News from the West: a reevaluation of the classical Aurignacian sequence of the Périgord

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ABSTRACT The sequences from four sites in northern Aquitaine — Caminade-Est, Roc-de-Combe, Le Piage and Corbiac-Vignoble II — were reevaluated under a two-step approach: first, the integrity of each assemblage was assessed through taphonomic analysis and, second, the assemblages or parts thereof thus validated were the object of a technological analysis. Results are that 1) the classical regional sequence is globally confirmed and refined, and 2) at Le Piage, the Early Aurignacian is preceded by an industry thus far unknown in northern Aquitaine. This Aurignacian in turn features two clearly differentiated, successive episodes: in an early phase, corresponding to the classical Early Aurignacian or Aurignacian I, “Aurignacian retouch” is common and bladelet cores are of the “carinated scraper” type, with a wide front, and produce straight or curved blanks; in a recent phase, corresponding to the Aurignacian II-IV, bladelet cores are of the “nosed scraper” or “busked burin” types, and mostly produce small, twisted blanks. Both phases share several technological features: 1) blade debitage is unipolar and has the purpose of producing large, thick blanks retouched into a diverse range of tools; and 2) blades and bladelets are obtained through separate procedures. The industry preceding the Early Aurignacian at Le Piage is characterized by continuity in the production of blades and bladelets, the latter being straight and rather long; its features evoke both the Archaic Aurignacian of Mediterranean regions and the Châtelperronian. These results force a reconsideration of the “Aquitaine model” of the Middle-to-Upper Paleolithic transition.

Introduction

The model according to which the Aurignacian marks the colonization of Eurasia by anatomically modern humans is currently favored by some scholars (e.g. Kozlowski and Otte, 2000), while in the opinion of others (e.g., Bar-Yosef, 2000, 2002) that colonization was done by bearers of earlier Initial Upper Paleolithic cultures. In this context, the term “Aurignacian” is systematically used whenever there is reason to believe that a given assemblage corresponds to the earliest Upper Paleolithic industry attributable to anatomically modern humans. This tendency to adapt the archeological facts to the dominant model must be countered by an effort to be more precise when characterizing the empirical data. Only by doing so, for instance through better descriptions of the industries from this period, will we be able to discuss the actual reality of that famous “break” so often diagnosed when the Aurignacian is compared with the technocomplexes of the transition, leading to such statements as that the Aurignacian is everywhere intrusive (Mellars, 1996). By the same token, only by finer analyses of existing collections will we be able to assess the identity of the Aurignacian technocomplex at the scale of its total extension.

To approach these questions, we need reliable regional sequences, and such is the scope of this paper, which offers a reevaluation of the Aurignacian sequence of northern Aquitaine,
TOWARDS A DEFINITION OF THE AURIGNACIAN

based on lithic analysis. The goal is that of testing the “Aquitaine model” (e.g. Harrold and Otte, 2001), taken here as a fully representative manifestation of the notion that Neandertal populations were replaced by a population of anatomically modern humans. The choice of this region is justified also by its historical role in the definition of the Aurignacian. Moreover, a large number of multistratified sites allow the definition of detailed archeostratigraphic sequences and of a framework of relative chronology that has better temporal resolution than available radiocarbon dates. The nature of this empirical data base also makes it possible to successfully apply refitting studies to issues of stratigraphy (Tixier, 1978; Villa, 1982; Bordes, 2000), and allows for fine comparisons between the different archeological assemblages. The four sequences studied (Fig. 1) feature such a level of coherence as to make it possible to present them in synthetic fashion as chronocultural phases; a higher level of detail has been provided elsewhere (Bordes, 2000, 2002, 2003, 2006; Bordes and Lenoble, 2002).

Historical framework and studied corpus

A brief history

Once it was differentiated from the industries nowadays designated as Châtelperronian (previously lower Aurignacian), and Gravettian (previously upper Aurignacian), the Aurignacian was structured in four phases, on the basis of its bone tools (Peyrony, 1933, 1934, 1946). This chronological seriation was confirmed by the typological analysis of lithic assemblages (Sonneville-Bordes, 1960) and is still a reference today.

However, as a result of new excavations (Delporte, 1964, 1984), or of the application of new analytical techniques (Djindjian, 1986, 1993; Demars, 1992, 1998), this scheme grew in complexity. Rigaud (1982, 1993) also argued that site function explained the differences more than chronology, but the other authors retained time as the key factor underlying the observed variability.
The formulation of these different alternatives to the classical model led to an abandonment of the terminology. Today, for instance, most researchers use “Early” or “Recent” Aurignacian instead of Aurignacian “I” or “III”. However, the underlying model remains that of Sonneville-Bordes, especially where the earliest manifestations of the Aurignacian are concerned: “Given the large number of sites occupied by this civilization since its very earliest moments, and the rich material those sites yielded, it would seem as though, by the beginning of the third stadial of the last glaciation, powerful, organized tribes took possession of the shelters, bringing with them techniques, rites and perhaps artistic fashions, the whole forming a rather elaborated civilization” (Sonneville-Bordes, 1960, p. 150). Although conceived in a different framework, this view is in good agreement with the replacement model.

To sum up, we stress that the Aurignacian sequence of northern Aquitaine is characterized by a rich and relatively old corpus. Although it has undergone various reconstructions, this corpus nowadays serves as the basis for a single model which, in particular, postulates that the Aurignacian is intrusive in the region and that its earliest manifestation is the Early Aurignacian, “I”, with split-based sagaie points.

Sites and assemblages analyzed

At all sites — except for Corbiac-Vignoble II, a lithic workshop — each assemblage contains several hundred tools. Only a qualitative description of the industrial features of these industries will be given here, but quantitative data are either published (Bordes, 1998, 2000, 2002, 2003, 2006; Bordes et al., 2005).

1) Caminade-Est

Caminade-Est is a rockshelter excavated between 1953 and 1966 by D. de Sonneville-Bordes, who recognized four Aurignacian levels. At the base, G and F were assigned to the Aurignacian “I” (a split-based point was found in F). Above, D2inf and D2sup were assigned to the Aurignacian “II” (Sonneville-Bordes, 1970). The contents of layer G were qualified as Aurignacian “0” (Delporte, 1964; Djindjian, 1993), on the basis of the presence of an “archaic” component (sidescrapers, denticulates) in the tool assemblage.

Taphonomic analysis (Bordes, 2000) indicates that this “archaic” component results from mixing with the underlying Mousterian levels. Systematic refitting across the Aurignacian sequence has shown that only two independent clusters of objects exist at Caminade-Est (Fig. 2); they correspond to levels F and G, on one hand (Early Aurignacian), and to levels D2inf and D2sup on the other (Recent Aurignacian).

New excavations, carried out between 1999 and 2001 (Bordes and Lenoble, 2001, 2002), confirmed the lithic taphonomy results. Moreover, the full recovery of the lithic objects sieved through a 2 mm mesh allowed further precision on the nature and importance of bladelet tools in the Aurignacian. The rarity of retouched bladelets in the Early Aurignacian, previously recognized at Abri Castanet (Pelegrin, in press) and Grotte des Hyènes, Brassempouy (Bon, 2002), is thus confirmed. Where the Recent Aurignacian is concerned, Caminade is the only Aquitaine site where the material from the sieve was fully recovered; as a result, the percentage of retouched bladelets is exceptionally high (Fig. 3). The large number of such small objects allowed a study of their variability. A new tool-type, the “Caminade bladelet” (the spall from a busked burin featuring direct retouch opposed to an abrupt back) could thus be defined (Fig. 13, nos. 4-6; Bordes and Lenoble, 2002).
FIG. 2 – Caminade Est. Results from a systematic search for conjoining blade fragments. The width of black rectangles represents the number of conjoins relative to the number of blade fragments considered. Chronocultural attribution is after Sonneville Bordes (1970) or, marked with an asterisk, after Delporte (1964) and Djindjian (1993).

FIG. 3 – Caminade. How excavation method influences the number of retouched bladelets. Bottom: Mortureux and Sonneville-Bordes’s excavations (dry sieving with 2 mm mesh, selective sorting); Caminade Ouest, after Sonneville-Bordes (1960). Caminade Est, after Sonneville-Bordes (1970). Top: Bordes and Lenoble’s excavations, loci 2, 3 and 4 (wet sieving with 2 mm mesh, exhaustive sorting).
2) Roc-de-Combe

This site is a small cave continuing laterally as a rockshelter, excavated by J. Labrot in 1959, and by F. Bordes in the summer of 1966. Our study concerns the collection from Bordes’ work. The archeological sequence is exceptional (Bordes and Labrot, 1967; Sonneville-Bordes, 2003): Mousterian (levels A, B and C), Châtelperronian (level 10), Aurignacian (level 9), Châtelperronian (level 8), Early Aurignacian (level 7), Aurignacian II (level 6), Evolved Aurignacian (level 5), and Gravettian (levels 4-1).

Taphonomic analysis (Bordes, 2002, 2003) has shown that levels 9 and 10 were defined through a post-excavation selection of objects coming from a disturbed part of the site: they are not valid analytical units, as is also the case (the Mousterian excepted) with the entire sequence excavated outside the cave porch. Inside, however, the archeological sequence is well preserved (Fig. 4). Where the Aurignacian is concerned, two main ensembles are clearly distinct: 7 (Early Aurignacian), and 6-5 (Recent Aurignacian). It remains possible that a finer analysis than hitherto undertaken may eventually lead to further refinement of the sequence, and that differences between levels 6 and 5 will become apparent. But it is clear that any such differences will be significantly less important than those separating 7 from 6-5.

FIG. 4 – Roc-de-Combe, synthetic sagittal projection. Top: the sequence as published by Bordes and Labrot (1967). Bottom: the sequence as inferred from lithic taphonomy analysis (Bordes, 2002); only the assemblages from the areas in gray are valid.
3) **Le Piage**

Le Piage is situated at the foot of a cliff. It was excavated by F. Champagne and R. Espitalié between 1954 and 1968 (Champagne and Espitalié, 1967, 1981), and yielded a sequence composed, from bottom to top, of three Aurignacian I levels (K, J and GI), a Châtelperronian level (F1), and an Aurignacian level (F), plus a mix of Solutrense and Badegoule (CDE).

Taphonomic analysis (Bordes, 2002, 2003) — refitting studies coupled with spatial analysis of the distribution of diagnostic pieces — led to a different interpretation of this sequence (Fig. 5). In the northern part of the site, where F1 had been defined, all levels are mixed and probably relate to redeposition by gravity of deposits originally accumulated in a rockshelter located above the excavated site; moreover, there is no stratigraphic continuity with the southern part. In the latter, the basal deposits are remnants of Mousterian (of Acheulian tradition) and Châtelperronian; above, two Aurignacian levels can be differentiated. Originally, these levels were on a slope, but this was not perceived at the time of excavation, leading to their artificial admixture. In order to minimize the impact of this problem, the material from intermediate level J was excluded from the analyses, which dealt only with levels K (whose chronological and cultural affinities will be discussed below) and GI (Early Aurignacian) of the southern part of the site. The nature of the data preventing any finer analytical resolution (because all objects are provenienced by square and level only), residual contaminations cannot be excluded. New excavation work, scheduled for 2004, will hopefully clarify remaining uncertainties.

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**FIG. 5** — Le Piage, synthetic frontal projection. Comparison between the sequence published by Champagne and Espitalié (1981) and that inferred from lithic taphonomy analysis (Bordes, 2002); only the assemblages from levels K and GI-F are thought to be sufficiently homogeneous to be considered here.
4) Corbiac-Vignoble II

This is an open air site in the Bergerac region, excavated by J. Tixier between 1987 and 1989. It is located close to a source of excellent lithic raw-material, available in large amounts. A first technological analysis showed that the site was a workshop for the production of blades and bladelets, attributed to the Aurignacian (Tixier and Reduron, 1991).

Ongoing and unfinished taphonomical analysis shows evident spatial structuration (Fig. 6), a large number of refits (>1000 already), and a very high degree of homogeneity of the lithic assemblage (no other remains are preserved), suggesting instantaneous occupation. The type of bladelet production unquestionably places this site in the Early Aurignacian. The ideal nature of the raw-material and the numerous refits make it possible to describe with great precision the fully expressed aims and modalities of the debitage.

![Excavation Plan of Corbiac-Vignoble II](image)

**FIG. 6 – Corbiac-Vignoble II, excavation plan (excavation units are 1 m ).**

**Development: the northern Aquitaine sequence**

On the basis of their relative stratigraphic position and of their typo-technological characteristics, three types of Aurignacian assemblages can be distinguished. Because of its significant typo-technological homogeneity, the Early Aurignacian is the key of this structuration. In the region, it is represented by the material from Corbiac-Vignoble II and by levels FG of Caminade-Est, G1-F of Le Piage, and 7 of Roc-de-Combe. Levels D2 of Caminade-Est
and 6-5 of Roc-de-Combe overlie Early Aurignacian deposits and also contain rather homogeneous collections, which we designate as Recent Aurignacian. Underlying the Early Aurignacian is the material from level K of Le Piage, which, at present, has no equivalent in the region. Its affinities must be discussed in the context of a description of this material; for the moment, we will call it Aurignacian “pre-I”.

The Early Aurignacian

This is the most common and better known aspect of the Aquitanian Aurignacian. A strong identity in the intentions and modalities of blade and bladelet production is apparent from site to site. The “ideal” blade (i.e., that which will be used as a tool blank) is large and, above all, wide and thick; its profile is in general curbed, and extensions of cortex often remain. Pre-forming of cores tends to be minimal: crests are rather uncommon, and not well made. The single striking platform is rejuvenated through the removal of thick core tablets. The re-

**FIG. 7** – Caminade Est. Blade core from the Early Aurignacian.
moval of blades is always effected through direct soft hammer percussion, using an organic hammer, and is carefully prepared: facetted or spur butts predominate (Figs. 7 and 9).

Debitage is controlled throughout by the removal of large laminar flakes at the intersection between the edges of the core and the flaking surface, or by crests unilaterally prepared from the side of the flaking surface (Fig. 9). The size of blade cores does not vary with raw-material: blade production stops as soon as the length falls below 8-10 cm, at which

FIG. 8 – Corbiac-Vignoble II. Bladelet core from the Early Aurignacian ("carinated scraper").
time the width of blanks is of 2-3 cm (Fig. 7). Blade cores are rare at sites where tools are numerous. This fact can be explained, on one hand, by the eventual “destruction” of most cores in a last production stage where flakes are extracted with no apparent purpose, and, on the other, by a production of blades away from the settlement. Tools on blades are for the most part endscrapers and laterally retouched pieces (Fig. 9). More often than not, the size of the blanks is severely reduced through successive episodes of retouch, and the same blank may also go through different typological stages in the course of its technical life time (Fig. 9).

Bladelets are produced from cores made on flakes reduced along their thickness, traditionally called “carinated scrapers”; as in blade production, only direct soft hammer percussion, using an organic hammer, is used. Such cores feature a wide front and centripetal bladelet removals, organized symmetrically around the morphological axis of the core (Fig. 8), betraying an intention to produce bladelets indifferently straight or curved, but never twisted. Their length varies between to 2 and 4 cm, on average, and they are seldom retouched. When such is the case, retouch (semi-abrupt and marginal) tends to be inverse on the right edge (Fig. 10).

The variety and importance of non-local raw-materials are traditionally observed characteristics of this phase of the Aurignacian (e.g. Demars, 1994). The recent identification of material coming from the northern Pyrenees and the Charentes in a number of these sites (Fig. 11) carries the implication that traditional views of the mobility of these groups have to be considerably revised (Bordes et al., 2005).
The typo-technological and economic variability of these series is low. It relates for the most part to variation in the relative frequencies of certain tool-types (especially splintered pieces and burins), to which no satisfactory explanation has yet been proposed.

In sum, it would seem that the very strong technical unity of this phase of the Aurignacian is related to extensive circulation of objects (and people?) and to a marked segmentation of lithic production systems (*chaînes opératoires*). These results also suggest an important pre-determination of raw-material management, and possibly indicate a great stability in the socio-economic organization of human groups of this key moment of the Aurignacian of northern Aquitaine.

**The Recent Aurignacian**

Although often recognized, this phase of the Aurignacian is less well defined than the Early Aurignacian. The number of sequences containing post-Early Aurignacian levels is relatively small, and inter-site variability seems higher, at least where the terminal episodes of the Aurignacian at La Ferrassie (Delporte, 1984) and at Pataud (Chiotti, 1999) are concerned. In a first approach to the collections, the contents of levels D2 of Caminade-Est and 6-5 of Roc-de-Combe were considered together, given their numerous shared features. It remains possible that this classification will be refined by further, more detailed analysis.

Recent Aurignacian blade production is close to that described for the Early Aurignacian (Fig. 12). The main differences relate to its representation in the lithic production system as a whole, particularly in relation to the importance of bladelet production. By comparison with the Early Aurignacian, there are fewer tools on blades, and a large part of the “tool assemblage” corresponds in fact to bladelet cores made on flakes or laminar flakes. Tools are dominated by endscrapers and burins (Fig. 12). Pieces bearing lateral retouch in general, and “Aurignacian retouch” in particular, are less common than in the Early Aurignacian.
The main difference between the Recent and the Early Aurignacian concerns the goals and procedures involved in bladelet production. Bladelets are extracted from cores made on flakes, blades and laminar flakes; traditionally, such cores have been classified as “nosed scrapers” and “busked burins”. “Nosed scrapers” differ from “carinated scrapers” in the nature of...
the intended products, which are very standardized in size, and twisted. In order to obtain this morphology, debitage follows very strict procedures, which translate into a marked lateralization of the flaking surface relative to the morphological axis of the “nose” (Fig. 13, no. 8). These twisted bladelets often bear retouch, which is inverse (on the right) or alternate (in which case the inverse retouch is still always on the right); they are called Dufour bladelets of the Roc-de-Combe subtype (Fig. 13, nos. 1-3; Demars and Laurent, 1989). Busked burins produce the same kinds of twisted bladelets. They also produce curbed or twisted bladelets with a natural back. When retouched on the opposite side, retouch of the latter is always direct; we have proposed for these pieces the designation of Caminade bladelets (Fig. 13, nos. 4-6).

Conclusions on the classical sequence

The classical, bipartite sequence of the Aquitainian Aurignacian is confirmed, with both episodes sharing a number of features justifying their treatment as part of a single technocomplex:

• Blades and bladelets are removed through direct, soft hammer percussion and make up the overwhelming majority of tool blanks.
• Blade production is very similar in both goals and procedures.
• Blade and bladelet productions are independent, carried out on different cores and clearly discontinuous in terms of the sizes of intended products.

On the other hand, these two episodes are clearly distinct in that:

• Bladelet production has different goals and follows different procedures, with the Early Aurignacian featuring mid-sized, straight or curbed, rarely retouched bladelets, and the Recent Aurignacian featuring often retouched, twisted bladelets (Dufour bladelets of the Roc-de-Combe subtype), as well as burin spalls with direct retouch.
• The importance of bladelet production relative to blade production increases in the Recent Aurignacian.
• The importance of lateral retouch, and especially of “Aurignacian retouch”, decreases in the Recent Aurignacian.
• In all studied sites, the Recent Aurignacian unquestionably overlies the Early Aurignacian; moreover, no indication exists of a gradual transformation of one into the other that cannot be explained as a result of level mixing.

Le Piage level K: an industry stratigraphically and technologically intermediate between the Châtelperronian and the Early Aurignacian

Level K of Le Piage underlies level G1, which contains a rich Early Aurignacian assemblage (>3000 tools). Two components can be distinguished in the industry from level K. The first such component is identical to that in level G1. It is at present impossible to assess whether this minority component represents a true cultural feature of the industry in level K or whether it represents evidence of mixing with material from the overlying deposits.

The second component is characterized by the production of slender blades, i.e., blades which, for a similar width, are significantly thinner than those of the Early Aurignacian. Such
blades are extracted from cores indifferently set up on blocks or on flakes, but always with unfacetted striking platforms (Fig. 16); regardless of blank type, blade and bladelet productions are continuous. Blade- and bladelet-sized blanks are often retouched, whereas blanks of intermediate size tend to bear only use wear (Fig. 14). Burins and endscrapers are the most common tools on blades (Fig. 15). Lateral retouch is rare, and “Aurignacian retouch” virtually absent. Retouched bladelets are extracted from the same cores as the blades, either intercalated or in succession (Fig. 16, no. 1). There are also many cores from which only bladelets were produced: these can be on block (they are then prismatic cores, as in Fig. 16, no. 1) or on flake, in which case debitage proceeds along the edge of the blank (they are then, typologically, “nucleiform burins”, as in Fig. 16, nos. 2-3). Size variation in retouched bladelets (>20% of the tool assemblage) is quite significant but, morphologically, they are all curved or straight, never twisted.

FIG. 14 – Le Piage level K. Blanks of intermediate size between blades and bladelets often exhibit use wear. The ventral surface of the flake whence it was extracted is still visible on no. 6. Butts are systematically unfacetted.
FIG. 15 – Le Piage level K. Endscrapers (1-2), burins (4, 6), retouched blades (3, 5), and pointed blade (7). Butts are systematically unfaceted. The ventral surfaces of the flakes whence they were extracted are still visible on nos. 4-5.
FIG. 16 – Le Piage level K. 1. Prismatic bladelet core; 2–3. Prismatic bladelet core on flake edge.
A first evaluation of Le Piage level K: some comparisons

When compared with the Aurignacian of northern Aquitaine, and leaving aside the issue of the presence of an Early Aurignacian component (robust blades, “Aurignacian retouch”, “carinated scrapers”) that may relate to level mixing, the industry from Le Piage level K shows both similarities and differences. The features of bladelet retouch (mostly inverse, in which case always on the right side, often alternate, marginal and semi-abrupt; Fig. 17) strongly evoke the Aurignacian tradition. In contrast, the continuity in blade and bladelet production as well as the rarity of lateral retouch and of platform faceting in blade cores are technical traits that separate this industry from the regional Aurignacian.

A wider comparison, both synchronically and diachronically, brings to light the following two points:

- There is a great level of affinity with the so-called “Archaic” Aurignacian of Mediterranean regions (cf. Bon, 2002, for a synthesis), as defined at sites in southeast France (Bazile and Sicard, 1999), northeast Spain (l’Arbreda) and northern Italy (Mochi rockshelter, Fumane), and also known at Arcy-sur-Cure (Schmider et al., 2002), and Isturitz (Normand, in press). If level K of Le Piage is indeed similar to these assemblages, then Le Piage is at present the only site featuring the stratigraphic succession of “Archaic” Aurignacian and Early Aurignacian.
- The techno-economic characteristics of Le Piage level K — size and straightness of the intended products, continuity of blade and bladelet production, debitage guided along the edges of flakes (Fig. 18) — have parallels in the Châtelperronian (Pelegrin, 1995):

The identification of this industry thus questions, on one hand, the commonly assumed homogeneity of the earliest phases of the Aurignacian, and, on the other hand, the generally accepted notion that the Châtelperronian and the Aurignacian are separated by a marked break.

Preliminary conclusions

This report is a first summary of current research on the Aurignacian of Aquitaine. Results are preliminary and should not be generalized to the Aurignacian as a whole. However, in a wider framework, they support the following points:

1. As often suggested in the past (Sonneville-Bordes, 1960), the typo-technological variability of Aurignacian industries in northern Aquitaine is for the most part diachronic. It is thus legitimate to talk about a regional Aurignacian sequence. Three main episodes can at present be distinguished: the Recent Aurignacian, the Early Aurignacian, and the “pre-I” Aurignacian.

2. This latter industry, so far known only at Le Piage, presents similarities with both the Early Aurignacian and the Châtelperronian of the region. This observation, based on preliminary comparisons that need to be further developed, leads us to question the reality of the break so often postulated between the Châtelperronian and the Aurignacian. Consequently, we propose that the replacement model is not that which best explains the northern Aquitaine evidence.
FIG. 18 – Roc-de-Combe level 8, Châtelperronian. 1-4. Châtelperron points; 5, 7. Blade cores on flake edge and flake ventral surface; 6, 8. Endscrapers on flake.
3. Outside Aquitaine, the circum-Mediterranean Proto-Aurignacian is the industry closest to Le Piage level K. More specifically, the production of large numbers of bladelets with a straight profile seems to be characteristic of the first manifestations of the Upper Paleolithic from the Atlantic façade to the Levant (Gorring-Morris and Belfer-Cohen, 2003; Ploux and Soriano, 2003) and the wider Near East (Olszewski, 2001; Bordes and Shidrang, 2004).

4. The rather marked techno-economical homogeneity of typical Early Aurignacian assemblages is largely confirmed. The important circulation of flint items in this period suggests that such homogeneity is the product of the widespread mobility and circulation of both people and ideas. It remains nonetheless important to note that these kinds of assemblages remain absent, or rare, in the southern fringe of the distribution of Aurignacian sites sensu lato.

5. Finally, the Evolved Aurignacian is mostly characterized by the production of twisted bladelets. The geographical extension of this facies is as considerable as in the basal Proto-Aurignacian/Ahmarian/Baradostian phase (idem). Beyond the variability in the methods used to produce those twisted bladelets, the fact remains that their morphology, size and types of modification by retouch are remarkably standardized at the scale of this immense space. It would seem, therefore, that diffusion more than convergence must explain the phenomenon, which, given available dates, seems to appear first in the eastern reaches of the distribution of the Aurignacian.

These results show how productive and necessary it can be to re-evaluate the key sequences from the beginning of the Upper Paleolithic, in order to achieve a better understanding of the forces underlying its emergence.

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