Research Article

Anne Augereau*

Funerary Practices as a Testimony of Ideology in Western Linearbandkeramik Culture

https://doi.org/10.1515/opar-2020-0184
received November 29, 2020; accepted July 28, 2021

Abstract: The Linearbandkeramik (LBK) is behind the spread of the Neolithic way of life in a large part of Western Europe. This period is often regarded as the beginning of social inequalities whose ideological frameworks deserve to be highlighted. According to social anthropologists, funerary practices are relevant for this debate as they reflect the symbolic thought in relation to death. In addition, as they are perpetuated by the living, funerary practices are pertinent in addressing the ideological values, symbolic systems, and thoughts that support social organisation. Whilst examining how grave goods are allocated amongst the LBK population, we have identified a small group of dominant men characterised by a specific burial kit (adzes, arrows, lighter set, and red deer antlers), a richer protein intake in diet, and their local origin. Comparing them to other social categories characterised by minor marking of identity in grave goods, poorer protein intake in diet, and of diverse origin, we aim to explore the ideological frameworks and values sustaining the social LBK system. LBK dominant ideology appears to revolve around hunting and exploits in warfare, manhood, and virility, in short around violent behaviours perhaps linked to a territorial competition.

Keywords: Linearbandkeramik, ideology, funerary practices, social organisation, social identity

1 Introduction

The Linearbandkeramik (LBK) is responsible for the spread of the Neolithic way of life in a large part of Western Europe. This period is often regarded as the beginning of social inequalities. If social organisation during Palaeolithic and Mesolithic times remains widely unknown, LBK culture developed as an egalitarian society, as asserted by various previous works (Demoule, 2018; Gronenborn, 2016; Gronenborn, Strien, van Dick, & Turchin, 2018; Jeunesse, 1996, 2018). Gender studies now reinforce this assertion (Augereau, 2021). As gender is a social construct defining the social roles performed by material manifestations, it can be perceived within archaeological data and their variability between groups of individuals: dress and ornaments, sexual division of labour, health and diet, origins, and so on. By examining these aspects in the LBK population, we have been able to identify a small group of dominant men, and other various social categories characterised by farmland access, poorer protein intake in diet, diverse origin, and

*Corresponding author: Anne Augereau, Institut National de Recherches Archéologiques Préventives/UMR 7055 du CNRS Préhistoire et Technologie, Centre Archéologique de Marne la Vallée, 56 Boulevard de Courcerin, 77183 Croissy-Beaubourg, France, e-mail: anne.augereau@inrap.fr

Special Issue: THE EARLY NEOLITHIC OF EUROPE, edited by F. Borrell, I. Clemente, M. Cubas, J. J. Ibáñez, N. Mazzucco, A. Nieto-Espinet, M. Portillo, S. Valenzuela-Lamas, & X. Terradas

Open Access. © 2021 Anne Augereau, published by De Gruyter. This work is licensed under the Creative Commons Attribution 4.0 International License.
minor marking of identities in grave goods (Augereau, 2021). In this article, we aim to explore the ideological frameworks and values sustaining this social system. According to social anthropologists, funerary practices are relevant in this debate as they reflect the symbolic thought towards death. In addition, as they are perpetuated by the living, funerary practices are pertinent in addressing the ideological values, symbolic systems, and thoughts that support social organisation.

2 Funerary Goods as Identity Markers

The archaeology of death constitutes the first step towards the study of ideology and social values. According to anthropologists, death provides pertinent information about cultural characteristics and the social framework of the living. Indeed, anthropologists Louis–Vincent Thomas and Patrick Baudry underline that death and burial are never opportunistic or fortuitous; they are a staging of the deceased, with their attributes and social position as conceived and perpetuated by the living (Baudry, 2007; Thomas, 1976). Preparation of the corpse, funerary dress, grave architecture, funerary goods, food deposits, ceremonies, and so on are constitutive of this staging performed by the social group. According to Testart (2004), the number and the quality of burial deposits mark a social differentiation; the Chinese mausoleum of Emperor Qin Shi Huang is an ultimate example of this, with its 7,000 clay soldiers symbolizing the Emperor’s army. Funerary goods included alongside the deceased also constitute his or her equipment. Amongst the objects found, those made from rare or distant sources of raw material, or produced with a complex know-how, can be considered as marking the status of the deceased. Everyday objects such as tools can also indicate the activities of the deceased in life, all of these artefacts being included in death as attributes of the living. This is also the case for some rich and utilitarian objects. Finally, these material manifestations in death underline the social values attributed to the dead individual. For example, the Emperor Qin Shi Huang’s vast clay army emphasizes values such as strength and power, contributing to sustain the superhuman power given by the Gods to the Qin dynasty and justifying war and conquest for the creation of the imperial China (Lewis, 2007).

Archaeological data provide numerous examples of this concept, especially through gender archaeology. Marie-Louise Sørensen proposes that the archaeological funerary domain is an arena where gendered social constructs can be approached when social differentiation or categorisation are marked in death (Sørensen, 2000). Bettina Arnold also suggests that a pertinent gendered mortuary analysis can be engaged at different levels: the treatment of the individual, women, men, and children; their grave’s location within the cemetery; the layout of the tomb; the position of the body; the nature and spatial distribution of the grave goods, and so forth (Arnold, 2006). In Prehistoric funerary practices, numerous grave goods are often found in tombs; gender identity is displayed in dress and ornament and in various objects and accessories, which symbolise and characterise individuals and their social status, age, gender, skills, role, and so forth. Sørensen has successfully used this approach in the study of European Bronze Age populations, correlating dress elements with the sex and the age of individuals (Sørensen, 1997, 2000, 2004). Sidéra (1997, 2000, 2003) carried out a similar study, when she highlighted values of men of the Cerny culture in the Paris basin, such as courage, power, and temerity, through their grave goods (wild boar and red deer canines, arrows).

3 The LBK Social Structure: Data and Main Results

As mentioned earlier, the LBK social structure seems to be inegalitarian. Christian Jeunesse had already formulated this proposition from the distribution of grave goods, leading thus to the hypothesis of a ranked society with male domination marked by specific and precious goods in certain burials of men (Jeunesse, 1996, 2018). Other scholars envisioned that male leaders emerged at the beginning of the LBK culture, when
the groups moving westwards needed a strong leadership, and at the end, when times became insecure, as suggested in particular by the Talheim and Asparn massacres (Gronenborn, 2016; Gronenborn et al., 2018). For Jean-Paul Demoule, the appearance of enclosures and the richly furnished graves of the end of the LBK culture are the first signs of the emergence of social complexity (Demoule, 2018). A recent gender study allowed us to specify the LBK social structure, the main results of which are recalled later as a starting point of the discussion on ideological values (Augereau, 2021).

The gender analysis concerns funerary data representing about 3,000 LBK individuals from cemeteries, isolated burials, or small groups of graves (Figure 1). These sites are located from the Carpathian Basin to the Paris Basin. However, the methods used for determining sex vary, and the entire sample is not sufficiently representative for a relevant gender study that requires reliable sex and age determination. Therefore, the study is based on a dataset of 378 LBK individuals (109 men, 106 women, and 163 children) for whom sex and age were determined using the most reliable method (measurements of coxal bones compared to a current population; Bruzek, 2002; Murail, Bruzek, Houët, & Cunha, 2005). They are located in the Paris Basin, Alsace, and Germany and notably from the site of Schwetzingen (Gerling, 2012). However, data from other archaeological sites seem to be consistent when looking at the correlation between sex and funerary goods; indeed, this group of hypothetical men and women follows the same pattern as the reliable dataset. In addition, the reliable dataset and the entire sample are representative of a well-balanced population, with an equal number of men and women and the proportion of immatures consistent with an archaic population (Crubézy et al., 1997; Thevenet, 2010).

Comparing age, sex, and grave goods with information about origin and nutrition provided by stable isotopes analysis brings to the fore the inequalitarian aspect of the LBK society. The initial analysis consists of detecting social identities by analysing the link between the age and the sex of the individuals and their grave goods. During the LBK, the list of objects within the graves is relatively vast: pottery, dyes, tools, jewellery, embroidered fabrics, and faunal remains. However, not all these objects are markers of identity. Pottery vessels are often found in a corner of the pit or in the fill and were probably deposited on top of the perishable cover of the burial pit during or after the funerary ceremony. Faunal deposits are very rare (eight examples in the reliable dataset) and only found in adult burials with abundant grave goods. As is the case for pottery, faunal deposits were probably included in the funerary ritual. Finally, dyes (ochre) are frequent, but their distribution does not follow any specific pattern. The “coloured” burials are male, female, or infants, with or without goods, regardless of their nature or abundance; otherwise, the function and status of dyes in funerary contexts remain unclear: viaticum, part of the burial ritual, colouring of dress and ornaments worn by the deceased, antiseptic (Labriffe de, 1985; Thevenet, 2010, 2016)?

Only goods deposited close to or worn on the body testify to the deceased’s identity. These objects are, firstly, jewellery and ornaments, which were a part of the deceased clothing, and secondly, tools and weapons. Their distribution can either be gendered or not and highlights several categories of individuals. Male burials can be divided into many groups according to their grave goods (Figure 2). Firstly, among the 109 men, only a handful have three types of object with notably polished adzes or axes, deer antlers, percussion set lighters (the association of ferrous nodules and flint flakes bearing traces of percussion; Nieszery, 1995), arrows, and regular blades made of rare or exotic raw material. These objects are absent from female graves and form the male-specific equipment. Men with only arrows (and sometimes a blade) constitute another small group. Two other groups are of burials containing up to two types of male equipment, which always includes an adze. Finally, there is a majority of men with no specific funerary goods. Some of these goods such as adzes from amphibolite outcrops situated in the Izera Mountains in the northern Czech Republic (Ramminger, 2009), are probable prestige goods and status markers within the meaning given by Laure Salanova, excluding pottery vessels (Salanova, 1998).

The distribution of ornaments also highlights several categories among the 106 female burials (Figure 3). At the top of the social scale, a few women gather more than three ornaments such as necklaces, bracelets, embroidered belts and belt buckles, plastrons, embroidered garments, and so on. Three other groups, larger than the previous one, comprise women with two or up to three ornaments and those with only one piece. Let us outline that there are no ornaments specific to women as a majority of these objects are also present in male burials but in a lower proportion. Finally, as in the case of male burials, a majority of female burials
Figure 1: Main sites with human bone remains of the Western LBK culture in Europe. Circle: funerary sites (cemeteries, isolated burials, small groups of graves); star: other sites with human remains (massacre sites and others); in black: selected sites used for the reliable dataset (relief determination of sex and age); site numbers with circle: samples used for strontium analysis (map: M. Ilett & F. Giligny, UMR 8215 Trajectoires, Université de Paris I). 1: Polgár-Ferenci-hát, Hungary (Raczky, 2004); 2: Mezőkövesd-Mocsolyás, Hungary (Kalicz & Kőss, 2001); 3: Füzesabony-Gubakút, Hungary (Domboroczki, 2001); 4: Balatonszázsó, Hungary (Oross, 2013; Zoffmann, 2012); 5: Nitra, Slovakia (Pavúk, 1972); 6: Vedrovice, Czech Republic (Džkalová, 2008; Podborský, 2002; Zvelebil & Pettitt, 2008); 7: Těšetice-Kjovice, Czech Republic (Berkovec, 2004); 8: Brno-Starý Liskovec, Czech Republic (Podborský, 1999); 9: Asparan an der Zaya/Schletz, Austria (Teschler-Nicola, 2012; Windl, 1994); 10: Kleinhasdersdorf, Austria (Neugebauer-Maresch & Lenneis, 2015); 11: Rutzig, Austria (Kloiber & Kneidinger, 1968); 12: Mittendorf, Austria (Blesl, Nönig, & Spatzier, 2003; Blesl, Kalser, & Spatzier, 2004); 13: Alerhofen, Germany (Nieszery, 1995); 14: Mangolding, Germany (Nieszary, 1995); 15: Sengkofen, Germany (Nieszery, 1995); 16: Dillingen, Germany (Nieszery, 1995); 17: Essenbach-Ammerbreite, Germany (Brink-Kloke, 1990); 18: Otzing, Germany (Scheidt, 2001; Schmotz & Weber, 2000); 19: Sondershausen, Germany (Kahlke, 2004); 20: Bruchstedt, Germany (Kahlke, 2004); 21: Wandersleben-Gotha, Germany (Hoffmann, 1989); 22: Flomborn, Germany (Richer, 1969); 23: Schwetzingen, Germany (Behrends, 1997; Gerling, 2012); 24: Herxheim, Germany (Zeeb-Lanz, 2016); 25: Stuttgart-Mühlhausen, Germany (Kurz, 1994); 26: Talheim, Germany (Wahl & König, 1987; Wahl & Stien, 2007); 27: Elsloo, Netherlands (Meddernan, 1970); 28: Niedermerz, Germany (Döhrn-Ihmig, 1983); 29: Ensheim, LesOctrois, France (Jeunesse, Lambach, Mathieu, & Mauvilly, 1993; Jeunesse, 1997); 30: Mulhouse-est (Rixheim), IleNapoléon, France (Schweitzer & Schweitzer, 1977; Jeunesse, 2005); 31: Vendenheim, LeHaut du Coteau, France (Boës et al., 2007; Jeunesse, 2002); 32: Souffelweyersheim, TuilerieReiss, France (Arbogast, 1983; Forrer & Jaenger, 1918; Ulrich, 1953); 33: Quatzenheim, Auf den Spitzenzopf, France (Stieber, 1947, 1955); 34: Marainville-sur-Madon, Sous le Chemin de Naviot, France (Blouet, Faye, Gheller, & Decker, 1987); 35: Larzacourt, Champ Bucholte, France (Chertier, 1980); 36: Orconte, LesLoues, France (Tappret, Gé, & Vallois, 1968); 37: Ecuriennes, LaFolle, France (Bonnabel, Paresys, & Thomashausen, 2003); 38: Plichautcourt, Les音, France (Bonnabel & Dugois, 1997); 39: Vert-laGravelle, Le Bas des Vignes, France (Chertier, 1988); 40: LaSaulsotte, LeBoisBaudin, LesGrèves, France (Piette, 2004); 41: Escovilles-Sainte-Camille, LePré-de-laPlanche, France (Joly, 1968); 42: Charmoy, LesOmes, France (Bailloud, 1964); 43: Gron, LesSablons, France (Müller, 1995); 44: Vinneuf, PortRenard, France (Carré, 1976, 1977); 45: Villeneuve-la-Guyard, LesFalaises dePrépoux, France (Prestreau, 1992); 46: Barbey, LeChemin de Montereau, LeBuissonRond, France (Renaud & Gouge, 1992); 47: Marolles-sur-Seine, LeCarrières, LeChemin deSens, France (Gouge, 1985; Séguier, 1995); 48: Balloy, LesRéaudins, France (Mordant, 1997); 49: Pontpoint, LeJonquièreIl, France (Alix, Arbogast, Pinard, & Prodéo, 1997); 50: Bucy-leLong, LaFosseille, LaHéronière, LaFosseTounise, France (Constantin, Farruggia, & Guichard, 1995; Hacken et al., 1998; Ilett, Constantin, Farruggia, & Bakels, 1995); 51: Missy-sur-Aisne, LeCulot, France (Farruggia & Constantin, 1984); 52: Pontavert, LePortauxMarbres, France (Thevenet, 2010); 53: Berry-au-Bac, LeChemin de laPêcherie, LeVieuxTordoir, LaCroixMaigret, France (Allard et al., 1996, 1997; Demoule & Ilett, 1978; Ilett & Plateaux, 1995); 54: Cuiry-les-Chaudardes, LesFontinettes, France (Ilett & Hackem, 2001; Soudsky et al., 1982); 55: Menneville, Derrièrele Village, France (Coudart & Demoule, 1982; Farruggia, Guichard, & Hackem, 1996); 56: Chasseny, LeGrandHorle, France (Auxiette, Guichard, & Pommepuy, 1987); 57: Cys-la-Commune, LesLonguesRaises, France (Boureux, 1965); and 58: Maizy, LesGrandsAisements, France (LeBulloch, Dubouloz, & Plateaux, 1986).
have no ornaments but can sometimes contain everyday tools (flint flake, bone awl or needle, grinding tools). Most of the female burials have no grave goods.

When looking at the entire sample for Western Europe in this study, we can see that these various groups differ according to funerary treatments, food, and origin. Regarding burial mode, the Aiterhofen-Ödmühle cemetery presents a representative pattern (Figure 4, Nieszery, 1995), where individuals with numerous male objects are frequently buried in the centre of groups of tombs. For example, in group III, an adult, probably male, with more than five objects including three adzes, three arrowheads, and one Spondylus buckle, is buried in the densest part of the group. Other adults, with fewer grave goods including
only ornaments (female?) or adzes (males?), surround him. The same pattern is observed in the western part of group V. In groups I, II, and V, and to a lesser extent in group III, tombs with no specific funerary objects or no objects at all are found at a certain distance from the central group. Finally, individuals with only arrows never occupy the dense part of tombs but are located in the peripheral zone, as in group II. This pattern deserves to be confirmed with more precise spatial analysis including accurate chronological data from the cemetery. However, it has been noticed in other necropolises such as Ensisheim, Schwetzingen, Sondershausen, Kleinhadersdorf, and Vedrovice (Gerling, 2012; Jeunesse, 1997; Kahlke, 2004; Neugebauer-Maresch & Lenneis, 2015; Zvelebil & Pettitt, 2008; for further details such as maps with grave goods distribution, see also Augereau, 2021). At Ensisheim, a man with an adze, four arrows, and a deer antler is buried in the centre of the tombs. Around him, in a first circle, men equipped with adze and sometimes arrows, lighter, and ornaments, are found. Immatures are also nearby. Most of the women, whether adorned or not, occupy a second circle of graves. The most adorned woman is closest to the main concentration. Four more are found far on the northern periphery of the site. In this area, there are also men, women, and children with no characteristic funerary goods except for a man, to the north, who has a large bone tool. The Schwetzingen case is less clear due to the destruction of the central part of the site. However, it is possible to distinguish in the three groups of tombs, wealthy male burials with adzes, and in peripheral area graves with arrows but no adzes. At Sondershausen, two wealthy graves, one with adzes and the other with only ornaments, are located in the middle of the main cluster of tombs. At Kleinhadersdorf, two burials containing adzes, regular blades, deer antler, and bone tools were located in the centre of the two main groups of tombs. At Vedrovice, many clusters with a diffuse distribution of tombs contained one or two richer male burials with adzes and arrows.
If the burial’s relative location in the cemetery is linked to the individual’s status in life, a complex social segmentation emerges with a few men at the top of the social scale who dominate a hierarchical society represented in the funerary record by individuals with adzes, then women, individuals with arrows (archers?), and those with no specific funerary objects. Data relating to geographic origin and diet reinforce this assertion. Indeed, in the sites analysed by Bickle and Whittle (2013), strontium analysis shows that 96% of individuals with adzes are of local origin, whereas the other groups have a greater proportion of non-locals: 18% amongst individuals bearing only ornaments, 29% of individuals with only arrowheads, and 15% of individuals with no specific grave goods (Table 1). Moreover, adults buried with polished adzes in certain sites (Vendenheim, Aiterhofen-Ödümühle, Vedrovice, and Nitra) have a higher protein intake of animal origin ($^{15}$N), while the other categories have a more varied diet with higher rates for vegetables, starchy food, and food sourced from woodland areas.

To sum up, the importance of a crosscutting study of grave goods, funerary locations, and stable isotopes analysis is that it distinguishes several different social categories among LBK people. Men with adzes seem to have certain privileges such as a richer nutrition and a stable residence; they have a central place in death, probably linked to a central role in life. They seem to constitute a dominant social group with a specific funerary kit containing adzes, deer antler, arrows, percussion set lighters, and regular blades, which do not exist in other groups, especially among women. Examining the meaning of the burial assemblages of these dominant men is relevant in addressing the mainstream ideology in the LBK society. However, this pattern does not characterise the whole LBK culture. Indeed, in the Paris and Carpathian basins, men with adze or arrows seem to be rare or absent at least in death. Thus, the ideology of these outlying areas of the LBK culture was probably different or expressed in a different way, not perceptible in the funerary data.

| Funerary goods | Sex (when reliable) | Part of the population (%) | Nbe analysed Ind. | Origin (strontium) (%) |
|----------------|---------------------|-----------------------------|-------------------|-----------------------|
| Adze (+antler, arrow, lighter) | Male | 13 | 74 | Local origin = 96 |
| Arrows only | Male | 3 | 31 | Non-local origin = 29 |
| Ornament only | Female | 15 | 48 | Non-local origin = 18 |
| Ordinary tools | Female/male | 33 | 31 | Non-local origin = 13 |
| No grave goods | Female/male | 37 | 119 | Non-local origin = 15 |

4 LBK Values from Moravia to the Rhine Valley

What does these funerary data tell us about LBK values? In particular, what is the significance of the presence of adzes, arrows, blades, deer antler objects, and set lighters in male burials?

4.1 Men Values: Courage, Strength, and Known-How

Considered as male objects, tools or weapons provide information about activities at least for part of the male population. In the reliable dataset, 35 male burials totalise 57 adzes, which would have been used for various activities. The study of preserved wood from the Eythra well (Germany, Saxe) brought to light tool
marks corresponding to adze blades (Tegel, Elbur, Hakelber, Stäuble, & Büntgen, 2012), and the use-wear analysis carried out on tools from the Vedrovice cemetery and others showed that the male polished tools were used in woodworking and possible butchering (Masclans, Bickle, & Hamon, 2020; Masclans, Bickle, Hamon, Jeunesse, & Bickle, 2021). The study of bone marks on male skeletons from Stuttgart–Mühlhausen cemetery showed that men suffered from tendonitis of the right elbow, which can arise from repeated throwing movements from the handling of the adze (Villotte & Knüsel, 2014). Moreover, adzes were probably used as weapons in situations of conflict as observed on the human skulls from the Talheim massacre that bear cutting marks probably made by adze (Wahl & König, 1987; Wahl & Strien, 2007).

Seventeen male burials of the reliable dataset contain 57 arrowheads, probably deposited in a quiver. Arrows were probably used not only for hunting but also in warfare. Although examples of arrowheads embedded in animal bone are not common, LBK bone assemblages consistently contain a significant proportion of wild fauna, representing 5–40% in data from early to final LBK settlements located within an area that covers Central Europe to the Paris basin (Arbogast, 2001; Bedault & Hachem, 2008; Hachem, 1999; Lüning, 2000; Tresset & Vigne, 2001). Large game such as wild boar, red deer, roe deer, and aurochs are the main species. The proportion of these animals varies throughout Western and Central Europe and according to LBK culture chronology. This said boar and red deer are the main species that were hunted during this period.

Arrows are also used in warfare and conflict. An example of an arrowhead found in a human body has been documented at a site in Mulhouse, where the death of a young man was probably due to a wound from an arrowhead that remained embedded between two ribs (Jeunesse, Barrand-Emam, Denaire, & Chenal, 2014). Indirect examples are also documented, such as bone callus resulting from injuries due to a throwing weapon (Jeunesse et al., 1993). More widely, Neolithic iconographies showing men with bows involved in hunting and warfare are well known in the Spanish Levant painting, South Italian caves, or certain Çatal Höyük buildings (Hodder, 2006; López-Montalvo, 2011; Mellaart, 1967; Whitehouse, 2001).

Another male skill is the knapping of blades made from rare or exotic raw materials (Carpathian obsidian, Szentgál radiolarite, and fine-grained exogenous flint). For example, at Schwetzingen (Germany), regular blades are documented in a small number of male burials, while irregular blades, ordinary flakes, or irregular tools are found in female burials. This seems to indicate that, during this period, regular blade knapping was a male activity, while the production of the less regular blades and tool flakes, often using local flint, was activities carried out by women and children (Augereau, 2019). It is noteworthy that arrowheads are produced from regular blades, and it would not be surprising that the production of arrowheads was a male activity.

As a preliminary conclusion, tools and weapons are strongly linked to the activities, behaviour, and values of certain men. Warfare, hunting, woodworking, and regular laminar knapping evidenced by arrows, adzes, and blades require courage, strength, and high known-how, which seem to be primary male values.

4.2 Male Power, Regeneration, and Virility?

Although rare (eight objects in only eight burials belonging to the reliable dataset and 21 more from the entire sample), the significance of red deer antler deposits in male burials is also worth exploring. While faunal studies testify red deer hunting, only antlers are found in male graves, and it is not possible to determine whether these objects come from hunted animals or were shed antlers. Their pointed ends are often bevelled and the thicker ends can be perforated (Figure 5), being generally found near the hip as they were probably suspended from a belt. Unlike adzes and arrows, red deer antlers are only found with adult men and never with children or women. However, red deer is not totally absent from female graves, as female burials with very elaborate dress include ornaments made from deer teeth, for instance
the headband decorated with 82 deer teeth, bore by a female at Berry-au-Bac (Dép. Aisne, France, Bonnardin, 2009).¹

In the LBK of the Paris basin, red deer has a specific status according to Hachem (2018). At Cuiry-lès-Chaudardes, it is associated with the highest rates of cattle husbandry in the largest houses of the village. It appears to be an animal connected to breeding and domestication (Hachem, 2018). In contrast, wild boar is linked to the smaller houses characterised by a surplus of hunting; these houses could be those of newly settled groups drawing a large part of their subsistence from the wild (Hachem, 2011, 2018). Thus, the hunting focuses here on wild boar, while the larger houses with high animal husbandry are linked to red deer hunting. The red deer hunting could therefore be a privilege for the breeders of animal stock living in the large houses. In other LBK areas from Hungary to Alsace, big game and red deer are systematically present in faunal assemblages in small quantities (Jeunesse & Arbogast, 1997). According to archaeozoologists, low rates of this animal could indicate that it was not hunted just for food (Hachem, 2011, 2017; Jeunesse & Arbogast, 1997; Tresset, 1993; Vigne, 1993). Indeed, this animal probably played a social role, as it is the only species of large game that was not domesticated, whereas wild boar and aurochs were. There is no objective reason for this, all these animals being equally difficult to domesticate. Furthermore, in insular contexts, such as Sardinia or Cyprus, fallow deer and red deer were introduced during the Neolithic (seventh and fourth millennium) and were kept wild for – social or recreational? – hunting (Vigne, 1993). Compared with other wild animals, the status of red deer, in particular the male deer, was specific according to Vigne (1993); it is territorial, very imposing being twice as big as the female; it reigns over a herd from 20 to up to 50 does. The fact that the male deer can shed its antlers every year strikes the imagination. The red deer associated with men also played a role in the Neolithic art and thought; the mural

1 The specific raw material of the hair combs coming from the Bavarian cemeteries (Aiterhofen-Ödmühle and Sengkofen, Nieszery, 1995) is unknown; it could be deer antler or bone (Sidéra, 2000). In addition, the sex determination of the few individuals bearing these objects, generally close to their occiput, remains unreliable; one of them has an adze.

Figure 5: Deer antler from Schwetzingen, grave 56 (Germany, after Gerling, 2012).
painting in Çatal Höyük shows men hunting male deer (Hodder, 2006; Mellaart, 1967). Likewise, paintings depicting deer hunting in caves, such as Cova dels Cavalls in Spain or Porto Badisco cave in Italy, would have probably been of spiritual or social significance. They could celebrate the victory of men over the wild (Martínez Valle & Villaverde Bonilla, 2002) or demonstrate male supremacy over women and the younger members of society (Whitehouse, 2001; Figure 6).

According to Mykhailova (2015), the deer is the subject of an ancient cult practiced until the twentieth century. This cult was celebrated in rites of passage, including separation (death), transition, and new status such as revival (Mykhailova, 2006). During the Palaeolithic, the red deer is linked to a male figure. The “wizard” of the Trois Frères cave, which is undoubtedly a man wearing antlers, is an example (Ariège, Bégouën & Breuil, 1958; Mykhailova, 2015). During the Mesolithic, some men and women were buried with whole or fragmented deer antlers, as part of the burial architecture or support for the corpse (Téviec and Hoëdic, Vedbæck, Henriksholm-Bøgebakken, Albertsen & Petersen, 1976; Boulestin, 2016; Péquart & Péquart, 1934; Péquart, Péquart, Boule, & Vallois, 1937).

Male red deer were also important during Protohistoric times. Among multiple examples, Cernunnos, the Celtic god of the regeneration represented by a male deer on the Gundestrup cauldron, is the most famous (Denmark, Olmsted, 1994). During medieval times, red deer played a psychopomp role, and kings and nobles were buried wrapped in deer hides (Moinot, 1987). In early Christendom, Jesus Christ was known as “the deer of the deer” and was symbolised by a male deer. Finally, the red deer is still considered a symbol of nobility and power. Among French hunters of the present day, who are 98% men (https://www.chasseurdefrance.com/), a small proportion belonging to the higher social classes organise the expensive hunting of red deer with hounds, thus performing and perpetuating the ancestral domination of the great bourgeoisie over the rural and popular classes (Fradkine, 2015; Pinçon-Charlot & Pinçon, 1993).

Therefore, the male red deer appears as a symbol of regeneration and power in many archaeological and historical contexts, and it is not surprising that LBK dominant men were associated with male deer through objects made from their antlers. It is likely that owning deer antlers was a symbol of power, which seems to be reserved to a small number of individuals. In the same way, female burials and infant burials do not contain deer antlers, and they are reserved for adult men, thus constituting a symbol of virility.
4.3 Male Light and Heat?

Several male burials (six individuals in the reliable dataset, both adults and young individuals) include percussion set lighters of ferrous nodules and flakes bearing traces of percussion. They are systematically associated with other male objects, such as adzes and arrows. Does this mean that male power is derived from the energy of heat and light? Answering this question is not easy. The ferrous nodules are poorly preserved, and many of them could have disappeared over time; the absence of lighter sets in other male burials and female and infant burials is therefore not a conclusive observation. Systematic research on flint flakes with percussion traces in tombs could provide some clues in this regard. Other techniques exist for producing fire such as the friction technique probably practiced by both LBK men and women. At present, interpreting lighters as being male attributes is probably premature, even if the fact remains that they are found only in male burials.

To sum up, the study of the grave goods of these dominant men underlines some of the ideological values at work during the LBK culture. Warfare, hunting, and crafting marked by tools and weapons such as adzes, arrows, or regular blades production highlight that courage, strength, skill, and dexterity were necessary, and these activities were greatly valued by the first farmers of Western Europe. Hunting and in particular the hunting of red deer appears to play a specific role. It is likely that this hunting had a social value and was perhaps only practiced by communities that already had a long tradition of animal husbandry. The correlation observed at Cuiry-lès-Chaudardes between the largest houses, intensive cattle rearing and the presence of red deer remains provides evidence for this hypothesis. Thus, the association between some men and red deer antlers cannot be random, even if the origin of deer antlers remains uncertain (from a hunted animal or shed antlers). Owning antlers from this emblematic animal, characterised by the annual regeneration of its antlers and numerous does, could be a symbol of virility and power.

However, most of the men have only adzes and only a small number are buried with more than one male attribute. These burials are generally found at central place in the cemetery. For example, at Schwetzingen, the central male burial no. 133 cumulates an adze, a deer antler, and 10 arrows; at Ensisheim, the male burial no. 19 has the same equipment; at Aiterhofen-Ödmühle, burial no. 153 contains an adze, four arrows, and a lighter set and burial no. 158 also has an adze, arrows, and an antler. As mentioned earlier, their special place in death could be correlated to specific social roles rooted to the place where they were born and died. However, the great majority of men of local origin have only adzes. This object could be a symbol of manhood and a marker of the territorial belonging.

4.4 What about Children, Women, and Men with No Adze?

As is the case with men, some children from 5 years of age are buried with an adze, showing that this attribute was provided early in life (Figure 7). In addition, some of them have, just like the adults, other objects belonging to the male equipment (excepting deer antler), such as a lighter set and arrows, and as for a small number of adults, some infants occupy a central place in death, such as in Aiterhofen-Ödmühle (Figure 4). These observations about children raise the question of the transmission and heredity of territorial values and those linked to the dominant male status. Unfortunately, the sex of children cannot be determined from skeletal evidence, and it is therefore impossible to state if these children are male and if they are the dominant male heirs, which would have been a significant contribution in defining the LBK social structure and the system of land inheritance.

Amongst the male burials without adze, a group with arrows emerges. These individuals occupy peripheral areas in cemeteries, around the groups of male burials with adzes (Figure 4). Some of these individuals are of exogenic origin (Table 1, Bickle & Whittle, 2013). Had they a specific role in the LBK way of life? Were they Mesolithic hunter-gatherers who made an important contribution to Neolithic society as seen by some authors (Gronenborn, 1997, 1999; Jeunesse, 1995, 1997, 2003; Lenneis, 2007, 2008; Price,
Finally, what about the women? Did female values and attributes exist? Female identity seems to be quite different from male identity in general and in particular from dominant men. Women do not have specific equipment, only ordinary tools. Their identity, when it can be defined, is characterised by jewellery and ornaments, which are sometimes worn in an elaborate way, as for example the female burials no. 70 from Berry-au-Bac or no. 14 from Mulhouse (Figure 8). Does this mean that women’s values were linked to their physical appearance and dress? At this stage, nothing else characterises women, and, unlike men, after comparing their grave goods, diet, and origin, no dominant women are visible. For example, the female with elaborate dress from Mulhouse burial 14 is of non-local origin. In Vedrovice, the diet of individuals buried with a Spondylus ornament, who are probably female, had a varied but vegetarian diet (Masclans et al., 2020). Generally, women regardless of their grave goods consumed less animal protein and more vegetables and starchy foods and were more mobile than men (Bickle & Whittle, 2013). Regarding female mobility, many authors support the idea of the LBK marriage system with a patrilocal structure (Bentley et al., 2002; Bickle & Whittle, 2013; Hedges et al., 2013). In summary, these results indicate that differences and inequalities relating to technique, diet and origin characterise LBK women. Can we assume that they were subordinate to men? This assumption should be kept in mind and explored further but, like men, the female population encompassed many different statuses.

5 Conclusion: An Ideology for What?

From Moravia to the Rhine valley, LBK death, and probably life, seemed to be organised around dominant men with adzes that perpetuated specific ideological values. Amongst the male burials, several groups emerge depending on their position in the cemetery and the quality and quantity of male-gendered objects they own; but all are buried with at least one adze and, when the isotopic analysis is available, a large majority of these individuals are of local origin. Adzes are tools for woodworking (Eythra well, use-wear...
analysis) and weapons (Talheim and Asparn and der Zaya massacres), but they also seem to symbolise manhood, territorial belonging, and status. Other objects found in a minority of adze owner burials suggest other ideological values, such as ability and courage in warfare and hunting with the presence of arrows, and perhaps virility, power, and regeneration through the red deer antlers. Indeed, we cannot consider deer antler as a "neutral" attribute as this imposing and territorial animal, with annual antler growth and a large "harem" of does holds an important place in the Neolithic wild bestiary. Furthermore, red deer hunting seems to be an important activity of Neolithic social life, in particular in the LBK culture where accomplished cattle breeders (faunal assemblages from Cuiry-les-Chaudardes) would have practiced it.

LBK dominant ideology revolves around hunting and the exploits of warfare, manhood, and virility, in short situations that could have involved violence. Why did LBK society develop these specific values? Territorial access and protection were probably central issues for these agricultural communities. The strong link to agricultural lands appears through various data. For example, the Vaihingen settlement study shows a straight correlation between pottery styles that characterise specific areas of the village and the nature and frequency of weed macrorests in the pits along the houses, indicating various distances from arable fields. These data suggest that the clans identified themselves by their pottery would have had more or less close access to agricultural lands (Bogaard, 2011; Bogaard, Krause, & Strien, 2011). The values conveyed by male behaviour would have been used for the control of the portion of agricultural land farmed by a group (family, clan, or kinship group?) led by one of these dominant men. This ideology takes its real meaning when remembering that LBK farmers were migrant people, arriving in a new place and establishing a direct link to a new territory, already occupied by local groups of hunters-gatherers. It remains to be understood why the ideology of violence, witnessed in particular by the Talheim and Asparn massacres, seems absent in the Paris and Carpathian basins.

Figure 8: Mulhouse-Est (France). Grave 14. Woman with elaborate dress. 1: map of the grave (after Schweitzer & Schweitzer, 1977); 2: photo of the skeleton (after Schweitzer & Schweitzer, 1977); 3: beads and skull (© Musée Historique de Mulhouse); 4: ornaments reconstitution (© Musée Historique de Mulhouse). Photomontage after Bonnardin, 2009.
Acknowledgments: All my thanks to Rebecca Peake, who controlled my English writing and made it better.

Funding information: The author states no funding involved.

Author contributions: The author has accepted responsibility for the entire content of this manuscript and approved its submission.

Conflict of interest: The author states no conflict of interest.

Data availability statement: The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

References

Alix, P., Arbogast, R.-M., Pinard, E., & Prodéo, F. (1997). Le méandre de Pont-Sainte-Maxence (Oise) au Néolithique ancien. In C. Jeunesse (Ed.), Le Néolithique danubien et ses marges entre Rhin et Seine: Actes du 22e colloque interrégional sur le Néolithique tenu à Strasbourg, 1995 (pp. 359–399). Strasbourg: Suppl. Aux Cahiers de l’Association Pour la Promotion de la Recherche Archéologique en Alsace.

Albertsen, S., & Petersen, E. (1976). Excavation of a Mesolithic cemetery at Vedbæk. Acta Archaeologica, 47(1), 1–28.

Allard, P., Dubouloz, J., & Hachem, L. (1997). Premiers éléments sur cinq tombes rubanées à Berry-au-Bac (Aisne, France): Principaux apports à l’étude du rituel funéraire danubien occidental. In C. Jeunesse (Ed.), Le Néolithique danubien et ses marges entre Rhin et Seine: Actes du 22e colloque interrégional sur le Néolithique tenu à Strasbourg, 1995 (pp. 31–43). Strasbourg: Suppl. Aux Cahiers de l’Association Pour la Promotion de la Recherche Archéologique en Alsace.

Allard, P., Constantin, C., Dubouloz, J., Harruggia, J.-P., & Ilett, M. (1996). Berry-au-Bac “Le Vieux Tordoir”, ultime fouille du site rubané. Fouilles Protohistoriques dans la vallée de l’Aisne, 24, 7–54.

Arbogast, R.-M. (1983). Les sépultures rubanées d’Aisne (Mémoire de maîtrise). Strasbourg: Université des Sciences Humaines.

Arbogast, R.-M. (2001). Variabilité de la représentation des animaux sauvages et statut de la chasse sur les sites du Rubané du Nord de la France. In R.-M. Arbogast, C. Jeunesse, & J. Schibler (Eds.), Rôle et statut de la chasse dans le Néolithique ancien danubien (5500–4000 av. J.-C.), Actes des Premières rencontres danubiennes (pp. 77–90). Rahden: Marie Leidorf, Internationale Archäologie, Arbeitsgemeinschaft, Symposium, Tagung, Kongress.

Arnold, B. (2006). Gender and archaeological mortuary analysis. In S. M. Nelson (Ed.), Handbook of gender in archaeology. Berkeley: Oxford: AltaMira Press.

Augereau, A. (2021). Femmes néolithiques. Le genre dans les premières sociétés agricoles. Paris: CNRS Edition, collection « Le Passé recomposé ».

Augereau, A. (2019). Change and continuity. Gender and flint knapping activities during the Neolithic in the Paris basin. In J. C. Koch & W. Kirleis (Eds.), Gender transformations in prehistoric and archaic societies (pp. 435–458). Leiden: Sidestone Press.

Auxiette, G., Guichard, Y., & Pommepuy, C. (1987). Le site rubané et de l’Age des métaux de Chassey « Le Grand Horle ». Les Fouilles Protohistoriques de la Vallée de l’Aisne, 15, 51–84.

Baudry, P. (2007). Histoire de la mort. In A. Destenberg & B. Moulet (Eds.), La mort. Mythes, rites et mémoire (pp. 147–154). Hypothèses 2007/1 (10). Paris: Editions de la Sorbonne.

Bailloud, G. (1964). Le Néolithique dans le Bassin parisien (1974 ed.). Paris: CNRS, suppl. à Gallia Préhistoire, 2.

Bedault, L., & Hachem, L. (2008). Recherches sur les sociétés du Néolithique danubien à partir du Bassin parisien: Approche structurelle des données archéozoologiques. In L. Burnez-Lanotte, M. Ilett, & P. Allard (Eds.), Fin des traditions danubiennes dans le Néolithique du Bassin parisien et de la Belgique (5100–4700 av. J.-C.). Autour des recherches de Claude Constantin. Actes de la Table ronde SPF, Namur, novembre 2007 (pp. 221–243). Paris: Mémoire de la Société Préhistorique Française, XLIV.

Behrends, R.-H. (1997). La nécropole rubanée de Schwetzingen (Kr. Rhin-Neckar, Bade-Wurtemberg). In C. Jeunesse (Ed.), Le Néolithique danubien et ses marges entre Rhin et Seine: Actes du 22e colloque interrégional sur le Néolithique tenu à Strasbourg, 1995 (pp. 17–29). Strasbourg: Suppl. Aux Cahiers de l’Association pour la Promotion de la Recherche Archéologique en Alsace.

Bentley, A., Price, D., Lüning, J., Gronenborn, D., Wah, L. J., & Fullagar, P. D. (2002). Prehistoric migration in Europe: Strontium isotope analysis of early Neolithic skeletons. Current Anthropology, 43(5), 799–804.
Döhrn-Ihmig, M. (1983). Das bandkeramische Gräberfeld von Aldenhoven-Niedermerz, Kreis Düren. Rheinische Ausgrabungen, 24, 4–190.

Domboráczki, L. (2001). The excavation at Füzessabony-Gubakút, preliminary report. In R. Kertész & J. Makkay (Eds.), From the Mesolithic to the Neolithic. Proceeding of the international archaeological conference, Damjanich museum of Szolnok, September 1996 (pp. 193–214). Budapest: Archaeolingua, 11.

Farruggia, J.-P., & Constantin, C. (1984). Le site néolithique et des âges des métaux de Missy-sur-Aisne « Le Culot ». Les Fouilles Protohistoriques de la Vallée de l’Aisne, 12, 61–94.

Farruggia, J.-P., Guichard, Y., & Hachem, L. (1996). Les ensembles funéraires rubanés de Menneville «Derrière le Village» (Aisne). In P. Duhamel (Ed.), La Bourgogne entre les Bassins rhénan, rhodanien et parisien: Carrefour ou frontière? Actes du 18ème Colloque Inter régional sur le Néolithique, Dijon, octobre 1991 (pp. 119–174). Dijon: Revue Archéologique de l’Est, 14ème Supplément.

Ferrer, R., & Jaenger, F. (1918). Neolithisches Gräberfeld bei Hoenheim-Souffelweyersheim. Anzeiger für Elsässische Altertumskunde, 6(33), 875–886.

Fradkine, H. (2015). Chasse à courre, relations interclasses et domination spatialisée. Genèses, 99(2), 28–47.

Gerling, C. (2012). Das linearanbandkeramische Gräberfeld von Schwetzingen, Rhein-Neckar-Kreis. Fundberichte aus Baden-Württemberg, 32(1), 7–263.

Gouge, P. (1985). Marolles-sur-Seine, Les Carrières, Document final de synthèse de sauvetage urgent. Saint-Denis: SRA Ile de France.

Gronenborn, D. (1997). Silexartefakte der ältestbandkeramischen Kultur. Bonn: Habelt.

Gronenborn, D. (1999). Variations on a basic theme: The transition to farming in southern central Europe. Journal of World Prehistory, 13, 123–210.

Gronenborn, D. (2016). Some thoughts on Political differentiation in Early to Young Neolithic societies in Western Central Europe. In H. H. Meller, D. Gronenborn, R. Jung, & R. Risch (Eds.), Arm und Reich – Zur Ressourcenverteilung in prähistorischen Gesellschaften. Rich and poor – Competing for resources in prehistoric societies. 8. Mitteldeutscher Archäologentag, Halle, vom 22. bis 24. Oktober 2015 (pp. 61–75). Halle: Tagungen des Landesmuseums für Vorgeschichte Halle, 14.

Gronenborn, D., Strien, H.-C., van Dick, R., & Turchin, P. (2018). Social diversity, social identity, and the emergence of surplus in the Western Central European Neolithic. In H. H. Meller, D. Gronenborn, & R. Risch (Eds.), Überschuss ohne Staat – Politische Formen in der Vorgeschichte. Surplus without the state – Political forms in prehistory. 10. Mitteldeutscher Archäologentag, Halle, vom 19. bis 21. Oktober 2017 (pp. 201–220). Halle: Tagungen des Landesmuseums für Vorgeschichte Halle, 18.

Hachem, L. (1999). Apport de l’archéozoologie à la connaissance de l’organisation villageoise rubanée. In F. Braemer, S. Cleuziou, & A. Coudart (Eds.), Habitat et société. Actes des 15ème rencontres internationales d’archéologie et d’histoire d’Antibes (pp. 325–338). Juan-les-Pins: APDCA Éd.

Hachem, L. (2011). Le site néolithique de Cuiry-lès-Chaudardes – I. De l’analyse de la faune à la structuration sociale. Rahden: Marie Leidorf, Internationale Archäologie, 120.

Hachem, L. (2018). Animals in LBK society: Identity and gender markers. Journal of Archaeological Science: Reports, 20, 910–921. doi: 10.1016/j.jasrep.2017.09.020.

Hachem, L., Allard, P., Constantin, C., Farruggia, J.-P., Guichard, Y., & Ilett, M. (1998). Le site néolithique rubané de Bucy-le-Long “La Fosselle” (Aisne). Internéa, 2, 17–27.

Hedges, R., Bentley, A., Bickel, P., Cullen, P., Dale, C., Fibiger, L., ... Whittle, A. (2013). The supra-regional perspective. In P. Bickle & A. Whittle (Eds.), The first farmers of central Europe: Diversity in LBK lifeways (electronic ed.). Oxford: Oxbow Books.

Hodder, I. (2006). Çatalhöyük. The Leopard’s Tale: Revealing the mysteries of Turkey’s ancient “Town”. Londres: Thames & Hudson.

Hoffmann, E. (1989). Die Anfänge des Branditus. In F. Schlette & D. Kaufmann (Eds.), Religion und Kult in ur- und frühgeschichtlicher Zeit (pp. 99–110). Berlin: Akademie-Verlag.

Ilett, M., Constantin, C., Farruggia, J.-P., & Bakels, C. (1995). Bâtiments voisins du Rubané et du groupe de Villeneuve-Saint-Germain sur le site de Bucy-le-Long “La Fosse Tounise” (Aisne). Actes du 19e colloque inter régional sur le Néolithique, Amines, 1992 (pp. 17–39). Senlis: Revue Archéologique de Picardie, no. spécial.

Ilett, M., & Hachem, L. (2001). Le village néolithique de Cuiry-les-Chaudardes (Aisne, France). In J. Guijane (Ed.), Communautés villageoises du Proche Orient à l’Atlantique (8000–2000 av. notre ère), Séminaires du collège de France (pp. 171–186). Paris: Errance, Coll. des Hespéridés.

Ilett, M., & Plateaux, M. (1995). Le site néolithique de Berry-au-Bac “Le Chemin de la Pêcherie” (Aisne). Paris: CNRS, Monographie du CRA, 15.

Jeunesse, C. (1995). Les groupes régionaux occidentaux du Rubané (Rhin et Bassin parisien) à travers les pratiques funéraires. Gallia Préhistoire, 37, 115–154.

Jeunesse, C. (1996). Variabilité des pratiques funéraires et différenciation sociale dans le Néolithique ancien danubien. Gallia Préhistoire, 38, 249–286.
Jeunesse, C. (1997). Ensisheim « Les Octrois », Une nécropole de Haute Alsace. In C. Jeunesse (Ed.), *Pratiques funéraires au Néolithique ancien. Sépultures et nécropoles danubiennes, 5500–4900 av. J. C.* (pp. 129–140). Paris: Errance.

Jeunesse, C. (2002). Vendenheim « Le Haut du Coteau »: Une nécropole du Néolithique ancien, Document final de synthèse. Strasbourg: SRA Alsace.

Jeunesse, C. (2003). Les pratiques funéraires du Néolithique ancien danubien et l'identité rubanée: Découvertes récentes, nouvelles tendances de la recherche. In P. Chambon & J. Leclerc (Eds.), *Les pratiques funéraires néolithiques avant 3500 av. J.-C., en France et dans les régions limitrophes. Actes de la table ronde de la société préhistorique française, Saint-Germain-en-Laye, Musée des antiquités nationales, 15–17 juin 2002* (pp. 9–32). Paris: Mémoire de la Société Préhistorique française, 33.

Jeunesse, C. (2005). Nouvelles données sur la nécropole du Néolithique ancien de Quatzenheim (Bas-Rhin). *Cahiers Alsaciens d'Archéologie, d'art et d'Histoire*, 48, 5–30.

Jeunesse, C. (2018). « Big men », chefferies ou démocratie primitive? Quels types de sociétés dans le Néolithique de la France. In J. Guilaine & D. García (Dirs.), *La Protohistoire de la France* (pp. 171–185). Paris: Hermann, Histoire et Archéologie.

Jeunesse, C., & Arbogast, R.-M. (1997). A propos du statut de la chasse au Néolithique moyen. La faune sauvage dans les déchets domestiques et dans les mobiliers funéraires. In C. Jeunesse (Ed.), *Le Néolithique danubien et ses marges entre Rhin et Seine: Actes du 22e colloque interrégional sur le Néolithique tenu à Strasbourg, 1995* (pp. 81–102). Strasbourg: Suppl. Aux Cahiers de L’Association Pour la Promotion de la Recherche Archéologique en Alsace.

Jeunesse, C., Lambach, F., Mathieu, G., & Mauvilly, M. (1993). Ensisheim « Les Octrois » (Haut-Rhin), une nécropole rubanée de Haute-Alsace. *Cahiers de l’Association Pour la Promotion de la Recherche Archéologique en Alsace*, 9, 1–88.

Jeunesse, C., Barrand-Emam, H., Denaire, A., & Chenal, F. (2014, December). Unusual funeral practices and violence in Early Neolithic Central Europe: New discoveries at the Mulhouse-East Linearbandkeramik. *Antiquity Project Gallery, 88*(342). http://journal. antiquity.ac.uk/projgall/jeunesse342.

Joly, D. (1968). Escolives-Sainte-Camille. Informations archéologiques, Bourgogne. *Gallica Préhistoire, 11*, 406–409.

Kahlke, D. (2004). *Sondershausen und Bruchstedt. Zwei Gräberfelder mit älterer Linienbandkeramik in Thüringen.*

Langenweilbach: Beier & Beran Archäologische Fachliteratur, Weimarer Monographien zur Ur- und Frühgeschichte, 39.

Kalicz, N., & Köös, J. (2001). Eine Siedlung mit ältestneolithischen Gräbern in Nordostungarn. *Preistoria Alpina*, 37, 45–79.

Kloiber, Ä., & Kneidinger, J. (1968). Die neolithischen Siedlungen und die neolithischen Gräberfundplätze von Rutzging und Haid, Ortsgemeinde Hörsching, politischer Bezirk Linz–Land, Teil I. * Jahrbuch des Oberösterreichischen Museumsvereins*, 113, 9–58.

Kurz, G. (1994). Zum Abschluss der Ausgrabungen beim Viesenhäuser Hof, Stuttgart Mülhausen. *Archäologische Ausgrabungen in Baden-Württemberg*, 1993, 34–38.

Labriffe de, P. A. (1985). *Les sépultures danubiennes dans le Bassin parisien* (Mémoire de maîtrise). Paris: Université Paris I Panthéon Sorbonne.

Le Bolloch, M., Dubouloz, J., & Plateaux, M. (1986). Sauvetage archéologique à Maizy (Aisne): Les sépultures rubanées et l’enceinte du de la fin du IVème millénaire. *Revue Archéologique de Picardie*, 1–2, 3–12.

Lenneis, E. (2007). Mesolithic heritage in early Neolithic burial rituals and personal adornments. *Documenta Praehistorica*, 34, 129–137.

Lenneis, E. (2008). Perspectives on the beginnings of the earliest LBK in east-central Europe. In D. W. Bailey, A. Whittle, & D. Hofmann (Eds.), Living well together? Settlement and materiality in the Neolithic of South-East and Central Europe (pp. 164–178). Oxford: Oxbow book.

Lewis, M. (2007). *The Early Chinese Empires: Qin and Han*. Cambridge: Belknap Press.

López-Montalvo, E. (2011). Violence and mort dans l’art rupestre du Levant: Groupes humains et territoires. In L. Baray, M. Honegger, & M.-H. Dias-Meirinho (Eds.), *L’armement et l’image du guerrier dans les sociétés anciennes. De l’objet à la tombe. Actes de la table ronde internationale de Sens, juin 2009* (pp. 19–42). Dijon: Éditions de l’Université de Dijon.

Lüning, J. (2000). *Steinzeitliche Bernen in Deutschland. Die Landwirtschaft im Neolithikum*. Bonn: Habelt.

Martínez Valle, R., & Villaverde Bonilla, V. (2002). *La Cova dels Cavalls en el Barranc de la Valltorta*. Tírig: Museu de la Valltorta, Monografies del Instituto de Arte Rupestre, 1.

Masclans, A., Bickle, P., & Hamon, C. (2020). Sexual inequalities in the Early Neolithic? Exploring relationships between sexes/genders at the cemetery of Vedrovice using use-wear analysis, diet and mobility. *Journal of Archaeological Method and Theory*. doi: 10.1007/s10816-020-09453-y.

Masclans, A., Bickle, P., Hamon, C., Jeunesse, C., & Bickle, P. (2021, April 14). A sexual division of labour at the start of agriculture? A multi-proxy comparison through grave good stone tool technological and use-wear analysis. *PloS One*, 16(4), e0249130. doi: 10.1371/journal.pone.0249130.

Mellaart, J. (1967). *Çatal Höyük: A Neolithic town in Anatolia*. New York: McGraw-Hill, Book Company.

Modderman, P. J. R. (1970). *Linearbandkeramik aus Elsloo und Stein*. Leiden: Analecta Praehistorica Leidensia, 3.

Moïnot, P. (1987). *Anthologie du cerf*. Paris: Hatier.

Mordant, D. (1997). Le complexe des Réaudins à Balloy: Enceinte et nécropole monumentale. In C. Constantin, D. Mordant, & D. Simonin (Eds.), *La culture de Cerny. Nouvelle économie, nouvelle société au Néolithique. Actes du colloque international de Nemours, mai 1994* (pp. 449–479). Nemours: APRAIF, Mémoires du Musée de Préhistoire d’Ille de France, 6.

Müller, F. (Ed.). (1995). *Gron, Les Sablons, document final de synthèse de sauvetage urgent*. Dijon: SRA Bourgogne.
Mural, P., Bruzek, J., Houët, F., & Cunha, E. (2005). DSP: A probabilistic sex diagnosis tool using worldwide variability in hip bone measurements. Bulletin et mémoire de Société Anthropologique de Paris, no. spécial, 1.17, 3–4, 167–176.

Mykhailova, N. (2006). The cult of the deer and “Shamans” in Deer Hunting Society. Archaeloia Baltica, 7, 187–198.

Mykhailova, N. (2015). Deer offerings in the archaeology and art of prehistoric Eurasia. Expression, 10, 53–58.

Neugebauer-Maresch, C., & Lenneis, E. (2015). Das linearbandkeramische Gräberfeld von Kleinahlersdorf. Wien: Österreichische Akademie der Wissenschaften, Mitteilungen der Prähistorischen Kommission, 82.

Nießery, N. (1995). Linearbandkeramische Gräberfelder in Bayern. Espelkamp: Internationale Archäologie, 16.

Olmsted, G. S. (1994). The Gods of the Celts and the Indo-Europeans. Innsbruck: Innsbrucker Beiträge zur Kulturwissenschaft, 92.

Oross, K. (2013). Balatonszárszó-kis-Ende-Dülő Leélőhely Közsésp Ololit település szerkezete és középeurópai párhuzamai. Doktori Disszertáció. (PhD thesis). Universität Loránd Eötvös, Budapest.

Pavúk, J. (1972). Neolithisches Gräberfeld in Nitra. Slovenská Archaológia, 20(1), 5–105.

Pérotin-Charlot, M., & Pérotin, M. (1993). La chasse à courre. Ses rôles et ses enjeux. Paris: Payot.

Piette, J. (2004). 5000 ans d’histoire. Le site de la ferme de Frécul à Barbuise et à la Saulsotte (Aube), catalogue d’exposition. Nogent-sur-Marne: Musée Dubois-Boucher.

Péquart, M., & Péquart, S.-J. (1934). La nécropole mésolithique de l’île d’Hoedic (Morbihan). L’Anthropologie, XLIV, 1–20.

Péru, M., Péruart, S.-J., Bouille, M., & Vallois, H. (1937). Tèvèk, station nécropole mésolithique du Morbihan. Paris: Masson, Archives de l’Institut de Paléontologie Humaine, Mémoire 18.

Podborsky, V. (Ed.). (1999). Pravěká sociokultovní architektura na Moravě (Primeval socio-religious architecture in Moravia). Brno: Masarykova univerzita.

Podborsky, V. (2002). Děvě pohřebiště neolitického lidu s lineární keramikou ve Vědrovickách na Moravě. Brno: Masarykova univerzita.

Prestreau, M. (1992). Le site néolithique et Protohistorique des Falaises de Prépoux à Villeneuve-la-Guyard (Yonne). Gallia Préhistoire, 34, 171–207.

Price, T. D., Bentley, R. A., Lüning, J., Gronenborn, D., & Wahl, J. (2001). Prehistoric human migration in the Linearbandkeramik of Central Europe. Antiquity, 75, 593–603.

Raczyky, P. (2004). Polgár, Ferenci-hát. Régészeti Kutatások Magyarországon, 2002, 257–258.

Renaud, S., & Gouge, P. (1992). Barbey, Le Chemin de Montereau, le Buisson Rond. Carrière de la Compagnie des Sablières de la Seine. 10 millénaires d’occupations humaines: Rapport de synthèse, Document final de synthèse de sauvetage urgent. Saint-Denis: SRA Île de France.

Richter, I. (1969). Die Bandkeramischen Gräber von Flomborn, Kreis Alzey. Mainzer Zeitschrift, 63/64, 158–179.

Salanova, L. (1998). Le statut des assemblages campaniformes en contexte funéraire: La notion de “bien de prestige”. Bulletin de la Société Préhistorique Française, 95(3), 315–326.

Schmotz, K. (2001). Die altneolithische Siedlung von Otzing, Landkreis Deggendorf, Niederbayern. Das Archäologische Jahr in Bayern, 14–17.

Schmotz, K., & Weber, W. (2000). Untersuchungen in der linienbandkeramischen Siedlung von Otzing, Lkr. Deggendorf. In K. Schmotz (Ed.), Vorträge des Niederbayerischen Archäologentages, 18 (pp. 15–37). Rahden: Marie Leidorf.

Schweitzer, R., & Schweitzer, I. (1977). La nécropole danubienne de Mulhouse-Est. Bulletin du Musée Historique de Mulhouse, 8, 11–63.

Séguijer, J.-M. (1995). Un gisement archéologique de l’interfluve Seine–Yonne, du Paléolithique supérieur à l’Antiquité tardive à Morolles-sur-Seine « Le Grand Canton Sud » et le Chemin de Sens. Document final de synthèse de sauvetage urgent. Saint-Denis: SRA Île de France.

Sidéra, I. (1997). Le mobilier en matières dures animales en milieu funéraire Cerny: Symbolisme et socio-économie. In C. Constantin, D. Mardont, & D. Simonin (Eds.), La culture de Cerny. Nouvelle économie, nouvelle société au Néolithique. Actes du colloque international de Nemours, mai 1994 (pp. 499–513). Nemours: APRAIR, Mémoires du Musée de Préhistoire d’Ile de France, 6.

Sidéra, I. (2000). Animaux domestiques, bêtes sauvages et objets en matières animales du Rubané au Michelsberg: De l’économie aux symboles, des techniques à la culture. Gallia Préhistoire, 42, 107–194.

Sidéra, I. (2003). De l’usage des produits de la chasse pour différencier les hommes. Fonction votive et sociale de la chasse au Néolithique ancien et moyen du Bassin parisien. In P. Chambon & J. Leclerc (Eds.), Les pratiques funéraires néolithiques avant 3500 av. J.-C., en France et dans les régions limitrophes. Actes de la table ronde de la Société Préhistorique Française, Saint-Germain-en-Laye, Musée des Antiquités Nationales, 15–17 juin 2001 (pp. 91–98). Paris: Mémoire de la Société Préhistorique Française, 33.

Sørensen, M. L. S. (1997). Reading dress: The construction of social categories and identities in bronze age Europe. Journal of European Archaeology, 5(1), 93–114.

Sørensen, M. L. S. (2000). Gender archaeology. Cambridge: Polity Press.

Sørensen, M. L. S. (2004). The Interconnection of Age and Gender: a Bronze Age Perspective. Ethnographisch-Archäologische Zeitschrift, 45(2), 327–338.
Soudsky, B., Bayle, D., Beeching, A., Bicquar, A., Bouroux, M., Cleuziou, S., ... Ilett, M. (1982). L’habitat néolithique et chalcolitique de Cuiry-lès-Chaudardes. Les Fontinettes-Les Gravelines (1972–1977). Vallée de l’Aisne. Cinq années de fouilles protohistoriques. Senlis: Revue Archéologique de Picardie, no. spécial, pp. 57–119.

Stieber, A. (1947). Le cimetière néolithique à céramique rubanée de Quatzenheim (Bas-Rhin). Cahiers d’Archéologie et d’Histoire d’Alsace, 12, 21–30.

Stieber, A. (1955). Quatre nouvelles tombes du cimetière néolithique à céramique rubanée de Quatzenheim. Congrès préhistorique de France, compte-rendu de la XIVe session Strasbourg-Metz 1953, 594–606.

Ramminger, B. (2009). The exchange of LBK adze blades in central Europe: An example for economic investigations in archaeology. In D. Hofmann & P. Bickle (Dir.), Creating communities. New advances in Central Neolithic research (electronic ed.). Oxford: Oxbow Books.

Tappret, E., Gé, T., & Vallois, V. (1988). Sauvetage d’Orconce « Les Noues » (Marne), Néolithique et Protohistoire, note préliminaire. Bulletin de la Société Archéologique du Centre, 81(2), 3–29.

Tegel, W., Elbur, R., Hakelber, D., Stäuble, H., & Büntgen, U. (2012). Early Neolithic water wells reveal the world’s oldest wood architecture. PloS One, 7(12). doi: 10.1371/journal.pone.0051374.

Tescher-Nicola, M. (2012). The Early Neolithic site Asparn/Schletz (Lower Austria): Anthropological evidence of interpersonal violence. In R. Schulting & L. Fibiger (Eds.), Sticks, stones, and broken bones: Neolithic violence in a European perspective (pp. 101–120). Oxford: Oxford University Press.

Testart, A. (2004). Deux politiques funéraires. Dépôt ou distribution. In L. Baray (Ed.), Archéologie des pratiques funéraires. Approches critiques. Actes de la table ronde de Glux-en-Glenne, juin 2001 (pp. 303–316). Glux-en-Glenne: Bibracte 9.

Thevenet, C. (2010). Des faits aux gestes. Des gestes aux sens? Pratiques funéraires et société durant le Néolithique ancien en Bassin parisien. (PhD thesis). Paris: Université de Paris I-Panthéon Sorbonne.

Thevenet, C. (2016). Quelques hypothèses quant à l’usage des matières colorantes rouges dans les sépultures du Néolithique ancien du Bassin parisien. In C. Billard, D. Bosquet, R. Dreesen, E. Goemaere, C. Hamon, I. Jadin, ... X. Savary (Eds.), Autour de l’hésitation. Approfondissement et transformation durant la Préhistoire récente (pp. 187–199). Bruxelles: Anthropologica et Praehistorica, 126.

Thomas, L.-V. (1976). Anthropologie de la mort. Paris: Payot.

Tresset, A. (1993). Le rôle de la chasse dans la néolithisation de l’Europe tempérée: L’exemple de la vallée de la petite Seine. In J. Desse & F. Audoin-Rouzeau (Eds.), Exploitation des animaux sauvages à travers le temps. Actes des XIIIe rencontres internationales d’archéologie et d’histoire d’Antibes, IVe colloque international de l’Homme et l’Animal, Juan-les-Pins, octobre 1992 (pp. 247–258). Juan-les-Pins: APDCA ed.

Tresset, A., & Vigne, J.-D. (2001). La chasse, principal élément structurant la diversité des faunes archéologiques du Néolithique ancien, en Europe tempérée et en Méditerranée: Tentative d’interprétation fonctionnelle. In R.-M. Arbogast, C. Jeunesse, & J. Schibler (Eds.), Rôle et statut de la chasse dans le Néolithique ancien danubien (5500–4900 av. J.-C.), Actes des Premières rencontres danubiennes (pp. 129–151). Rahden: Marie Leidorf, Internationale Archäologie, Arbeitsgemeinschaft, Symposium, Tagung, Kongress.

Vigne, J.-D. (1993). Domestication ou appropriation pour la chasse: Histoire d’un choix socio-culturel depuis le Néolithique. L’exemple des cerfs (Cervus). In J. Desse & F. Audoin-Rouzeau (Eds.), Exploitation des animaux sauvages à travers le temps. Actes des XIIIe rencontres internationales d’archéologie et d’histoire d’Antibes, IVe colloque international de l’Homme et l’Animal, Juan-les-Pins, octobre 1992 (pp. 201–220). Juan-les-Pins: APDCA ed.

Villotte, S., & Knüsel, C. (2016). “I sing of arms and of a man.”: Medial epicondylody and the sexual division of labour in prehistoric Europe. Journal of Archaeological Science, 43, 168–174.

Ulrich, H. (1993). Le cimetière néolithique à céramique rubanée de Hoenheim-Souffleweyersheim: Bilan d’ensemble avec les nouvelles sépultures. Cahiers d’Archéologie et d’Histoire d’Alsace, 133, 21–36.

Wahl, J., & König, H. G. (1987). Anthropologisch-traumatologische Untersuchung des menschlichen Skelettrestes aus dem bandkeramischen Massengrab bei Talheim, Kr. Heilbronn. Fundberichte Baden-Württemberg, 12, 65–186.

Wahl, J., & Strien, H.-C. (2007). Tatort Talheim. 7000 Jahre später. Heilbronn: Archäologen und Gerichtsmediziner ermitteln, Katalog zur Ausstellung Archäologie-Museum 2007–2008.

Whitehouse, R. (2001). Exploring gender in Prehistoric Italy. Papers of the British School at Rome, 69, 49–96.

Wind, H. J. (1994a). 10 Jahre Grabung Schletz, VB. Mistelbach, Niederösterreich. Archäologie Österreichs, 5, 11–18.

Zeeb-Lanz, A. (Ed.). (2016). Ritualised destruction in the Early Neolithic: The Exceptional Site of Henxheim (Palatinate, Germany). Speyer: Forschungen zur Pfälzischen Archäologie, 8, 1.

Zoffmann, Z. K. (2012). Anthropological analysis of the burials from the LBK settlement at Balatonszárszó-Kis-erdéi-dülő. Acta Archaeologica Academiae Scientiarum Hungaricae, 63, 301–316.

Zvelebil, M., & Pettitt, P. (2008). Human condition, life and death at an Early Neolithic Settlement: Bioarchaeological analyses of the Vedrovice cemetery and their biosocial implications for the Spread of Agriculture in Central Europe. Anthropologie, 46(2–3), 195–218.