbinsel und ihren atlantischen Beziehungen', *Madrider Mitteilungen*, **43**, 22–60

### Brandherm, D 2007

Las espadas del Bronce Final en la Península Ibérica y Baleares, Prähistorische Bronzefunde IV / 16, Steiner, Stuttgart

### Brandherm, D 2011

'Bronzezeitliche Kamm- und Hörnerhelme – Überlegungen zu Ursprung, Verbreitung und symbolischem Gehalt', in Bronzen im Spannungsfeld zwischen praktischer Nutzung und symbolischer Bedeutung. Beiträge zum internationalen Kolloquium am 9. und 10. Oktober 2008 in Münster (eds U Dietz and A Jockenhövel), 39–54, Prähistorische Bronzefunde XX/13, Steiner, Stuttgart

### Brandherm, D 2013

'Westward Ho? Sword-bearers and all the rest of it...', in Koch and Cunliffe (eds) 2013, 147–55

#### Brandherm, D 2015

<sup>•</sup>Castro-Kultur', in *Frühgeschichte der Mittelmeerkulturen. Historischarchäologisches Handbuch* (ed A-M Wittke), 154–7, Der Neue Pauly Supplemente 10, JB Metzler, Stuttgart

#### Brandherm, D 2017

<sup>'</sup>Zum Übergang von der Mittel- zur Endbronzezeit im Südwesten der Iberischen Halbinsel', in *Le Bronze moyen et l'origine du Bronze final en Europe occidentale (XVIIe–XIIIe siècle av. J.-C.): colloque international de'l APRAB, Strasbourg, 17 au 20 juin 2014* (eds T Lachenal, C Mordant, T Nicolas and C Véber ), 399–422, Mémoires d'Archéologie du Grand-Est 1, Association pour la Valorisation de l'Archéologie du Grand-Est, Strasbourg

### Brandherm, D and Moskal-del Hoyo, M 2014

'Both sides now: the carp's-tongue complex revisited', *Antiquaries Journal*, **94**, 1–47

### Brandherm, D and Mederos Martín, A forthcoming

'Letters from a troubled past – Adolf Mahr and Julio Martínez Santa-Ollala', *Journal of the Royal Society of Antiquaries of Ireland*, forthcoming

#### Briard J 1957

<sup>°</sup>Le Bronze de faciès atlantique en Armorique', in *Congrès préhistorique de France, Compte-rendu de la XVe Session. Poitiers – Angoulême 15–22 juillet 1956*, 313–27, Société Préhistorique Française, Paris

#### Briard, J 1958

'Le dépôt de fondeur de Menez-Tosta en Gouesnach (Finistère)', Travaux du Laboratoire de Anthropologie de Rennes, **3**, 2–23

#### Briard, I 1961

*Dépôts de l'âge du Bronze de Bretagne*, Travaux du Laboratoire de Anthropologie de Rennes 5, Rennes

### Briard, J 1965

Les dépôts bretons et l'âge du Bronze atlantique, Laboratoire d'Anthropologie Préhistorique, Rennes

#### Briard, J 1966

Dépôts de l'âge du Bronze de Bretagne. La Prairie de Mauves à Nantes, Travaux du Laboratoire de Anthropologie de Rennes 8, Rennes

### Brun, P 1991

<sup>•</sup>Le Bronze atlantique et ses subdivisions culturelles: essai de définition', in Chevillot and Coffyn (eds) 1991, 11–24

### Brun, P 1993

'East-west relations in the Paris Basin during the Late Bronze Age', in *Trade and Exchange in Prehistoric Europe: proceedings of a conference held at the University of Bristol, April 1992* (eds C Scarre and F Healy), 171–82, Oxbow Books, Oxford

### Brun, P 2006

'L'origine des Celtes. Communautés linguistiques et réseaux sociaux', in Celtes et Gaulois, l'archéologie face à l'histoire, La préhistoire des Celtes: actes de la table ronde de Bologne (Bologne-Monterenzio, 28–29 mai 2005 (ed D Vitali), 29–44, Bibracte, Glux-en-Glenne

### Brun, P, Aubry, F, Giraud, F and Lepage, F 1997

'Dépôts et frontières au Bronze final en France', *Boletín del Seminario de Estudios de Arte y Arqueología*, **63**, 97–114

## Burgess, C B 1968a

Bronze Age Metalwork in North-Eastern England, c 1000–700 BC, Oriel Press, Newcastle upon Tyne

#### Burgess, C B 1968b

<sup>(</sup>The later Bronze Age in the British Isles and north-western France', *Archaeological Journal*, **125**, 1–45

### Burgess, C B 1969

<sup>6</sup>Chronology and terminology in the British Bronze Age', *Antiquaries Journal*, **49**, 22–9

#### Burgess, CB 1987

'Les rapports entre la France et la Grande-Bretagne pendant l'Age du Bronze. Problèmes de poterie et d'habitats', *Les relations entre le Continent et les Îles Britanniques a l'Âge du Bronze. Actes du colloque de Lille dans le cadre du 22ème Congrès Préhistorique de France, 2–7 septembre 1984* (ed J-C Blanchet), 307–18, Supplément a la Revue Archéologique de Picardie, Amiens

### Burgess, C 2012

'Alignments: revising the Atlantic Late Bronze Age sequence', Archaeological Journal, **169**, 127-58

### Burgess, C and Miket, R (eds) 1976

Settlement and Economy in the Third and Second Millennia BC: papers delivered at a conference organised by the Department of Adult Education, University of Newcastle upon Tyne, January 1976, British Archaeological Reports (British Series) 33, BAR, Oxford

### Burgess, C and O'Connor, B 2008

'Iberia, the Atlantic Bronze Age and the Mediterranean chronology', in *Contacto cultural entre el Mediterráneo y el Atlántico (siglos XII-VIII ANE): la precolonización a debate* (eds S Celestino, N Rafel and X-L Armada), 41–58, Serie Arqueológica 11, Escuela Española de Historia y Arqueología en Roma – CSIC, Madrid

### Chevillot, C and Coffyn, A (eds) 1991

L'Âge du Bronze atlantique: ses faciès, de l'Écosse a l'Andalousie et leurs relations avec le Bronze continental et la Méditerranée, Actes du 1er colloque du Parc archéologique de Beynac, 10–14 septembre 1990, Association des Musées du Sarladais, Beynac-et-Cazenac

### Coles, J M 1959-60

'Scottish Late Bronze Age metalwork: typology, distributions and chronology', *Proceedings of the Society of Antiquaries of Scotland*, **93**, 16–134

#### Coles, J M and Harding, A 1979

*The Bronze Age in Europe: an introduction to the prehistory of Europe, c 2000–700 BC*, Methuen, London

#### Coffyn, A 1985

*Le Bronze final atlantique dans la Péninsule Ibérique*, Publications du Centre Pierre Paris 11, Boccard, Paris

### Coffyn, A and Sion, H 1993

'Les relations atlanto-méditerranéennes. Eléments pour une révision chronologique du Bronze final atlantique', *Mediterrâneo*, **2**, 285–310

### Coutil, L 1921

'L'âge du Bronze en Normandie: Eure, Seine-Maritime, Orne, Calvados et Manche', Comptes Rendus de l'Association Française pour l'Avancement des Sciences (Congrès à Rouen), 45, 791-812

#### Coutil, L 1922

'L'âge du Bronze en Normandie II: Calvados et Manche', Comptes Rendus de l'Association Française pour l'Avancement des Sciences (Congrès à Montpellier), 46, 495-506

### Craddock, P 1978

'Deliberate alloying in the Atlantic Bronze Age', in Ryan (ed) 1978, 369 - 85

### Crawford, OGS 1920

'A prehistoric invasion of England', Antiquaries Journal, 2, 27-35 Cunliffe, B 1997

The Ancient Celts, Oxford University Press, Oxford

### Cunliffe. B 2001

Facing the Ocean: the Atlantic and its peoples, 8000 BC to AD 1500, Oxford University Press, Oxford

#### Cunliffe, B 2010

'Celticization from the West: the contribution of archaeology', in Celtic from the West: alternative perspectives from archaeology, genetics, language and literature (eds B Cunliffe and JT Koch), 13-38, Celtic Studies Publications 15, Oxbow Books, Oxford

### Cunliffe, B 2018

The Ancient Celts, 2nd edn, Oxford University Press, Oxford

### Déchelette, J 1910

Manuel d'archéologie préhistorique, celtique et gallo-romaine, ii: archéologie celtique ou protohistorique, première partie: âge du Bronze, Picard, Paris

### De Marinis, R 1991

'I Celti Golasecchiani', in I Celti (eds S Moscati, O-H Frey, V Kruta, B Raftery and M Szabó), 93-102, Bompiani, Milan

### Driscoll, P 2008

'The Channel Islands: an archipelago of the Atlantic later Bronze Age', in Changing Perspectives on the 1st Millennium BC: proceedings of the Iron Age Research Student Seminar 2006 (eds O Davis, N Sharples and K Waddington), 199-214, Oxbow Books, Oxford

### Dunlop, M 1938

'L'Âge du Bronze en France', L'Anthropologie, 48, 457-502

### Dunlop, M 1939–40

'L'Âge du Bronze en France (suite)', L'Anthropologie, 49, 35-48

### Eogan, G 1964

The Later Bronze Age in Ireland in the light of recent research', Proceedings of the Prehistoric Society, 30, 268-351

### Eogan, G 1983

The Hoards of the Irish Later Bronze Age, University College, Dublin Eogan, G 1990

Irish megalithic tombs and Iberian comparisons and contrasts', in: Probleme der Megalithgräberforschung: Vorträge zum 100. Geburtstag von Vera Leisner, 113-38, Madrider Forschungen 16, De Gruyter, Berlin

#### Eska, JF 1998

'Comments on John T. Koch's Tartessian-as-Celtic enterprise', Journal of Indo-European Studies, 42, 428-38

### Eska, J F 2014

'The linguistic position of Lepontic', in Proceedings of the Twenty-Fourth Annual Meeting of the Berkeley Linguistics Society, February 14-16, 1998: special session on Indo-European subgrouping and internal relations, February 14, 1998, (eds B K Bergen, M C Plauché and A C Bailey), 2-11, Berkeley Linguistics Society, Berkeley

### Evans, E 1930

'The sword-bearers', Antiquity, 4, 157–72

### Falileyev, A 2015

'A folk who will never speak: Bell Beakers and linguistics', in The Bell Beaker Transition in Europe: mobility and local evolution during the 3rd millennium BC (eds M P Prieto Martínez and L Salanova), 1-7, Oxbow Books, Oxford

### Gerloff, S 1980-81

'Westeuropäische Griffzungenschwerter in Berlin: zu chronologischen Problemen der britischen Spätbronzezeit', Acta Praehistorica et Archaeologica, 11/12, 183-217

### Gerloff, S 2010

Atlantic Cauldrons and Buckets: studies in typology, chronology and origin of multi-sheet vessels of the Late Bronze and Early Iron Age in western Europe, Prähistorische Bronzefunde II / 18, Steiner, Stuttgart Gibson, C 2013

'Beakers into bronze: tracing connections between western Iberia and the British Isles 2800-800 BC', in Koch and Cunliffe (eds) 2013, 71-99

### Giot, P-R 1949

'Deux dépôts de bronze finistériens (Rosnoën et Tréboul)', Bulletin de la Société Archéologique du Finistère, 1949, 9-19

#### Gomez de Soto, J 1991

'Le fondeur, le trafiquant et les cuisiniers. La broche d'Amathonte de Chypre et la chronologie absolue du Bronze final atlantique', in Chevillot and Coffyn (eds) 1991, 369-73

### González Marcén, P, Lull, V and Risch, R 1992

Arqueología de Europa, 2250-1200 A.C. Una introducción a la 'Edad del Bronce', Síntesis, Madrid

### Gorrochategui, J 2013

'Hispania indoeuropea y no indoeuropea', in Iberia e Sardegna: legami linguistici, archeologici e genetici dal Mesolitico all'Età del Bronzo. Atti del Convegno Internazionale "Gorosti U5b3", Cagliari-Alghero, 12-16 giugno 2012 (eds E Blasco Ferrer, P Francalacci, A Nocentini and G Tanda), 47-64, Le Monnier Università, Florence

### Kuhn, H 1962

'Das Zeugnis der Namen', in Völker zwischen Germanen und Kelten: Schriftquellen, Bodenfunde und Namengut zur Geschichte des nördlichen Westdeutschlands um Christi Geburt (R Hachmann, G Kossack and H Kuhn), 105-228, Wachholtz, Neumünster

#### Harbison, P 1967

'Mediterranean and Atlantic elements in the Early Bronze Age of northern Portugal and Galicia', Madrider Mitteilungen, 8, 100-22

### Harrison, RJ 1974

'Ireland and Spain in the Early Bronze Age', Journal of the Royal Society of Antiquaries of Ireland, 104, 52-73

### Hatt, J-J 1961

'Chronique de Protohistoire V – Une nouvelle chronologie de l'âge du Bronze final. Exposé critique du système chronologique de H. Müller-Karpe', Bulletin de la Société Préhistorique Française, 58, 184-95

#### Hawkes, CFC 1948

'From Bronze Age to Iron Age: Middle Europe, Italy, and the North and West', Proceedings of the Prehistoric Society, 14, 196-218 Hawkes, CFC 1973

'Cumulative Celticity in pre-Roman Britain', Études Celtiques, 13, 607 - 28

#### Jockenhövel, A 1975

'Zum Beginn der Jungbronzezeitkultur in Westeuropa', Jahresbericht des Instituts für Vorgeschichte, Universität Frankfurt, 1975, 134-81

#### Joy, J 2014

"Fire burn and cauldron bubble": Iron Age and Early Roman cauldrons of Britain and Ireland', Proceedings of the Prehistoric Society, 80, 327-62

### Kalb, P 1980

'Zur Atlantischen Bronzezeit in Portugal', Germania, 58, 25-59

#### Kimmig, W 1951

'Où en est l'étude de la civilisation des champs d'urnes en France, principalement dans l'Est?', Revue Archéologique de l'Est et Centre-Est, 2, 65-81

#### Kimmig, W 1952

'Où en est l'étude de la civilisation des champs d'urnes en France, principalement dans l'Est?', Revue Archéologique de l'Est et Centre-Est, 3, 7-19, 137-172

#### Kimmig, W 1954

'Où en est l'étude de la civilisation des champs d'urnes en France,

principalement dans l'Est?', Revue Archéologique de l'Est et Centre-Est, 5, 7–28, 209–232

### Koch, J T 2011

Tartessian 2. The Inscription of Mesas do Castelinho, ro and the verbal complex: preliminaries to historical phonology, Canolfan Uwchefrydiau, Aberystwyth

#### Koch, JT 2013a

*Tartessian: Celtic in the South-West at the dawn of history,* 2nd edn, Celtic Studies Publications 13, CSP-Cymru Cyf, Aberystwyth

### Koch, JT 2013b

'Out of the flow and ebb of the European Bronze Age: heroes, Tartessos, and Celtic', in Koch and Cunliffe (eds) 2013, 101-46

### Koch, JT 2014a

'On the debate over the classification of the language of the southwestern (SW) inscriptions, also known as Tartessian', *Journal of Indo-European Studies*, **42**, 335–427

### Koch, JT 2014b

'A decipherment interrupted: proceeding from Valério, Eska, and Prósper', *Journal of Indo-European Studies*, **42**, 487–524

### Koch, J T 2016

'Phoenicians in the West and the break-up of the Atlantic Bronze Age and Proto-Celtic', in Koch and Cunliffe (eds) 2016, 431–76

### Koch, JT and Cunliffe, B (eds) 2013

*Celtic from the West 2. Rethinking the Bronze Age and the Arrival of Indo-European in Atlantic Europe*, Celtic Studies Publications 16, Oxbow Books, Oxford

### Koch, JT and Cunliffe, B (eds) 2016

Celtic from the West 3. Atlantic Europe in the Metal Ages: questions of a shared language, Celtic Studies Publications 19, Oxbow Books, Oxford

### Kortlandt, F 2007

*Italo-Celtic Origins and Prehistoric Development of the Irish Language*, Leiden Studies in Indo-European 14, Rodopi, Amsterdam

### Lejeune, M 1971

*Lepontica*, Monographies Linguistiques 1, Les Belles Lettres, Paris **Lenerz-de Wilde, M 1991** 

Iberia Celtica: archäologische Zeugnisse keltischer Kultur auf der Pyrenäenhalbinsel, Steiner, Stuttgart

### Ling, J and Uhnér, C 2014

'Rock art and metal trade', Adoranten, 2014, 23-43

### Macalister, RAS 1935

Ancient Ireland: a study in the lessons of Archaeology and History, Methuen, London

#### Mac Eoin, G 2007

<sup>6</sup>What language was spoken in Ireland before Irish?', in *The Celtic Languages in Contact: papers from the workshop within the framework of the XIII International Congress of Celtic Studies, Bonn, 26–27 July 2007* (ed H Tristram), 113–25, Universitätsverlag, Potsdam

### MacWhite, E 1951

*Estudios sobre las relaciónes atlánticas de la Península Hispánica en la Edad del Bronce*, Dissertaciones Matritenses 2, Seminario de Historia Primitiva del Hombre, Madrid

### Mahr, A 1937

'New aspects and problems in Irish prehistory. Presidential address for 1937', *Proceedings of the Prehistoric Society*, **3**, 261–436

### Mallory, J 2013

'The Indo-Europeanization of Atlantic Europe', in Koch and Cunliffe (eds) 2013, 17–39

#### Marcigny, C and Talon, M 2009

'Sur les rives de la manche. Qu'en est-il du passage de l'âge du bronze à l'âge du fer à partir des découvertes récentes?', in Roulière-Lambert *et al* (eds) 2009, 385-403

### Marsille, L 1913

'Les dépots de l'âge du Bronze dans le Morbihan', *Bulletin de la Société Polymathique du Morbihan*, 1913, 49–109

### Marsille, L 1921

Catalogue du musée archéologique de la Société Polymathique du Morbihan, Musée Archéologique, Vannes

### Marsille, L 1937

'Le dépot de Pont-er-Vil en Locmariaquer', Bulletin de la Société Polymathique du Morbihan, 1937, 1–8

### Martínez Santa-Olalla, J 1941

'Esquema paletnológico de la Península Hispánica', in *Corona de estudios que la Sociedad Española de Antropología, Etnografía y Prehistoria dedica a sus mártires* (ed J Martínez Santa-Olalla), 141–66, Sociedad Española de Antropología, Etnografía y Prehistoria, Madrid

#### Martínez Santa-Olalla, J 1942

'Escondrijo de la Edad del Bronce Atlántico en Huerta de Arriba (Burgos)', Actas y Memorias de la Sociedad Española de Antropología, Etnografía y Prehistoria, **17**, 127–64

### Martínez Santa-Olalla, J 1946

*Esquema paletnológico de la Península Hispánica*, 2nd edn, Seminario de Historia Primitiva del Hombre, Madrid

### Meid, W 1986

<sup>6</sup>Hans Kuhns "Nordwestblock<sup>«</sup>-Hypothese. Zur Problematik der "Völker zwischen Germanen und Kelten<sup>«</sup>), in *Germanenprobleme in heutiger Sicht* (ed H Beck), 183–212, Ergänzungsbände zum Reallexikon der Germanischen Altertumskunde 1, De Gruyter, Berlin

### Milcent, P-Y 2009

'Le passage de l'âge du Bronze à l'âge du Fer en Gaule au miroir des élites sociales: une crise au VIIIe siècle av. J.C.?', in Roulière-Lambert *et al* (eds) 2009, 453–76

#### Milcent, P-Y 2012

Le temps des élites en Gaule atlantique: chronologie des mobiliers et rythmes de constitution des dépôts métalliques dans le contexte européen (XIIIe-VIIe siècle avant J.-C.), Presses Universitaires de Rennes, Rennes

### Millotte, J-P 1963

*Le Jura et les plaines de Saône aux âges des métaux*, Annales littéraires de l'Université de Besançon 59 – Archéologie 16, Les Belles Lettres, Paris

#### Monteagudo, L 1983

'Koiné del Bronce atlántico?', in *I. Colóquio Galaico-Minhoto, Ponte de Lima, 1–5 Setembro de 1981*, ii, 365–98, Associação Cultural Galaico-Minhota, Braga

### Moore, T and Armada, X L 2012

<sup>6</sup>Crossing the divide: opening a dialogue on approaches to western European first millennium BC studies', in *Atlantic Europe in the First Millennium BC: crossing the divide* (eds T Moore and X L Armada), 3–77, Oxford University Press, Oxford

### Mordant, C and Richard, H (eds) 1992

L'Habitat et l'occupation du sol à l'âge du Bronze en Europe: actes du colloque international de Lons-le-Saunier, 16–19 mai 1990, Documents Préhistoriques 4, Comité des Travaux Historiques et Scientifiques, Paris

### Mullins, G 2007

Dublin Nazi No. 1: the life of Adolf Mahr, Liberties Press, Dublin

### Needham, S 2009

'Encompassing the sea: "maritories" and Bronze Age maritime interactions', in *Bronze Age Connections: cultural contact in prehistoric Europe* (ed P Clark), 12–37, Oxbow Books, Oxford

### Norden, AG 1925

Östergötlands bronsålder, i: beskrivende förteckning med avbildningar av lösa fynd i offentliga och enskilda samlingar, kända gravar samt hällristningar översikt, Henric Carlson, Linköping

#### Obermaier, H 1925

<sup>•</sup>Die bronzezeitlichen Felsgravierungen von Nordwestspanien (Galizien)<sup>•</sup>, *Jahrbuch für prähistorische und ethnographische Kunst*, **1**, 51– 9

#### O'Brien, W 2016

'Clashanimud and the Bronze Age hillforts of Munster', *Emania*, **23**, 5–30

### O'Connor, B 1980

Cross-Channel Relations in the Later Bronze Age: relations between Britain, North-Eastern France and the Low Countries during the Later Bronze Age and the Early Iron Age, with particular reference to the

14

*metalwork*, British Archaeological Reports (International Series) 91, BAR, Oxford

### Oliveira Jorge, S (ed) 1998

*Existe uma Idade do Bronze Atlântico?*, Trabalhos de Arqueologia 10, Instituto Português de Arqueologia, Lisbon

### Peake, H 1922

*The Bronze Age and the Celtic World*, Benn Brothers, London **Primas**, **M 2002** 

'Taking the high ground: Continental hill-forts in Bronze Age contexts', *Proceedings of the Prehistoric Society*, **68**, 41–59

### Prósper, BM 2014

'Some observations on the classification of Tartessian as a Celtic language', *Journal of Indo-European Studies*, 42, 468-86

### Richard, H, Magny, M and Mordant, C (eds) 2007

Environnements et cultures à l'âge du Bronze en Europe occidentale: actes des congrès nationaux des sociétés historiques et scientifiques, 129e, Besançon, 2004, Documents Préhistoriques 21, Comité des Travaux Historiques et Scientifiques, Paris

# Roulière-Lambert, M-J Daubigney, A, Milcent, P-Y, Talon, M and Vital, J (eds) 2009

De l'âge du Bronze à l'âge du Fer en France et en Europe occidentale (Xe-VIIe siècle av. J.-C.). La moyenne vallée du Rhône aux âges du Fer. Actes du XXXe colloque international de l'AFEAF, co-organisé avec l'APRAB, Saint-Romain-en-Gal, 26–28 mai 2006, Revue Archéologique de l'Est Supplement 27, RAE, Dijon

#### Ruano, L forthcoming

'Atlantic dwellings in the first millennium BC: a transnational approach to the social organization of space', *Emania*, **25**, forthcoming **Ruiz-Gálvez Priego**, M **1979** 

#### Kuiz-Gaivez I Hego, WI 1973

'El Bronce Antiguo en la fachada atlántica peninsular', *Trabajos de Prehistoria*, **36**, 151–72

### Ruiz-Gálvez Priego, M 1984

La Península Ibérica y sus relaciones con el círculo cultural atlántico, Editorial de la Universidad Complutense, Madrid

#### Ruiz-Gálvez Priego, M 1987

'Bronce Atlántico y "cultura" del Bronce Atlántico en la Península Ibérica', *Trabajos de Prehistoria*, **44**, 251–64

### Ruiz-Gálvez Priego, M 1990

'Canciones del muchacho viajero', Veleia, 7, 79-104

### Ruiz-Gálvez Priego, M 1998

La Europa Atlántica en la Edad del Bronce. Un viaje a las raices de la Europa occidental, Crítica, Barcelona

### Ryan, M (ed) 1978

The Origins of Metallury in Atlantic Europe. Proceedings of the Fifth Atlantic Colloquium, Dublin, 30th March to 4th April 1978, The Stationery Office, Dublin

#### Sandars, NK 1957

Bronze Age Cultures in France: the later phases from the thirteenth to the seventh century BC, Cambridge University Press, Cambridge

#### Santos Estévez, M 2008

'A new proposal for the chronology of Atlantic Rock Art in Galicia (NW Iberian Peninsula)', in *The Archaeology of Semiotics and the Social Order of Things* (eds G Nash and G Children), 141–52, British Archaeological Reports (International Series) 1833, Archaeopress, Oxford

### Santos Estévez, M and Seoane Veiga, Y 2010

'Rock art and archaeological excavation in Campo Lameiro, Galicia: a new chronological proposal for the Atlantic rock art', in *Representations and Communications: creating an archaeological matrix of late prehistoric art* (eds Å C Fredell, K Kristiansen and F Criado Boado), 16–30, Oxbow Books, Oxford

### Savory, HN 1948

'The "sword-bearers": a reinterpretation', *Proceedings of the Prehis*toric Society, **14**, 155–76

### Savory, H N 1949

'The Atlantic Bronze Age in south-west Europe', *Proceedings of the Prehistoric Society*, **15**, 128–55

### Savory, HN 1968

Spain and Portugal: the prehistory of the Iberian Peninsula, Ancient Peoples and Places 61, Thames and Hudson, London

#### Schrijver, P 2015

<sup>(</sup>Pruners and trainers of the Celtic family tree: the rise and development of Celtic in the light of language contact', in *Proceedings of the XIV International Congress of Celtic Studies, held in Maynooth University, 1–5 August 2011* (eds L Breatnach, R Ó hUiginn, D McManus and K Simms), 191–219, Dublin Institute for Advanced Studies, Dublin

### Schrijver, P 2016

'Sound change, the Italo-Celtic linguistic unity, and the Italian homeland of Celtic', in Koch and Cunliffe (eds) 2016, 489–502

### Senna-Martinez, J C 1996

'The symbolism of power in central Portugal Late Bronze Age communities', *Máthesis*, **5**, 163–75

#### Senna-Martinez, J C 1999

'The central Portugal Late Bronze Age: contributions to a study on regional ethnogenesis', *Estudos do Quaternário*, **2**, 41–50

#### Sperber, L 1987

Untersuchungen zur Chronologie der Urnenfelderkultur im nördlichen Alpenvorland von der Schweiz bis Oberösterreich, Antiquitas III/29, Habelt, Bonn

### Sperber, L 2017

Studien zur spätbronzezeitlichen Chronologie im westlichen Mitteleuropa und in Westeuropa, Monographien des Römisch-Germanischen Zentralmuseums 136, RGZM, Mainz

### Tarradell Mateu, M 1950

<sup>c</sup>La Península Ibérica en la época del Argar<sup>'</sup>, in *Crónica del I. Congreso Nacional de Arqueología y del V. Congreso Arqueológico del Sudeste (Almería, 1949)*, 72–85, Junta Municipal de Arqueología and Museo de Cartagena, Cartagena

#### Tarradell Mateu, M 1965

'El problema de las diversas áreas culturales de la Península Ibérica en la Edad del Bronce', in *Miscelánea en homenaje al abate Henri Breuil (1877–1962)* (ed E Ripoll Perelló), 423–30, Diputación Provincial, Barcelona

#### **Tarradell Mateu 1969**

'La cultura del bronce valenciano: nuevo ensayo de aproximación', Papeles del Laboratorio de Arqueología de Valencia, **6**, 7–30

### Taylor, JJ 1978

'The relationship between British Early Bronze Age goldwork to Atlantic Europe' in Ryan (ed) 1978, 229–50

### Uhlich, J 1999

<sup>6</sup>Zur sprachlichen Einordnung des Lepontischen<sup>7</sup>, in Akten des zweiten deutschen Keltologen-Symposiums, Bonn, 2.–4. April 1997 (eds S Zimmer, R Ködderitzsch and A Wigger), 277–304, Niemeyer, Tübingen

#### Valério, M 2014

'The interpretative limits of the southwestern script', *Journal of Indo-European Studies*, **42**, 439–67

#### Vera Ramos, C 2009

'Julio Martínez Santa-Olalla y el nacionalsocialismo: un oscuro y controvertido aspecto del primer excavador científico de Carteia', *Almoraima*, **39**, 489–504

#### Waddell, J 1995

<sup>6</sup>Celts, Celticisation and the Irish Bronze Age', in *Ireland in the Bronze Age. Proceedings of the Dublin Conference, April 1995* (eds J Waddell and E Shee Twohig), 158–69, Stationery Office, Dublin

#### Watkins, C 1966

'Italo-Celtic revisited', in Ancient Indo-European Dialects: proceedings of the conference on Indo-European linguistics held at the University of California, Los Angeles, April 25–27, 1963 (eds H Birnbaum and J Puhvel), 29–50, University of California Press, Berkeley