

The 13th century: A major economic turning point for craftspeople working with hard animal materials in Western France

Le XIII^e siècle, un tournant économique majeur pour les artisans des matières dures animales dans l'ouest de la France

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Abstract: The craftsmanship of hard animal materials remains, in medieval France, an underexplored and often overlooked subject, despite recent progress in regional studies. These advancements have facilitated the investigation of some historical and economic aspects of this craft, including the question of whether craftspeople were itinerant or sedentary. Indeed, the question of their social status remains complex, owing to the sporadic distribution of archaeological data, the fragmented nature of historical sources, and the dynamic evolution of their status over time. Focusing on elite residences, a significant shift appears to occur in the 13th century. Prior to this period, craftspeople engaged in processing hard animal materials—i.e. bone, antler, horn, cetacean bone, ivory, etc.—seemed to operate in a relatively sedentary manner within these loci of power. However, from the 13th century onwards, these artisans increasingly vanished from castle sites, which evolved into primarily consumption-focused spaces, rarely displaying evidence of manufacturing. This shift challenges the hypothesis of itinerant craftspeople and further complicates the notion of their sedentary presence within elite domains. Instead, the disappearance of workshops from such locations appears to correspond to the rise of towns, which were experiencing the transformative forces of a commercial revolution in Western Europe. Amidst this urban revival, cities emerged as attractive and economically viable, powerful hubs which offered protection under the aegis of burgeoning bourgeois elites. These new urban centres generated significant demand for artisanal production, thereby drawing craftspeople away from castle sites and integrating them into these thriving urban economies.

Keywords: Osseous material, craft, workshop, social status, Middle Ages, economy, castle sites, itinerancy.

Résumé : L'artisanat des matières dures d'origine animale demeure un témoin clé de certains phénomènes touchant la société, et occupe une place centrale dans l'économie médiévale. Pourtant, ces divers métiers restent peu étudiés ou généralement négligés, tout du moins en France et pour le Moyen Âge. Malgré une historiographie européenne maintenant plutôt ancienne, ce n'est que très récemment qu'une exploration des aspects historiques et économiques a pu être menée en France. Parmi les sujets traités, la question du statut social de l'artisan captive et intéresse la communauté scientifique. L'artisan est-il itinérant, sédentaire, ou possède-t-il un statut mixte ? La problématique est complexe, car les données sont éparpillées, les sources sont fragmentaires, et la situation de l'artisan semble changer avec le temps. En effet, en considérant le point de vue des résidences élitaires dans l'ouest de la France, il semblerait qu'une transition se déroule aux alentours du XIII^e siècle. Avant cette date, l'artisan apparaît comme étant présent dans les lieux de pouvoir. Plusieurs indices de travail sont connus sur quelques sites singuliers, à l'instar d'Andone (Charente) ou de Mayenne (Mayenne). De plus, au sein de ces occupations castrales, les indices tendent vers une spécialisation artisanale sur le bois de cervidé, probablement en raison de la proximité environnementale entre ces sites et les lieux de chasse. La situation change avec le XIII^e siècle. Il existe toujours des exceptions présentant de rares indices de travail entre la fin du XII^e siècle et le début du XIV^e siècle, caractérisant ainsi cette phase de transition. Cependant, ces observations ne cadrent plus avec l'hypothèse d'un artisan itinérant, et encore moins avec celle d'un artisan

sédentaire. La relative rareté des déchets de travail peut cependant résulter d'un autre artisan, peut-être sédentaire, mais surtout travaillant plusieurs matériaux en même temps. Il semblerait donc que les artisans des matières osseuses et kératineuses disparaissent des sites élitaires, et ceux-ci deviennent dès lors des espaces dédiés à la consommation. Ces changements historiques observés chez les artisans correspondent à un épisode socio-économique majeur se mettant en place à cette période. Une révolution commerciale est en marche en Europe occidentale, les villes se développent de manière exponentielle, et une économie de marché s'instaure. Les espaces urbains deviennent alors de forts pôles d'attractions puissants, protecteurs et économiquement viables. En leurs sein, de nouvelles formes d'élites fleurissent, et la bourgeoisie se constitue. Cette nouvelle caste est à l'origine de nouvelles demandes, et attirent les artisans dans les villes. Les quelques ateliers connus dans les espaces castraux avant le ^{xiii}^e siècle disparaissent au profit des centres urbains. Archéologiquement et historiquement, ces observations se vérifient. D'une part, des espaces de travail sont connus dans plusieurs villes, en France comme en Europe. D'autre part, les sources historiques traduisent une activité artisanale intense à partir du ^{xiii}^e siècle, et jusqu'au ^{xviii}^e siècle dans certains espaces. Si tel est effectivement le cas, les artisans des matières dures d'origine animale sont sédentaires, mais urbains. Ce sont alors les marchands, les merciers et les élites qui sont à l'origine des déplacements de productions et des changements de modes, lors de leurs itinérances. Dans cette dichotomie entre espace castral et ville, dont les limites désormais plus nettes, une problématique demeure. Qu'en est-il de l'espace rural ? Malheureusement, ce milieu social à l'époque médiévale est encore mal connu en France. Il est donc tout à fait possible que des artisans aient pu s'y installer avant le ^{xiii}^e siècle et que les ateliers aient pu y perdurer jusqu'aux derniers siècles du Moyen Âge. De rares indices penchent vers cette hypothèse, notamment à Rougiers, mais aucune certitude n'est permise en l'état actuel des connaissances. Cas exceptionnel ou témoignage d'un déplacement artisanal ? Seule de nouvelles données archéologiques permettront de répondre à cette nouvelle question.

Mots-clés : matière osseuse, artisanat, atelier, statut social, Moyen Âge, économie, site castral, itinérance.

INTRODUCTION

Craftspeople working with hard animal tissues, and their guild organisations all bear witness to broader societal transformations during the second half of the Middle Ages. These materials therefore occupy a pivotal role in the medieval economy, despite their relative scarcity in the archaeological record. On the one hand, these materials are evidence of the wide variety and the complexity of trade routes, spanning short, medium, and long distances. Resources such as bone, ivory, horn, antler, and cetacean bone were sourced from diverse locations, offering insights into both land and maritime trade networks. On the other hand, they highlight the necessity of adopting a comprehensive perspective on medieval labour and its multifaceted characteristics.

Despite these assertions, the craft of bone, antler, ivory or horn remains, in France during the Middle Ages, is a too often neglected subject. While there are noteworthy analyses of specific objects, functions, and production techniques, these studies often lack depth and fail to provide an overarching synthesis (Goret, 1997; Chandevau, 2002; Rijkkelijkhuizen, 2008; Grandet and Goret, 2012).

This lack of data can be attributed to several factors, chief among them the paucity of artefacts recovered from archaeological sites. This scarcity has hindered the development of precise typochronologies and diminished interest among archaeologists conducting excavations. Compounding this issue, non-specialists with limited training are often consulted, overlooking the intricacies of these crafts. Such practices have led to a certain rejection of the interest in the study of these trades in medieval France, contributing to a shortage of specialists.

However, this situation is gradually changing, and an increasing number of scholars and students are turning their attention to these substitute crafts (Chazottes, 2017;

Sarmiento Pedro, 2023). These more in-depth investigations allow for a deeper understanding of the distinctive features of hard animal materials craftsmanship, particularly regarding whether medieval craftspeople were itinerant or sedentary, especially in the context of fortified settlements. Since the 1970s, and the hypothesis put forward by Z. Kurnatowska, this question has remained central to medieval archaeology (Kurnatowska, 1977; Ulbricht, 1978; Ashby, 2006). Based on a collection of medieval combs of similar types discovered in Poland, the author sought to highlight the trade network between princely sites. By doing so, she suggested the itinerant nature of this type of craft activity. Determining the social status of artisans, whether they were itinerant or sedentary, remains a difficult task, as data is scattered, sources are fragmentary, and there were changes in the way such artisans operated over time. Addressing this question is the main aim of this article, with the hope that the conclusions presented here will trigger further debate and exploration of these trades in the medieval period (see also Chaoui-Derieux and Goret, 2018).

1. ARCHAEOLOGICAL BIAS OR ABSENCE OF CRAFTSPEOPLE?

Before delving into the specifics of this craft in western France, it is essential to address the archaeological bias that may account for the absence of such finds at sites. Archaeology makes it possible to observe and interpret the manufacturing and consumption behaviours at various settlements based on a limited excavation window (Bourgeois, 2014, pp. 151–152). However, few excavations are extensive and exhaustive, inevitably leading to sampling bias and to the relative dearth of complete site monographs. Furthermore, numerous archaeological

areas and sites remain unexplored, further compounding this issue. While it is reasonable to consider archaeological limitations as a contributing factor, an alternative interpretation emerges when broader statistical and probabilistic approaches are applied.

The Occam's razor, a principle that favours simplicity in competing hypotheses, provides a useful framework for this discussion. It posits that the simplest explanation is almost always the best one, until disproven, when multiple theories are raised to explain a phenomenon. This principle, often summarised as "the simplest solution is almost always the best", offers an intriguing perspective on the apparent absence of artisans working with hard osseous materials at these settlements.

In this case, by taking the number of remains on a site as a random variable, two equivalent explanations arise (fig. 1). Either the scarcity of finds is due to an archaeological bias, or it genuinely reflects an absence of craftspeople. For a single archaeological site, both hypotheses have a 50% chance of being correct, given that there are only two valid hypotheses. However, as the dataset expands to include a larger corpus, comprising approximately a dozen sites, the probability increasingly favours the absence over the bias. This trend becomes even more pronounced with larger sample sizes, suggesting that the absence of artisans is a more consistent and likely explanation than mere archaeological bias. The maximum number proposed corresponds to the total number of sites considered in the corpus. The intermediate figures

are only there to provide a visual representation of this decline, which is inversely proportional to the number of sites. The proportions observed are therefore based on the number of sites and the number of work indices per site considered.

2. THE CASE OF ELITE SITE

As part of this study, 188 castral sites in western France, where archaeological excavation has been carried out, were analysed (fig. 2a). Artefacts from this type of craft were recovered from less than a third of them, 56 to be precise. Among them only two sites, Andone and Mayenne, preserved significant amounts of work evidence (fig. 2b). Most sites rarely contained more than ten objects. This pattern strongly suggests that craftspeople specializing in working these materials were largely absent rather than solely attributing this scarcity to archaeological bias. While alternative explanations may also be plausible, none currently provides a better understanding to explain the lack of this kind of artefacts at these sites.

These shortcomings also point to a transformation in the role of elite sites as centres of regional attraction, with a marked change occurring between the pre-13th century period and the subsequent centuries. Although a detailed definition of "elites" is outside the scope of this discus-

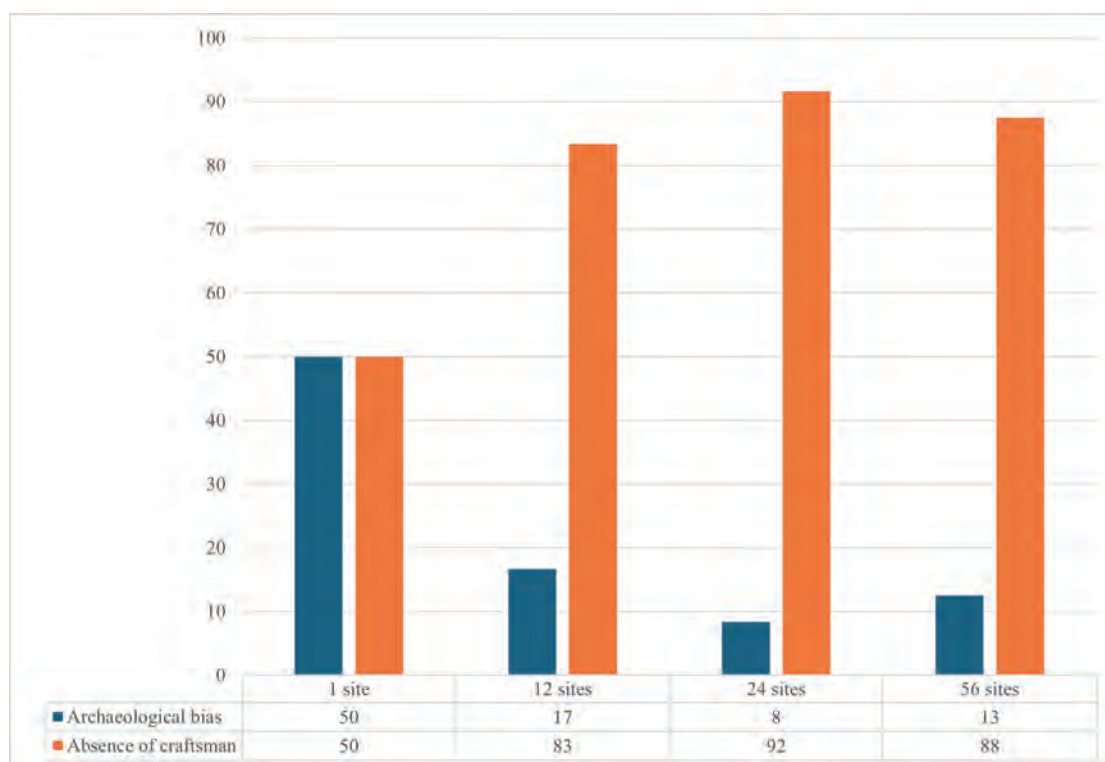


Fig. 1 – Simulation of the hypotheses proposed for all the sites in the thesis' corpus, assuming that a number of working evidence lesser than 5 means the absence of craftsman.

Fig. 1 – *Simulation des hypothèses proposées sur l'ensemble des sites du corpus, en considérant qu'un nombre d'indices de travail inférieur à 5 signifie l'absence d'artisan sur le site.*

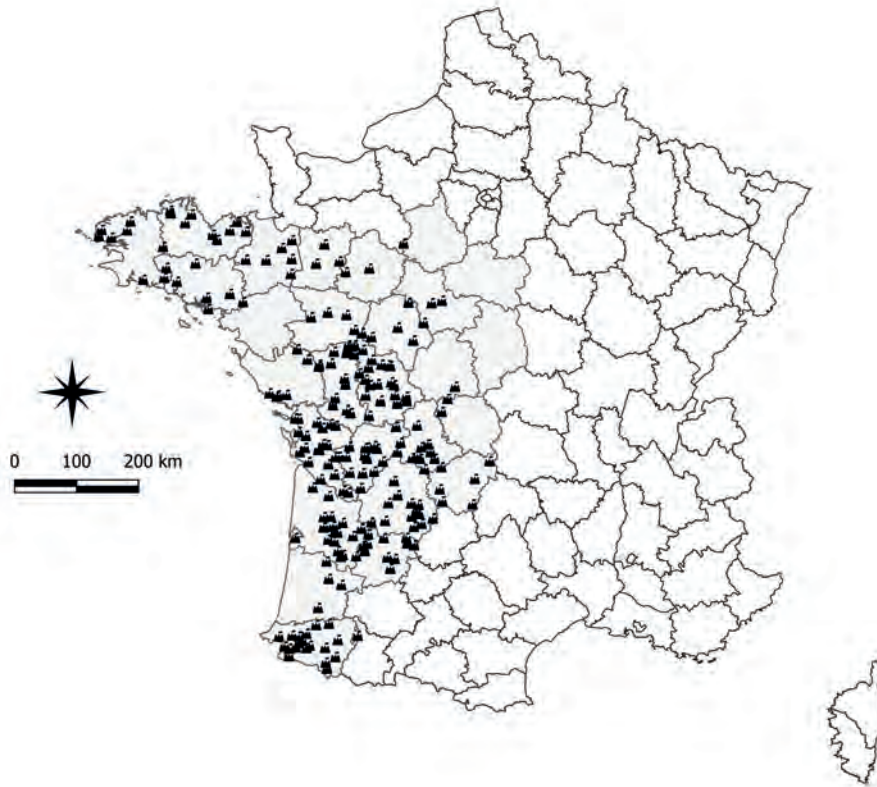


Fig. 2a – Distribution of elite sites in western France where an archaeological work had been carried out.

Fig. 2a – Carte de répartition des sites élitaires de l'ouest de la France, dans lesquels une opération archéologique a été menée.

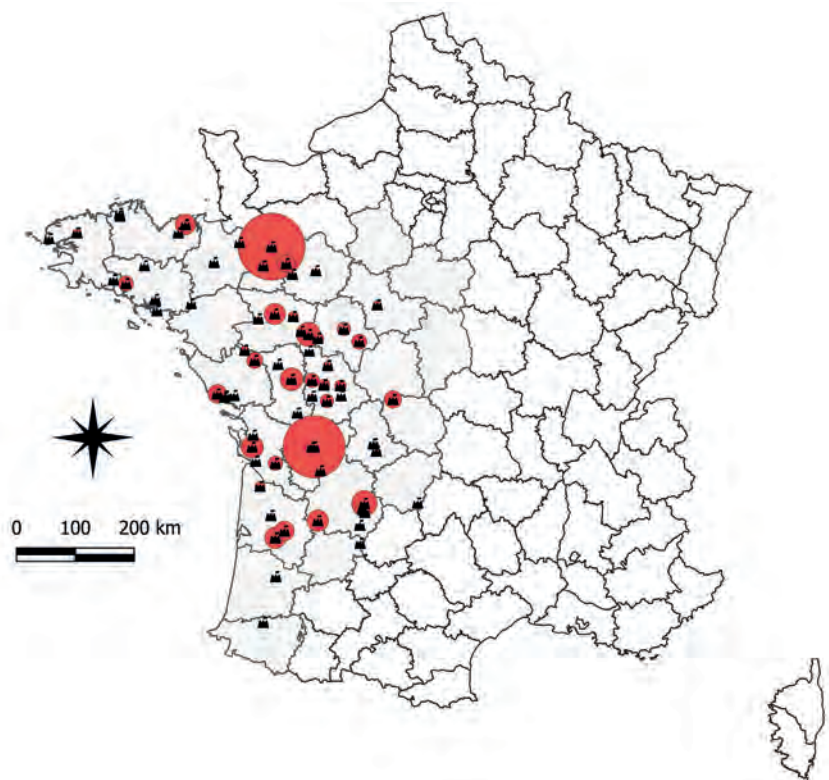


Fig. 2b – Distribution of elite sites in western France where osseous artefacts have been discovered, with their density.

Fig. 2b – Carte de répartition des sites élitaires de l'ouest de la France ayant permis la découverte d'artéfacts médiévaux en matières dures animales, avec leur concentration.

sion, the subject has been extensively examined by other scholars (Crouzet Pavan, 1997; Marcus, 1983; Braunstein, 1997; Farazmand, 1999; Wason, 2009).

2.1. Before the 13th century

Over the extended High Middle Ages, between the 10th and the 13th centuries, evidence points to the presence of sedentary craft industry at those particular sites. A few examples illustrate this pattern. The *castrum* of Andone (Charente), occupied briefly between the late 10th century and the beginning of the following century, fits well within this trend. Excavations revealed a remarkable number of artefacts, made from antler and bone, including 88 blanks and element of waste, indicating that for a relatively short period of time, a crafts person clearly operated there (Bourgeois, 2009).

The same conclusion can be applied to Mayenne castle (Mayenne), partially excavated in the late 20th century by the Oxford Archaeological Unit. Although the full archaeological data remains unpublished, several artefacts have already been showcased in an exhibition catalogue focusing on games (Grandet and Goret, 2012). Numerous bone and antler remains, including dozens of pieces of manufacturing wastes and blanks, were uncovered in an area of backfill within the castle (fig. 3). Although there is no precise location for the workshop and its timeline is not clear, these remains bear witness to an on-site workshop operating between the late 10th and the 12th centuries. The pieces of waste material cover all stages of production, from raw antler extraction to finished products.

Similar remarks can be observed at other elite sites outside of this study area, such as the castral mounds of La Roca in Niozelles and Notre-Dame in Allemagne-en-Provence in south-eastern France. At the latter site, roughly 100 pieces of manufacturing waste testify to the presence of on-site craftspeople operating there between the late 11th and 12th centuries (Chazottes, 2016 and 2017, vol. 1, pp. 172–173). Additionally, excavations at sites such as Boves (Somme) and Château-Thierry (Aisne) yielded artefacts indicative of workshop activity, though their smaller assemblages sizes do not indicate the itinerant or sedentary nature of these crafts persons (Goret, 1997; Chandevau, 2002).

In these periods of occupation, the craftspeople likely operated in specific area, utilizing primarily local or regional resources. Studies from aristocratic contexts in western France—such as Andone, Mayenne, and Château-Thierry—highlight a clear preference for antler. Bone seems to be used in smaller proportions than antler. Comparative studies between western, only aristocratic sites, and south-eastern France, including cities, countryside locations and castle sites, also suggests this preference for antler at elite sites (Chazottes, 2017, vol. 1, p. 94; Sarmento Pedro, 2023, vol. 1, p. 235). As a matter of fact, in south-eastern France, antler accounted for only around 10% of objects analysed, whereas in western France, it is close to 50% of the worked hard osseous material objects (fig. 4). Certain raw materials are therefore preferred and selected, and it likely reflects the availability of resources near the sites. In the case of antler, it is chosen for its mechanical properties and as a cheaper substitute for ivory.



Fig. 3 – Sawn and cut basal part of an antler (1), antler point showing traces of cutting (2), undetermined object (3), game piece blank (4), part of a knife handle, antler, Mayenne castle, 10th–12th century (photo H. Sarmento Pedro).

Fig. 3 – Partie basilaire sciée et découpée d'un bois de cerf (1), pointe de cerf présentant des traces de découpe (2), objet indéterminé (3), ébauche d'un pion de jeu (4), semelle de manche, bois de cervidé, château de Mayenne, Xe-XIIe siècles (cliché H. Sarmento Pedro).

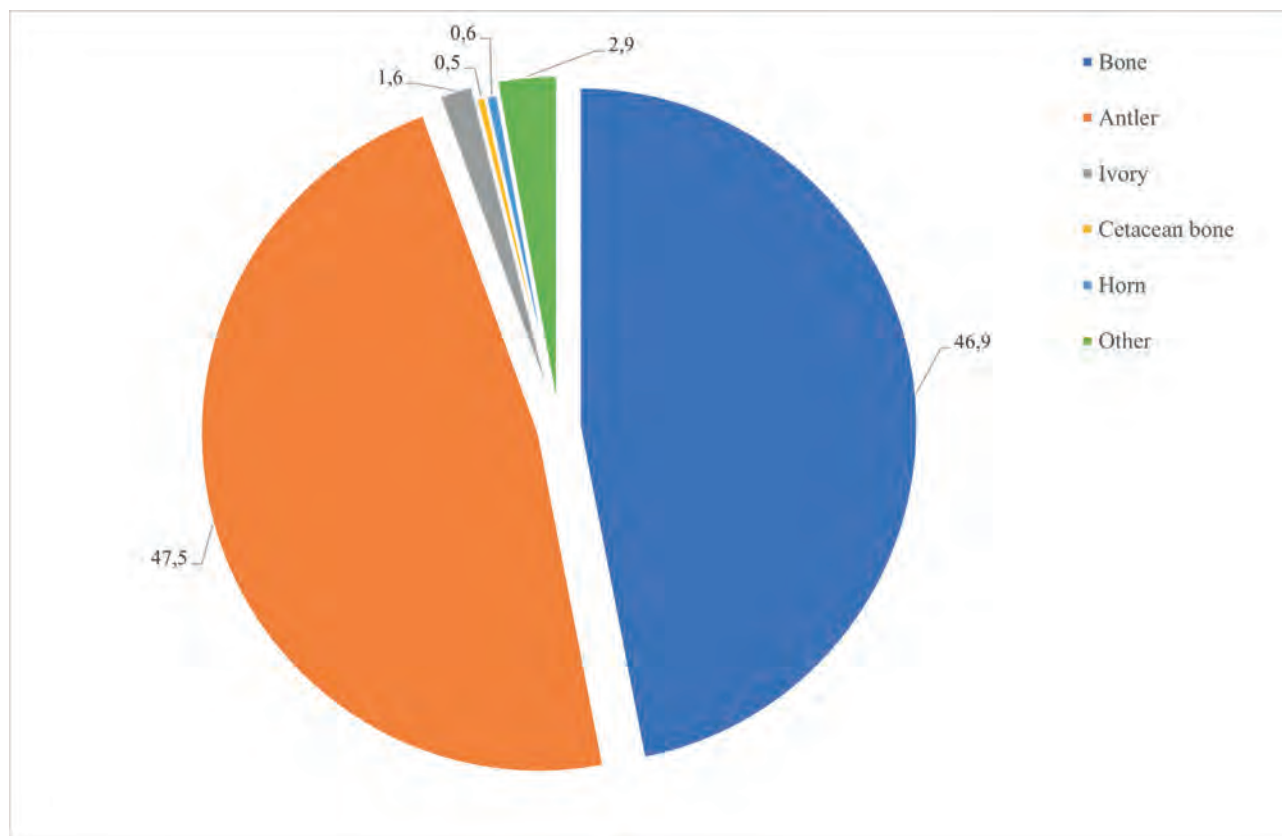


Fig. 4 – Summary of materials used in elite sites in Western France.

Fig. 4 – Récapitulatif des matériaux utilisés sur les sites élitaires de l'ouest de la France.

2.2. After the 13th century

From the 13th century onward, castles gradually shifted from production sites to consumption places, relying on towns to supply finished goods. While artefacts were found on these sites, evidence of crafting workmanship became rare, and no workshops could be clearly identified in any of the excavated sectors. A few exceptions, representing transitional examples, existed between the late 12th and early 14th centuries, but none of these sites contained more than a dozen or so objects evidencing manufacturing activities. Seven pieces of waste dated to the 12th-13th centuries were found at Talmont-Saint-Hilaire (Vendée), while excavations yielded three items linked to craft activity in hard osseous materials from around the 13th century at Chiré-en-Montreuil (Vienne). As it stands now, the relative lack finds of waste materials suggest that there had been no on-site craftspeople at any of these sites.

As far as itinerancy goes, the assumption that absent craftspeople were necessarily nomadic is problematic. This binary view of medieval craftsmanship—sedentary versus itinerant—is not appropriate for these areas and fails to account for the sparse nature of archaeological evidence. The amount of work waste elements remains too low to estimate the presence of a manufacturer, even a wandering one. The scarcity of manufacturing evidence might be explained, as some authors have suggested in

the late 20th century, by the occasional crafting work carried out by soldiers in garrisons to alleviate boredom (Schnitzler et al., 1990, p. 190; Clavel, 1993, p. 87). Leisure activities are not only of contemporary relevance and, as L. Turcot notes, have an “almost instinctive universality of pleasure and exercise” (Turcot, 2016, p. 22). In this situation, the creation of objects by non-artisans may explain the small number of remains. However, even if this hypothesis is simple and attractive, attributing these artefacts to casual hobbies risks oversimplifying the complexity of such craftsmanship during the late Middle Ages. In addition, applying modern attitudes to past standards are not only complicated, but also risky.

Alternatively, the absence of waste could be consistent with the presence of multi-skilled and sedentary artisans, who worked with various materials simultaneously (Kurnatowska, 1977, pp. 121–125; Ambrosiani, 1981, pp. 38–40; Lauwerier and Van Heeringen, 1995, pp. 88–89; Bourgeois, 2014, p. 167). This pattern aligns with findings from Anglo-Saxon England, where craftspeople were sedentary in urban centres, but practiced seasonal antler work alongside other trades (Riddler and Trzaska-Nartowski, 2011, pp. 130–131).

This short transitional period also coincides with significant socio-economic changes that may explain this shift in the medieval artisanal landscape. Urban centres grew exponentially, taking on increasing importance across the realms. This growth was due to a commercial

revolution that swept through Western Europe around the 13th century. In Western France, this upheaval could also have been related to other historical factors. Several episodes affected medieval populations in this part of the world. Indeed, the Plantagenet-Capetian conflict might have exacerbated the rural-to-urban migration. Rural communities were increasingly at risk from skirmishes, and possible episodes of famine and epidemics, triggering a form of rural desertion, leading to the cities (Menjot, 2007). Whatever the reasons for this revival of the urban world, towns became protected and economically viable hubs, attracting rural population.

Likely, specialised craftspeople, supposedly present in the castles until the 13th century tended to favour of urban settings. As A. Font and T. O'Connor noted during the symposium, this would also seem to be the case in York during this era, and in Budapest during the 15th century. In France, L. Bourgeois has already posited that this urban migration affected various crafts, although not including the craft of hard animal materials (Bourgeois, 2014, pp. 181–182). The image provided by the archaeological evidence suggests a virtually identical process, this craft following a parallel trajectory and urban centres supplanting castles as production hubs.

3. URBAN CRAFTSMANSHIP AND THE ROLE OF GUILDS

Archaeological evidence shows that from the 13th century onwards, workshops and craftspeople working with hard animal materials, primarily bone, started to be concentrated in various European cities. In France, such crafts featuring hard osseous materials were prominent in cities like Paris, Strasbourg, and Saint-Denis (Meyer and Wyss, 1985; Maire, 2001; Baker, 2023). Similar patterns emerged in Köln, York, and Dublin, and later in Bordeaux and Amsterdam (MacGregor et al., 1999, p. 1943; Laflaquière, 1993; Rijkelijhuizen, 2017). Notably, in Avignon, there are nearly 300 examples of activities involving the manufacturing of hard osseous materials in urban contexts between the 13th and 15th centuries (Chazottes, 2017, vol. 1, pp. 172–173).

Moreover, it is remarkable that this urban shift also aligns with written evidence. Before the 13th century, there is no mention of these craftspeople in western France in the documents examined. In contrast, from the 13th century onward, increasing documentation is available. Craftspeople are mentioned in texts linked to the rise of urban guilds throughout France. These mentions surely contain a historical bias, but it is worth pointing out. The most remarkable example is É. Boileau's *Livre des métiers*, which records Parisian guilds in the 13th century (Lespinasse and Bonnardot, 2005). Guilds also proliferated in Aix-en-Provence, Saint-Omer, Dijon, Brittany and in Castille during the late Middle Ages (Piponnier, 1988, pp. 158–159; Coulet, 1994, pp. 56–63; Derville, 1994, p. 99; Leguay, 1994, pp. 157–158; Menjot, 1994, p. 209).

By the 17th and 18th centuries, these artisans were present in several of Bordeaux guilds (Laflaquière, 1993). In those towns, they were organized in guilds, and specialised in producing items such as dice, combs, lanterns and chests.

This urbanisation of craft production involving hard osseous materials also coincided with the rise of bourgeois elites, who stimulated the development of urban markets, and fostered a burgeoning demand for goods inside the cities. A market economy developed, significantly reducing the craftspeople itinerancy. These artisans no longer moved around, or only very rarely. Instead, merchants and retailers, as well as elites, took on the role of traveling, disseminating production techniques and tools throughout the region, and even around Europe.

For instance, in 15th century Blois, retailers sold knives, rosaries, combs, and lanterns, many that could be crafted in bone, ivory, horn or antler (Bourgeois, 1892, pp. 162–163). By 1544, they were associated in a guild with chest-makers, cutlers, combmakers, and tabletiers. Records from other parts of France similarly attest to these conclusions. Sources from Marseille and Lyon show that between 1476 and 1478, retailers supplied ivory combs to René d'Anjou, underscoring the role of merchants over specialised craftspeople in urban trade (Arnaud d'Agnel, 1910, pp. 340–353).

CONCLUSION

All these elements suggest that the social and professional status of craftspeople working with hard animal materials underwent significant transformations from the 13th century onward. Before this period, the presence of production waste, even in small quantities, indicates with certainty the presence of craftspeople, possibly itinerant, creating objects from the hard animal materials in settlements. However, there is increasing archaeological examples of these types of workshops becoming sedentary.

The changing economic and military conditions during the 13th century catalysed a significant shift in these artisanal activities. These societal transformations seem to have resulted in the relocation of craftspeople into urban areas, where safety and improved working conditions could be more accessible. This exodus from the countryside could be seen as the backdrop to the evidence from numerous sites in south-eastern and western France. However, some finds suggests that some artisans may have been relocated to rural settings. For instance, at the *castrum* of Saint-Jean in Rougiers, over 80 features, mostly related to working antlers, were discovered in the settlement, while the associated castle displayed no such evidence (Chazottes, 2017, vol. 1, p. 170). This suggests that isolated or rural workshops could still have persisted in later medieval periods, albeit less commonly.

Unfortunately, these archaeological areas are still understudied, despite the growing interest in these occu-

pations in recent years in France. Limited archaeological exploration in these territories hinder a comprehensive understanding of rural crafting of hard osseous materials during this period. Future research could help further our understanding of the balance between urban and rural practices and offer deeper insights into the evolving roles of these craftspeople working in bone, antler, ivory and horn.

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