

Artisanats et territoires des chasseurs moustériens de Champ Grand

Ludovic Slimak (dir.)

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Artisanats et territoires des chasseurs moustériens de Champ Grand is best described as a site monograph summarizing the results of a series of analyses conducted on archaeological samples collected at the site of Champ Grand (France) during the excavation directed by A. Popier from 1968 to 1983. Divided into 15 chapters, all in French, this monograph is the result of the collaborative work of a team of specialists, each focusing on a specific aspect of the collected material. Champ Grand is a late Mousterian open-air site located in the central Massif Central mountain region of France in a section of the Loire Valley known for its relatively high density of Paleolithic sites, including the Magdalenian site of Rocher de la Caille and Goutte Roufat and Mousterian, Gravettian, and Magdalenian occupations at the site of Vigne Brun. Two distinct Mousterian layers separated by sterile sediments were initially identified by the excavators (see Chapter 1 by J. Combier), although only one single, thick Mousterian layer was identified in the lower section of the site. Following the excavation of large contiguous areas, Popier and his colleagues hypothesized that the preferential distribution of certain artifact types and concentrations of charcoal and faunal material might reflect the spatial organization of certain activities within the site. This monograph is an opportunity to test some of those hypotheses and to conduct an initial analysis of a sample of the lithic collection composed of nearly 90,000 lithic artifacts (including pebbles). Although structured as a typical site monograph, this book also contains methodological reflections regarding some aspects of lithic analysis and our current understanding of late Mousterian technological strategies. This review will focus on the results of those studies and on a critical assessment of the theoretical and methodological foundations supporting the analysis and interpretation of the archaeological data.

This monograph is the first volume of a new collection titled *Artisanats et territoires* directed by L. Slimak. As emphasized by J. Jaubert in the preface, the overall aesthetic quality of the book is remarkable. It includes color pictures of artifacts, technical drawings, and effective visual aids (diagrams and schemas) that all effectively support a rich and detailed text. The preface (Jaubert) and the following introduction (Geneste), whose purpose is essentially laudatory, provide the reader with an appreciation for the theoretical undertone of the book. Written in French, and likely intended for a French audience, its argumentation relies upon an implicit interpretive framework. The theoretical assumptions supporting many conclusions often are

considered so self-evident that the general lack of bibliographical references and methodological justifications may be a major obstacle for readers not familiar with French Paleolithic studies or structuralist anthropology (e.g., Le-roï-Gourhan 1943, 1945; Mauss 1936). The reader also may regret a similar bibliographical aridity concerning key archaeological concepts such as mobility, raw material maximization, or tool design. This may in fact reflect the overall narrow theoretical focus of the book. Similarly, many interpretive conclusions rely upon complex and multi-semantic concepts ("culture," "cultural traditions," or "social representations") which are never clearly defined. As a result, this book reflects both the strengths and weaknesses of current French Paleolithic archaeology. For the wealth of information it contains, this monograph is both an important contribution to our current understanding of the late Middle Paleolithic of Western Europe and an opportunity to critically revisit some fundamental aspects of the theoretical and methodological foundations of Paleolithic archaeology.

The first two chapters highlight the history of research at the site (Chapter 1 by J. Combier) and the overall methodology used during the excavation and the choices made for the analysis of the archaeological material (Chapter 2 by L. Slimak). Initiated in 1979, the systematic excavation of large portions of the site was organized as a salvage operation aimed at collecting as much material and contextual information as possible before the site was submerged due to the construction of a dam on the Loire River in 1983. As a result, the Popier collection is composed of an extensive lithic artifact assemblage ($n=89,330$ lithic artifacts including pebbles and non-siliceous artifacts). The analysis published in this monograph was conducted on a sample representing about 10% of this initial collection (total of 1,622 artifacts and 3,052 "micro-éclats et débris"; p. 37). Although described as "random" (p. 37), the sampling method is not clearly described while the relative proportion of the core component in the studied sample is slightly higher than that of the original collection. Those two chapters are followed by a detailed analysis of the site deposits aimed at identifying post-depositional processes and reconstructing the chronology of the site deposition (Chapter 3 by B. Kervazo, C. Duchadeau-Kervazo and N. Maumont). Most of the site deposits did not suffer from major post-depositional processes, giving credence to the following chapters focusing on the spatial organization of activities within the site's boundaries based on the analysis of the spatial distri-

bution of certain artifact types (Chapter 4 by A. Popier and J. Combier; Chapter 5 by P. Yvorra). Yvorra conducted a statistical analysis (k-means clustering) of the spatial distribution of lithic artifacts located in and near archaeological features previously identified by the excavators as possible habitation structures. This analysis supports some of those observations and confirms that some activities, including stone tool blank production, took place outside of the structures interpreted as possible huts. The analysis of the manufacturing processes of the pebble component (Chapter 6 by E. Nicoud) and the use-wear analysis of a selected sample of those pebbles (Chapter 7 by L. Roux) do not provide additional details regarding those activity areas. They do, however, demonstrate the extensive use of pebbles as both tools and flake cores. The scope of the faunal analysis (Chapter 8 by E. Crégut-Bonnoure) was greatly reduced by poor preservation conditions due to the acidity of the site sediments. Composed of 44 teeth and tooth fragments, and 4 identifiable bone fragments, the faunal collection only allowed for the identification of four species. Although not representative, this sample is thought to indicate a general cold steppic environment. Those results are surprising considering that the excavators identified large concentrations of horse teeth and bone fragments, as mentioned in the first chapter.

Based on extensive regional surveys, the identification of the lithic raw materials was more successful (Chapters 9 and 12 by L. Slimak; Chapter 10 by Y. Giraud). The majority of the lithic raw materials used in the studied sample is of a local origin and reflects the intensive use of both local pebbles (phonolith, quartz, basalt, granite), likely collected from the nearby Loire riverbed, and local cherts of inconsistent qualities outcropping between 10 and 40km from the site and representing nearly 99% of the siliceous raw materials. The remaining 1% is composed of non-local cretaceous cherts originating from various regions including the Parisian Basin (200km north from the site), the Cher Valley (250km northwest), the Maconnais region (80km northeast), and the Rhône Valley (180km south). Such long distance movements of raw materials are not uncommon in Middle Paleolithic contexts in Central Europe (e.g., Féblot-Augustins 1999) but remain rare in Western Europe. As such, these results support the notion of Mousterian groups moving over vast regions characterized by different ecosystems, possibly following the main river valleys. Chapter 11 (L. Slimak) is dedicated to the typological and technological analysis of a sample of the original lithic collection. Based on a *chaîne opératoire* approach (Balfet 1991; Inizan et al 1995), the analysis mainly focuses on the reconstruction of the operational sequences associated with tool blank production. The operational sequences are divided into several phases focusing on the later stages of core reduction (core shaping, core maintenance, and blank production per se) following Geneste's methodology (1985). These phases are isolated in the assemblage through the identification of morpho-technological flake categories defined by their overall morphology, the morphology of their dorsal surface, and the location and extent of their corti-

cal surfaces. As a result, Slimak is able to demonstrate that most of the blank production methods (Levallois, discoid, and Kombewa) were geared toward the production of flakes with normalized, similar morphologies interpreted here as reflecting cultural norms. The blade and bladelet component is particularly interesting as prismatic blade production has long been considered a defining criterion of Upper Paleolithic lithic industries. According to Slimak's demonstration, the comparison of the general dimensions of the blades and bladelets suggests that those two components were manufactured following two distinct sequences (see also Slimak 1999). Slimak's detailed descriptions of selected blade cores also suggest that the blade production method at Champ Grand did not involve the careful planning and maintenance of the core often described for Upper Paleolithic prismatic blade cores. Turning to the discoid cores, Slimak's lengthy discussion is merely intended to support his own re-definition of the "Discoid concept." The validity of the assumptions underlying his argumentation needs, however, to be first evaluated. As developed below, some of those assumptions rely upon undemonstrated theoretical claims and concepts, inherently introducing a great deal of interpretive bias into the analysis.

The following chapters (Chapter 13 by M. de Araujo-Igreja; Chapter 14 by H. Plisson) summarize the results of the use-wear analysis of selected tools (n=153). The most striking result is the identification of the use of small unretouched flakes (n=24) bearing micro-wears consistent with meat cutting. The systematic production of small, or micro, flakes using small discoid cores or truncated-facetted pieces has been identified in several Middle Paleolithic contexts. The demonstrated use of those tiny flakes at Champ Grand may further support the notion that an entire portion of the Mousterian technological repertoire has been underestimated until recently (Dibble and McPherron 2006). If confirmed, this small flake component may further contribute to demonstrate that microlithism is an adaptive technological strategy that was not restricted to post-Middle Paleolithic contexts. Plisson's use-wear analysis focuses on one single scraper made of translucent quartz interpreted as likely possessing special "meaning" or status, according to the author, due to the rarity of its raw material. This short chapter resonates as an attempt to demonstrate that a very detailed description of one single tool has the potential to provide meaningful information regarding Neandertals' cognitive abilities, social organization, or symbolic expression. This daunting, and unconvincing, *tour de force* relies upon a series of typical structuralist arguments concerning the relationships between technology and its social environment, further supported by Marxist anthropological references (Godelier 1984; Lemonnier 1992). This short chapter is the only one attempting to provide the reader with direct theoretical references. Left open-ended, this demonstration is also symptomatic of the underlying empiricist belief that artifacts carry some intrinsic meaning directly reflecting a broader system of social representations.

In the opening sections of the book, Geneste initially defends the specificity of French Paleolithic archaeology

within a discipline he perceives as too often relying on “now obsolete” materialist assumptions and plagued by “exclusively naturalistic” explanations (p. 17). The direct reference to a “Maussian anthropology” (p. 16) further contributes to delineate the theoretical paradigm of this book as grounded in a structuralist anthropological approach (Leroi-Gourhan 1943, 1945; Mauss 1936). Self-defined as part of the social sciences, French Paleolithic studies have always been reluctant to fully embrace a positive scientific paradigm. In brief, scientific reductionism is considered ill-equipped to fully grasp the complexity and subtleties of human social behavior, which can only be fully understood within its own system of social representation. At a fundamental level, French anthropology has suffered from a rigid partition between *hard* (i.e., biologically based) and *social* sciences strongly influenced by humanistic undertones and maintained by the internal organization of the French research and educative systems. As a result, French anthropologists have systematically downplayed the role of biological and environmental factors in shaping or affecting human behaviors and their evolution. At a paradigmatic level, this rebuttal may stem from the Cartesian distinction between Body and Soul translated in the anthropological realm into various dualistic distinctions such as nature-culture, *idéel-matériel* (Godelier 1984), or *milieu interne-milieu externe* (Leroi-Gourhan 1945). This philosophical bias has recently been under critique within French anthropology (Shaeffer 2007) as it has led to a superficial, and often erroneous, understanding of evolutionary processes and of the role played by the interaction between biological and cultural/behavioral factors during our evolutionary history. This is illustrated by Slimak’s refusal to explain the repeated occupation of Champ Grand as a direct consequence of the strategic location of the site for horse hunting, despite the accumulation of large amount of horse skeletal remains. For Slimak, “*the idea of societies isolated or subjugated by the exploitation of local resources is not here conceivable.*” (p. 405; my translation). Following his rationale, the lithic raw material procurement strategies implemented at Champ Grand demonstrate the capacity for Neandertals to develop complex technological systems. Those systems ultimately reveal elaborate social and representational structures, which operated according to their own internal logic, unaffected by environmental constraints. Ironically, evolutionary theories played a major role in French Paleolithic archaeology as illustrated by Leroi-Gourhan’s comparative analysis of technology (Leroi-Gourhan 1943, 1945) based on evolutionary principles and sharing some similarities with the contemporaneous, neo-evolutionist theses of L. White (1949). Similarly, Leroi-Gourhan’s *paletnographie* often has been compared to the American *New Archaeology*. The main differences between those two schools reside in the scientific ambition of the *New Archaeology*, which quickly identified the need for *middle range theories* and for ecologically based models directly relevant to the analysis of archaeological data. Leroi-Gourhan himself would describe, 40 years later, the way the American Processual Archaeology was perceived by French archaeologists as “typical of

the superficial penetration of foreign ideas” (Audouze and Leroi-Gourhan 1981:182), while denouncing the “insular” nature of the French archaeology of the early 1980s. This reluctance to use ecological models, perceived as inherently deterministic, better explains some of Slimak’s interpretation of the similarities in the distributions of lithic raw material categories at Champ Grand and at the nearby Upper Paleolithic site of Vigne Brun. Those similarities tend to demonstrate the continuity of procurement strategies beyond classic industrial boundaries that Slimak interprets as reflecting regional technological traditions.

At a methodological level, those interpretive choices are supported by a *chaîne opératoire* approach of lithic assemblages (Balfet 1991; Inizan et al 1995). This approach emphasizes the dynamic nature of the techno-economic processes reflected in the archaeological record. As such, it shares once again some methodological aspects of a broadly defined processual approach. However, the *New Archaeology* was built upon a critique of the previous cultural-historical interpretive paradigm as a whole. Leroi-Gourhan’s new focus on technological processes did not require such radical critique. His structuralist assumption that each technological system is organized by and within its own social structure does not necessarily contradict cultural-historical claims. As a result, while the goals of French Paleolithic archaeology shifted toward the reconstruction of past technological behaviors, those behaviors were still interpreted as cultural markers and broad cultural traditions. In other words, the *chaîne opératoire* approach contributed to refurbishing some aspects of cultural-historical theory by replacing traditional concepts, such as cultural norms, by structuralist concepts such as “mental structures” or “mental templates.” Located at the very foundation of structuralist anthropology, this “mental template” gambit ultimately relies upon undemonstrable assumptions as it fails to clearly tease out the complex relationships between techno-economic organization, social representations, and cognitive mechanisms. Focusing on its methodological implications, the concept of *chaîne opératoire* used in this monograph ultimately requires accepting the existence of such “mental templates” in order to fully function as an interpretive tool. First intended to describe sequences of technical actions (Balfet 1991), the *chaîne opératoire* concept quickly became the keystone of French Paleolithic archaeology as it allowed linking detailed technological observations and structural explanations. Similarly, the term of “concept” was later introduced in Paleolithic archaeology (e.g., Boëda 1993) to describe repetitive operational sequences identified in similar archaeological contexts. Those sequences were therefore interpreted as the material expressions of normative cultural templates determining the modalities of tool blank production and ultimately any technical activities. Practically speaking, a “concept” is merely a representation of the unifying characteristics of an operational sequence identified in similar archaeological contexts. Those characteristics are not, however, solely based on morphological criteria. Those “concepts” also are based on the identification of redundant technical de-

cisions or mental processes inferred from the reconstruction of the steps followed during the operational sequence. Such methods have raised significant concern because the validity of such inferences is based on our presumed ability to identify the intentionality of technical behaviors in the archaeological record. Furthermore, as acknowledged by Slimak, this approach tends to level archaeological variability by introducing biased expectations during the initial descriptive steps of the analysis. Slimak's re-evaluation of the Discoid concept is precisely motivated by the fact that some published reconstructions of discoid blank production sequences (e.g., Lenoir and Turq 1995; Mourre 2003) do not necessarily meet expectations based on the original definition of the "discoid concept" by Boëda (1993).

The core of Slimak's critique hinges upon the notion of "predetermination" defined by Boëda as one of the criteria defining Discoid and Levallois core reductions. According to Boëda, true Levallois or discoid end products are predetermined by the removal of previous flakes whose function is precisely to shape the volumes of the core in order to control the morphology of those final products. Predetermination thus requires assuming that a causal relationship exists between the morphology of the product and the morphology of the surface from which the product is removed. Such relationship remains to be fully demonstrated as it is so far mostly based on replicative experiments. Slimak's main issue with Boëda's definition is the fact that, for the Discoid method, any given flake is simultaneously predetermined by previous removals and predetermines subsequent ones. In other words, he is not able to identify flakes whose function would be to only maintain or adjust the volumes of those discoid cores. Again, the prerequisite of both Slimak and Boëda's argumentations remains that we are able to identify the specific purpose of each flake or step of those core reduction sequences. This requires knowing the flake's final intended use as well as assuming that this intention existed prior to the flake's actual production. The weakness of this demonstration resides in the fact that this *chaîne opératoire* method focuses on the identification of repetitive or archetypal technological sequences and that it interprets such redundancy as reflecting culturally determined technological norms. As such, the intents behind those sequences of events are perceived as known or even self-evident. Slimak demonstrates however that, if archetypal blank production methods (or "concepts") can be identified in the archaeological record, the Discoid concept cannot be used as an effective cultural or industrial marker due to its overall simplicity. Although Slimak does not push this demonstration any further, one could argue that the Discoid method is merely designed to produce a large amount of flakes following basic flaking principles. Slimak does not formulate any hypotheses regarding possible economic constraints favoring the implementation of the Discoid method over another blank production method. Considering the extent of the mobility patterns inferred from the distribution of the lithic raw material categories at Champ Grand, we could expect to identify technological strategies designed to maximize the return rate of blank

production or to secure reserves of blank volumes. Rather, Slimak concludes that the relative simplicity and the variability of the "Discoid concept" define it as a poor cultural marker, thus avoiding constructing hypotheses here regarding its adaptive characteristics.

Similarly, in the final chapter, Slimak compares some aspects of the lithic assemblages of Champ Grand with that of the site of Néron Cave located further south in the Rhône Valley (Slimak 2008). Slimak starts by stating that both assemblages share very close similarities in terms of blank production, blank morphologies, and even metrics ("to the millimeter;" p. 414), of the distribution of scraper types, thinning techniques, recycling strategies, etc. Yet, Slimak then argues that these two sites are in fact different in terms of activities, environment and modalities of occupation. Slimak seems so inclined to demonstrate the existence of technological traditions during the late Mousterian in southeastern France that he omits fully explaining how lithic assemblages composed of the same tool kits, bearing the same use-wear, supported by blank production methods sharing "*the same principles and the same objectives*" (p. 414; my translation) can in fact reflect different activities. Furthermore, while the faunal collection recovered at Néron Cave is relatively abundant and well preserved, the faunal collection of Champ Grand greatly suffered from poor preservation conditions (see Chapter 7). As a non-representative sample, the Champ Grand faunal assemblage cannot be used to support any meaningful reconstructions of the site activities and comparisons with other sites. It remains that the similarities of the assemblages from those two sites are striking. As briefly mentioned by Slimak (p. 196), Champ Grand also shares strong similarities with the site of Chez Pourré Chez Comte (France) located in the western piedmont of the Massif Central in the Brive basin region. Chez Pourré Chez Comte is a large collapsed rock-shelter overlooking the Vézère Valley that yielded a very large lithic collection likely reflecting the repeated occupation of the site. The lithic raw materials were primarily local pebbles (quartz, quartzite) and semi-local Senonian and Jaspoid cherts collected within a 60km radius similar to the one identified for Champ Grand. The overall typo-technological makeup of both assemblages includes a large discoid component, Levallois products, cores made of exotic high-quality raw materials, and a small flake component (Lhomme 2000; Steenhuyse 2007). This monograph confirms that looking at sites located on the margins of the *classic* densely occupied regions may significantly contribute to grasping the scope of Mousterian assemblage variability and how it was affected by regional factors.

Beyond the narrow focus of its interpretive basis, this book remains an important contribution to our understanding of the complexity of late Mousterian adaptive strategies. A critical assessment of the theoretical assumptions supporting a broadly-defined *chaîne opératoire* approach is long overdue. The evaluation of their validity and ability to construct hypotheses testable using archaeological data could in fact contribute to alleviating the weaknesses of this approach by strengthening its theoretical underlying

rationale. This monograph demonstrates, however, that the data thus produced can be integrated into alternative interpretive frameworks as long as it relies upon objective and consistent descriptive criteria and quantified observations. Other recent French archaeological publications (Bon 2009; Valentin 2008) further demonstrate that the construction of a more elaborate theoretical foundation for Paleolithic archaeology is clearly perceived as one of the challenges of the discipline.

REFERENCES

- Audouze, F. and A. Leroi-Gourhan. 1981. France: a continental insularity. *World Archaeology* 1: 170–189.
- Boëda, E. 1994. *Le concept Levallois: Variabilité des Méthodes*. Monographie du CRA. CNRS, Paris.
- Bon, F. 2009. *Préhistoire. La fabrique de l'homme*. l'Univers historique, Paris.
- Dibble, H. and S. McPherron. 2006. The Missing Mousterian. *Current Anthropology* 47(5): 777–803.
- Féblot-Augustins, J. 1999. Raw Material transport patterns and settlement systems in the European Lower and Middle Palaeolithic: continuity, change and variability. In *The Middle Paleolithic Occupation of Europe*, C. Gamble and W. Roebroeks (eds.), pp. 193–214. University of Leiden, Leiden.
- Geneste, J.-M. 1985. *Analyse Lithique d'Industries Moustériennes du Périgord: une Approche Technologique du Comportement des Groupes Humains au Paléolithique Moyen*. Unpublished PhD Dissertation, Université de Bordeaux I, Bordeaux.
- Godelier, M. 1984. *L'idéal et le matériel*. Fayard, Paris.
- Inizan, M.-L., M. Reduron-Ballinger, H. Roche and J. Tixier. 1995. *Préhistoire de la Pierre Taillée - t. 4: Technologie de la pierre taillée*. CREP, Meudon.
- Lemonnier, P. 1992. *Elements for an Anthropology of Technology*. Anthropological Paper, 88. Museum of Anthropology, University of Michigan, Ann Arbor.
- Leroi-Gourhan, A. 1943. *L'Homme et la Matière*. Albin Michel, Paris.
- Leroi-Gourhan, A. 1945. *Milieu et Techniques*. Albin Michel, Paris.
- Lhomme, V. 2000. *Industries lithiques de Paléolithique moyen à nombreuses fractures: les exemples du secteur sud de Champlost (Yonne) et de la Couche inférieure de «Chez-Pourré-Chez-Comte» (Corrèze)*. Unpublished PhD Dissertation, Université des Sciences et Technologies, Université de Lille I, Lille.
- Mauss, M. 1936. Les techniques du corps. *Journal de Psychologie* 32(3–4): 271–293.
- Mourre, V. 2003. Discoïde ou pas Discoïde ? Réflexions sur la pertinence des critères techniques définissant le débitage Discoïde. In *Discoïd Lithic Technology - Advances and implications*, M. Peresani (ed.), pp. 1–18. BAR International Series, Oxford.
- Shaeffer, J.-M. 2007. *La fin de l'exception humaine*. NRF Essais. Gallimard, Paris.
- Slimak, L. 1999. Mise en évidence d'une composante laminaire et lamellaire dans un complexe moustérien du Sud de la France. *Paleo* 11: 89–109.
- Slimak, L. 2008. *Artisanats et territoires des chasseurs moustériens de Champ Grand*. Artisanats et territoires 1. MMSH, Aix-en-Provence.
- Slimak, L. 2008. The Neronian and the historical structure of cultural shifts from Middle to Upper Palaeolithic in Mediterranean France. *Journal of Archaeological Science* 35(8): 2204–2214.
- Steenhuysse, A. 2007. *Continuity and change in technological and economic strategies: the Middle and Upper Paleolithic industries of the Brive basin (France)*. Unpublished Dissertation, Department of Anthropology, University of Pennsylvania, Philadelphia.
- Valentin, B. 2008. *Jalons pour une paléohistoire des derniers chasseurs (XIVe-VIe millénaire avant J.-C.)*. Cahiers Archéologiques de Paris 1. Publications de la Sorbonne, Paris.
- White, L. 1949. *The Science of Culture: A study of man and civilization*. Farrar, Straus and Giroux.