

ERAUL 150
ANTHROPOLOGICA ET PRÆHISTORICA 130

**Les sociétés gravettiennes du Nord-Ouest européen :
nouveaux sites, nouvelles données, nouvelles lectures**

**Gravettian societies in North-western Europe:
new sites, new data, new readings**

Actes du colloque international « Le Nord-Ouest européen au Gravettien :
apports des travaux récents à la compréhension des sociétés et de leurs environnements »
(Université de Liège, 12-13 avril 2018)

sous la direction de
Olivier TOUZÉ, Nejma GOUTAS, Hélène SALOMON, Pierre NOIRET

Presses Universitaires de Liège

2021

The Gravettian is Dead: Against Equivocation and Reification in Chronocultural Studies of the Upper Palaeolithic

Natasha REYNOLDS*

Résumé

Le Gravettien est mort : contre l'équivoque et la réification dans les études chronoculturelles du Paléolithique supérieur

Le mot « gravettien » est utilisé dans beaucoup de sens : comme substantif (« le Gravettien ») pour décrire un technocomplexe, une culture, une période de temps, une tradition, etc. ; comme substantif collectif (« les Gravettiens ») pour décrire une population ; et comme adjectif (« gravettien ») appliqué aux sites, assemblages, outils lithiques, sépultures, arts et beaucoup d'autres aspects des vestiges archéologiques. Au sein de notre discipline, il y a un extraordinaire manque de discussion à propos de la définition de ce terme et de son usage. Ce qui est clair, toutefois, c'est que ce terme n'est pas utilisé de manière cohérente. Cela engendre des problèmes significatifs pour l'élaboration d'argument solide et pour la communication. Ici, je fais le bilan de l'usage de ce terme aujourd'hui et je discute brièvement de la distinction entre les perspectives matérialistes et idéalistes à son propos. Je suggère une définition formelle pour « gravettien » comme adjectif, qui est délibérément minimale et monothétique (c'est-à-dire reposant sur la stricte correspondance de caractéristiques singulières) et je donne quelques exemples de l'utilisation d'une telle définition pour améliorer des questions de recherches archéologiques. Finalement, je suggère que l'usage des termes « le Gravettien » et « les Gravettiens » comme substantifs soit abandonné.

Mots-clés : taxonomie culturelle, Paléolithique supérieur moyen, technocomplexes.

Abstract

The word "Gravettian" is used in many different senses: as a noun ("the Gravettian") to describe a technocomplex, culture, time period, tradition, etc.; as a collective noun ("the Gravettians") to describe a population; and as an adjective ("Gravettian") applied to sites, assemblages, lithics, burials, art, and many other aspects of the archaeological record. Within our discipline, there is extraordinarily little explicit discussion of the definition of this term, and how it should be used. What is clear, however, is that this term is not used consistently. This causes significant problems for constructing robust arguments and for communication. Here, I review the usage of this term in the present day and briefly consider the distinction between its materialist and idealist conceptualisations. I suggest a formal definition for Gravettian as an adjective, which is deliberately minimal and monothetic, and give some examples of how the usage of such a definition may help to improve archaeological research questions. Finally, I suggest that the usage of "the Gravettian" and "the Gravettians" as nouns should be abandoned.

Keywords: cultural taxonomy, Mid Upper Palaeolithic, technocomplexes.

Introduction

What does Gravettian mean? This single word has come to serve as a noun (the Gravettian), a collective noun (the Gravettians), and an adjective (Gravettian). When used as a noun (the Gravettian) it can mean amongst other things a technocomplex, a collection of archaeological material or assemblages, a time period, or a culture. When used as a collective noun (the Gravettians) it refers to a putative past population, one that was somehow distinct from those which it followed, preceded, and lived contemporaneously with. When used as an adjective

it may describe sites, assemblages, a time period, lithic artefacts, populations, traditions, art, burials, technology, and more.

In this paper I argue that the multivalence of this term is at the root of many problems we currently face in understanding Mid Upper Palaeolithic (MUP) prehistory. The looseness with which we employ the word Gravettian frequently belies a looseness in our thinking, as we switch between categorically different concepts (e.g. time period, culture, population), without ever quite defining exactly what we mean or how we see the relationships between them. Most of what I have to say is equally applicable to

* UMR 5199 PACEA, Université de Bordeaux, Allée Geoffroy Saint-Hilaire, CS 50023, 33615 Pessac cedex (France). Email: natasha.reynolds@u-bordeaux.fr

our understanding of terms such as Aurignacian and Magdalenian. Although I focus on the English-language literature, the observations made here are applicable to work in other languages too.

This argument is put forward in the hope that an improved use of terminology can clarify our debates and problems, improve communication within and beyond our discipline, and lead to a better understanding of the past. It is through attempting to tackle my own terminological inconsistencies that I have come to develop strong views on this problem. Having done most of my work to date in Eastern Europe, where numerous *non*-Gravettian assemblages are dated to the Mid Upper Palaeolithic (Flas, 2015; Sinitsyn, 2015; Dinnis *et al.*, 2018), I have found that working with formal, precise terminologies is crucial to robust archaeological reasoning. This is also the case for areas such as northwestern Europe, where questions of the definition of Maisierian and the differences between this term and wider definitions of Gravettian are highly important (*e.g.* Pesesse and Flas, 2011; Touzé, 2018). More widely, I would argue that careful consideration of our concepts and definitions is key to resolving many recurrent problems we deal with as archaeologists.

There are three main intended audiences for this article. The first includes those who work directly on Gravettian assemblages and sequences. My colleagues in this area generally have an excellent understanding of the nuances of variation among these assemblages and the complex histories of our cultural taxonomies. However, we often find ourselves returning again and again to questions of ontology and epistemology, of “what was/is the Gravettian?” or “what were the origins of the Gravettian?” or “what was the relationship between the Gravettian and the Maisierian?” and so on. I attempt here to offer a way past these recurrent debates by reframing our definition of “Gravettian” and arguing for a less reified view of cultural taxonomic units. The second intended audience includes archaeologists and archaeological scientists who do not directly study Gravettian material culture. For these this article is largely intended as an appeal for more caution concerning any idea of “the Gravettian” as a homogeneous phenomenon possessing an essential character common to all assemblages. Although we might well use the term “Gravettian” as a shorthand to describe a large group of MUP European assemblages, any conceptualisation of “the Gravettian” as representing a discrete culture, or population, or even technocomplex, is more epistemologically dubious than is often assumed. The final audience includes those who are just beginning

to learn about Upper Palaeolithic archaeology and find themselves confronted by the challenge of understanding what is meant by “Gravettian”. I hope that the focus I place here on strict and explicit definition of this term might offer a way to move quickly past terminological questioning and onto the many more interesting challenges that the Upper Palaeolithic archaeological record poses.

A very short history of “the Gravettian”

Although a first definition of “Gravettian” was proposed many decades ago (Garrod, 1938), the history of the adoption of this term to describe MUP assemblages across Europe is complex. In France the most important aspect of this history is the Perigordian debate, concerning the cultural taxonomy and history of development of assemblages now mostly described as Chatelperronian and Gravettian (Djindjian and Bosselin, 1994; Pesesse, 2018). In other parts of Europe, it is only recently that a Gravettian attribution has been extended to the majority of MUP assemblages, thanks largely to better chronologies and reassessment of assemblages. For example, in Romania, claims for Aurignacian assemblages dating to the MUP have been critically assessed and rejected in recent decades (Steguweit *et al.*, 2009; Anghelinu and Niță 2014). In Hungary, a chronocultural model that closely matches the Gravettian and Epigravettian framework for other parts of Central Europe has been put forward only in the last few years (Lengyel, 2016). Similar complex histories of research can be described for many other parts of Europe. The road to the present state of affairs, whereby nearly all MUP assemblages from across Europe are described as Gravettian, has been long and contested.

At the same time, the development of the term “Gravettian” is entangled with the history of conceptualisation of cultural taxonomic units more generally. This history has developed differently in different parts of Europe, and involves a huge number of personalities and debates that the present discussion will not attempt to review. However, the long history of interaction between population concepts and cultural taxonomic units (Reynolds, 2020) may help in part to explain the multiplicity of usages of the word “Gravettian” outlined below. Various approaches to archaeological systematics during the twentieth century, which often came from Anglo-American sources (*e.g.* Clarke, 1968; Dunnell, 1971) have also left their mark. Meanwhile, across Europe, twentieth-century political contexts and the development of different schools of archaeology affected the conceptualisation of cultural taxonomic

units (e.g. Davis, 1983; Tomášková, 2003; Vander Linden and Roberts 2011). Over the last century, discussions of Gravettian assemblages have been based on a multiplicity of approaches to cultural taxonomy, which differ in their formality, completeness and epistemological foundations.

Finally, the ongoing debates concerning the definition and identification of “the Gravettian” have been enriched by the increased amounts of archaeological material at our disposal, improved chronology, and more comparative work. All of this has enabled better understanding of the variation, both geographical and chronological, among Gravettian sites and assemblages across Europe. From the 1990s on, there has also been an increasing focus on the “Mid Upper Palaeolithic” as a discrete time period (Mussi and Roebroeks, 1996; Roebroeks *et al.*, 2000). Many authors, especially those writing in French, have made important observations and discussions concerning the meaning and multivalence of the term “Gravettian” (e.g. Klaric, 2003; Pesesse 2008, 2013, 2017; Goutas, 2009, 2013; de la Peña Alonso, 2012; Noiret, 2013). The arguments made in this paper, although they differ from those of other authors, owe a great debt to the work that has been done across Europe in recent decades in understanding the complexity of Gravettian assemblages and in deconstructing the vocabulary we use to describe and analyse them.

Equivocation: one word, many meanings

The term “the Gravettian” is used in numerous ways in the present day. It is extremely rare that an explicit definition of the term is provided in published literature. In practice this term is used with a wide range of meanings, and in this paper I am interested in its use in general archaeological discussion, not just in the instances where it is the subject of special reflection. The following summary draws on English-language literature alone for the sake of simplicity, but similar usages can be found in many languages. The citations are drawn from a wide range of literature and should not be assumed to reflect the full depth of each author’s views on the definition of “Gravettian”, many of whom are writing in a second language. They are also not intended as criticism of the authors and should not be interpreted as such. However, they do hopefully reflect the significant variability at a disciplinary level in how we use this term.

In the literature, we are told that the Gravettian “is” many different things. It is a “culture” (Kaminská, 2016; Simonet, 2017), a “cultural unit” (Kuhn, 2013; Kozłowski, 2015), a “(cultural) entity”

(Klaric, 2007; Svoboda, 2007), a “(time) period” (e.g. Revedin *et al.*, 2015; Svoboda, 2015; Wojtal *et al.*, 2015), and a “technological tradition” (de la Peña and Vega Toscano, 2013). Perhaps most often, it is a “technocomplex” (e.g. Davies, 2007; Schmidt *et al.*, 2012; Bernaldo de Quirós *et al.*, 2015; Tripp, 2016). Sometimes it is a “macro-regional technocomplex” (Perlès, 2013) or “macro techno-complex” (Talamo *et al.*, 2014) or “archaeological industry” (Reynolds *et al.*, 2015). More rarely in modern usage it is an “archaeological culture” (e.g. Bar-Yosef, 2007; Kuhn, 2013; Reynolds *et al.* 2015; Lengyel and Wilczyński, 2018).

The above examples are all drawn from predicative expressions concerning the Gravettian, *i.e.* where we are told that “the Gravettian is...”. In other cases we need to read between the lines to understand the sense in which this term is used. Such cases include the usages outlined above, and also others, such as where it appears that the term is being used to refer directly to a stratigraphic unit or archaeological layer (e.g. Bodu *et al.*, 2014; Svoboda, 2015; Simonet, 2017), or even a population (Staubwasser *et al.*, 2018).

The use of the term “technocomplex” requires further discussion. It is frequently explicitly stated that the Gravettian is a technocomplex (see above), while references to “the Gravettian technocomplex” (*i.e.* using Gravettian as a modifier for the word technocomplex) are even more numerous (e.g. Banks *et al.*, 2008; Bradtmöller *et al.*, 2015; Wojtal and Wilczyński, 2015; Moreau *et al.*, 2016; Škrdla *et al.*, 2016). Occasionally we find reference to technocomplexes *within* the Gravettian technocomplex: e.g. “the Eastern Gravettian” or Pavlovian as technocomplexes (Hoffecker, 2002, p. 220; Farbstein, 2011). However, such chronologically and geographically restricted subsidiary groupings are more usually referred to by other terms, e.g. “*faciès*” or “phases” (e.g. Klaric, 2007; Reynolds *et al.*, 2015; Goutas, 2016).

Despite its wide usage, it is not usually clear what exactly is meant by the use of the term “technocomplex”. Although there is a rich literature on the terminology of “technocomplexes”, “archaeological cultures” etc. (e.g. Clarke, 1968; Gamble *et al.*, 2005; Roberts and Vander Linden, 2011; Sørensen, 2014; Hermon and Niccolucci, 2017), this is almost never cited in relation to the “Gravettian technocomplex”. Clarke (1968, p. 188) defined a technocomplex as “*a group of cultures characterized by assemblages sharing a polythetic range but differing specific types of the general families of artefact-types, shared as a widely diffused and interlinked response to common factors in environment, economy and technology*”. Here, “cultures” refers to his “archaeological

culture”, defined as “a polythetic set of specific and comprehensive artefact-type categories which consistently recur together in assemblages within a limited geographical area” (*ibid.*). It may be the case that some archaeologists are using the Clarkeian definition of a technocomplex in relation to “the Gravettian”. However, it is certainly not clear that we all are, or what alternative definitions might be in use.

The second usage of Gravettian, as a collective noun referring to a population (“the Gravettians”) is widespread but not universal (*e.g.* Otte, 2013; Ronchitelli *et al.*, 2015; Svoboda, 2015). Often “the Gravettians” appear to be understood as being distinct from the populations that preceded and succeeded it. This is despite the fact that, although it is often held that there was a population turnover associated with the Aurignacian–Gravettian transition (Otte and Keeley, 1990; Conard and Bolus, 2003; Finlayson and Carrión, 2007; Bradtmöller *et al.*, 2012), it is not generally assumed that there was a population turnover associated with the Gravettian–post-Gravettian transition (Finlayson and Carrión, 2007; Perlès, 2013). In fact, recent evidence from the study of ancient genomes suggests that there was no complete population turnover at either the beginning or end of the Mid Upper Palaeolithic (Fu *et al.*, 2016; Posth *et al.*, 2016). Finally, the use of “Gravettian” as an adjective is near-universal, and it may refer to sites, lithic assemblages, artefacts, art, faunal assemblages, technology, occupations, dwelling structures, mobility patterns, subsistence strategies, culture, traditions, social networks, a time period, people, groups, a population or populations, and so on.

It is clear that on a disciplinary level we are not always using these terms in the same way. The absence of explicit definitions and the highly variable usage of these terms are highly concerning, because they suggest that we lack consensus on some of our most basic concepts. This implies that the theoretical underpinnings of our discipline are not as strong as they could or should be. The potential risks of this state of affairs include impaired communication, misunderstandings, and poor formulation of research questions.

It might be argued that the multivalence of the word “Gravettian” is a strength, that it allows us to treat assemblages, populations, cultures, etc. as the deeply intertwined phenomena that they are. However, simply put, a time period, a technological tradition, a past population, and a stratigraphic unit are not the same thing, and they are also not the same as an archaeological taxonomic unit, technocomplex, or archaeological culture. The equivocation inherent in

treating all these usages as interchangeable suggests a lack of attention at a disciplinary level to the definition of these terms, which has significant consequences for the clarity and logic of our debates. A reassessment of our usage of terms such as “Gravettian”, with greater focus on consistency and explicit definition, could yield significant benefits for our research.

Materialism and idealism, past and present

The problem of equivocation in our usage of terms such as Gravettian is serious, and this would be the case no matter which definitions were used and interchanged in practice. However, the fact that some working definitions are based in a materialist perspective and others in an idealist perspective causes further problems. So too does the fact that some definitions are based on phenomena that existed in the past but no longer exist while others are based on phenomena that exist in the present day.

Materialist and *idealist* have many different meanings in philosophy, archaeology and everyday language. Here, by “materialist” I mean aspects of reality that have or had material form. Hence, a settlement, a population of humans, a stratigraphic unit, and an archaeological assemblage are all material bases for definitions. I use “idealist” to describe anything like a tradition, a culture (in the anthropological sense, rather than “material culture”), or a concept. Strictly speaking these can only be considered as abstract descriptions of material reality—they do not have an independent material existence that can be directly touched or measured.

Similarly, it is useful to make a strict distinction between that which existed in the past, and does not exist anymore, and that which exists in the present. The majority of material culture that was used by the people who made Gravettian assemblages no longer exists. The population(s) who created Gravettian assemblages no longer exist. Archaeological assemblages, on the other hand, do exist in the present day and can be studied and restudied. Among idealist phenomena, Gravettian cultures and traditions no longer exist (if they ever did); the only idealist phenomena relating to the Mid Upper Palaeolithic that exist to be directly interrogated in the present are our own conceptions and ideas (*cf.* Valentin, 2008; Pesesse, 2017). Finally, stratigraphic units, cultural layers, etc., fall in a strange place between materialist and idealist. Although prior to excavation they obviously have a material existence, they are usually destroyed in the process of their study, removing them from present-day material reality.

Switching between idealist and materialist concepts, and between phenomena that existed in the past and phenomena that exist in the present, are processes full of potential logical dangers. The fact that this is commonly done in our discipline without any recognition of the fact that we are doing it only makes it more hazardous. Eliding the differences between all these different concepts creates space for errors of logic and miscommunications: furthermore, it means that we may miss opportunities to fully appreciate the complex relationships between all these different, but linked, phenomena. Past populations and assemblages and stratigraphic units are all very different, but there are also obvious relationships between them that are worth studying. If we fail to differentiate between them accurately and consistently, we cannot gain a proper understanding of the complex mechanisms and processes that connect them.

A suggestion for a strictly materialist, monothetic definition of Gravettian assemblages

Here, I would like to suggest a strictly materialist definition of “Gravettian” (not “*the* Gravettian”) which is deliberately designed to be as minimal as possible and which is founded in the present-day material reality of archaeological assemblages. It is intended to encompass a temporally and geographically coherent group of assemblages, linked by a common feature of their material culture. This is based on the supposition that a properly defined cultural taxonomic unit must reflect material cultural similarities that are plausibly the result of past social or historical connections rather than being the result of convergence or random variation (Clarke, 1968; Teyssandier and Zilhão, 2018). Hence, it is necessary to create a definition that excludes assemblages that are chronologically and/or geographically separate from the coherent group of assemblages of interest. The definition of Gravettian proposed here is similar to that used in previous papers (Reynolds *et al.*, 2017, 2019), and is as follows: “Gravettian” is an adjective that describes archaeological assemblages:

- found in Europe,
- dating to the Mid Upper Palaeolithic (ca. 30–22 ka uncal BP),
- and containing evidence for systematic production of backed lithic artefacts.

There are three aspects to this definition: geographical, temporal, and material cultural. The first two aspects are included to differentiate Gravettian assemblages (which do appear to form a coherent

temporal and geographical group) from earlier and later assemblages containing backed lithics, or those found outside of Europe. At its upper limit, the date range serves only to differentiate Gravettian assemblages from much earlier, unrelated Chatelperronian assemblages, and perhaps the backed lithic assemblage found at Buran-Kaya III (Crimea) dated to more than 32 ka uncal BP (Prat *et al.*, 2011; Péan *et al.*, 2013; Yanevich, 2014). None of these assemblages necessarily have any direct link with the group of Gravettian assemblages of interest here. On the other hand, the lower limit of the date range is an arbitrary point in time that separates Gravettian assemblages from Epigravettian assemblages in much of Europe, even though in many regions there appear to be techno-typological similarities between assemblages attributed to each of these groups, at least in the shared presence of systematically backed lithics (Mihailovic and Mihailovic, 2007; Noiret, 2009; Anghelinu *et al.*, 2012, 2018). This limit was chosen to approximately reflect the conventional chronological boundary between Gravettian and Epigravettian assemblages (which is often cited as the Last Glacial Maximum).

The third element of the definition is designed to differentiate Gravettian assemblages from preceding Aurignacian assemblages but also from groups of assemblages found in Eastern Europe that lack backed lithics and may be entirely unrelated to Gravettian assemblages: these include the Streletskian/Sungirian, Gorodtsovian and Anosovka-Tel'manskaya Culture assemblages (Flas, 2015; Sinitsyn, 2015; Bosinski, 2017; Dinnis *et al.* 2018). The term “systematic” leaves some room for interpretation but is intended to exclude assemblages where only a small number of heterogeneous, possibly *ad hoc*, backed artefacts are found. This criterion was chosen to include all assemblages containing significant numbers of backed bladelets, Gravette points, shouldered points, etc., without an insistence on the primacy of any one of these index fossils.

The definition here is fully materialist and rooted in present-day reality: it is based on extant archaeological assemblages that can be studied and restudied. The definition is based on lithic technology, but the term can be extended to non-lithic elements of the assemblage or to features that are in definite archaeological association with the assemblage. Hence, we might also describe Gravettian art, Gravettian burials, and Gravettian dwellings, as long as we are describing features that are in definite association with assemblages that fulfil the above criteria. We could also extend this term to abstract subjects of interest, *e.g.* Gravettian technologies, Gravettian

social structures, and Gravettian mobility patterns: *i.e.*, the technologies, social structures and mobility patterns that are reflected in Gravettian assemblages. However, in a formal sense, I would argue that we should not define “Gravettian technologies/social structures/mobility patterns” but “technologies/social structures/mobility patterns which are attested in Gravettian assemblages”. This also applies to aspects of material reality in the past or present that we might want to study: hence, formally, not “Gravettian populations” but rather “populations that created/used/deposited Gravettian assemblages”; not “Gravettian layers” but “layers that have yielded Gravettian assemblages” and so on. This may seem excessively pedantic but it is intended to avoid potential slippage in meaning: a Gravettian attribution can only be made on the basis of a lithic assemblage. All other aspects of the archaeological record, and any abstract concepts we might be interested in, acquire a description as “Gravettian” only by a link with Gravettian lithic assemblages.

The definition is deliberately monothetic rather than polythetic (Clarke, 1968; Needham, 1975; Davis, 1990) and designed to be minimal. Many attempts at defining or characterising “Gravettian” make reference to numerous types of evidence, including different stone tool categories, burials, art, symbolism, etc. However, if such criteria were included in this formal definition, many sites traditionally described as Gravettian would have to be excluded. The same is true for definitions based around specific categories of stone tools. For example, if the presence of Gravette points is used as a criterion for the definition of Gravettian, a large proportion of Eastern European sites would have to be excluded (see *e.g.* Klaric *et al.*, 2009; Pesesse, 2013 for discussions of the importance of the techno-typology of backed index fossils for understanding the Gravettian record of Western Europe: extending the same approach to the rest of Europe reveals even more variability in lithic assemblages—see *e.g.* Polanská and Hromadová, 2015; Reynolds *et al.*, 2019).

The choice to create a monothetic definition is in part guided by a preference for creating the simplest, most unambiguous definition possible. Furthermore, my previous (unpublished) attempts to assign groups of assemblages to discrete cultural taxonomic units based on polythetic criteria frequently encountered logical difficulties, due to the fact that different material culture features do not always cluster cleanly, but are often found in overlapping groups of assemblages. The definition here is intended purely as descriptive, not analytical. In the view presented here, the choice

of whether or not to call an assemblage Gravettian is simply a necessary basic descriptive step, and only one minor aspect of the work that needs to be done to properly place a site within the Upper Palaeolithic chronocultural framework. The use of such a definition aims to separate description from analysis and to move away from reified polythetic cultural taxonomic units towards a more bottom-up approach to understanding variation in the archaeological record.

It could be argued that we should go further, and entirely discard terms such as “Gravettian”. We could in principle certainly move to a purely chronological phasing of the Upper Palaeolithic record (“Early Upper Palaeolithic”, “Mid Upper Palaeolithic” etc.) but in practice the temporal definition of these phases would probably continue to be based on the chronology of traditional cultural taxonomic groupings (*e.g.* Aurignacian, Gravettian). However, it seems that the majority of Upper Palaeolithic specialists do believe these terms have value and would prefer to keep them—at the very least for the sake of scholarly communication. Furthermore, the term “Gravettian” as defined here does have usefulness as a descriptive term, even if it is not intended to have any particular analytical value.

Although it may be argued that a focus on a single criterion cannot reflect the entire cultural complexity of Gravettian assemblages, the aim of this definition is *not* to fully reflect or describe cultural complexity, but simply to provide a clear, usable descriptive term. The definition used here is deliberately simple and deliberately does not make any ontological claims regarding any Gravettian “culture”, “population”, “entity” and so on. It is just one fairly useful term for describing an archaeological assemblage. The reification of groups of assemblages as technocomplexes, archaeological cultures, etc. has in practice done much to obscure the abundant variation that is found within them as well as the profound similarities they often share with other groups of assemblages. Therefore, I propose abandoning all references to “the Gravettian”, be it as a technocomplex, an archaeological culture, an archaeological taxonomic unit, or anything else. This is what is meant by the somewhat presumptuous title of this paper, “The Gravettian is dead”.

The presence of evidence for the habitual use of backing technology is sufficient to define Gravettian assemblages as a geographically and temporally coherent group. However, similar monothetic definitions can—and should—be used to define groups within this set of assemblages. So, on the pattern of the definition of Gravettian used above, we can also

easily create formal definitions for the (already quite well-defined) Noaillian, Kostenkian, etc., based on the presence of Noailles burins, Kostënki-Avdeev type shouldered points, etc. (Grigor'ev, 1993; Klaric, 2007). We can also create new definitions based on the presence of *éléments bitronqués*/Late Gravettian rectangles, Anosovka points, etc. (Polanská and Hromadová, 2015; Wilczyński *et al.*, 2015; Reynolds *et al.*, 2019). There is also no reason why we should not use other aspects of material culture, *e.g.* osseous artefacts or personal ornaments, as criteria where they can be used to define temporally and geographically coherent groupings. We should not expect all of these groupings to necessarily form a hierarchical, nested structure: rather, they may overlap, and these overlaps themselves are likely to be informative and useful.

One objection that might be raised to such an approach concerns the problem of assemblages that lack backed lithics but which nevertheless are usually described as Gravettian, for example the Rayssian assemblage of La Picardie and the Noaillian assemblage of Callan (Klaric *et al.*, 2011; Morala, 2011; Pesesse, 2017). However, the point of the approach to the definition of “Gravettian” proposed here is that I do not think that complex questions concerning *e.g.* relationship of Rayssian assemblages to each other and to other assemblages can be answered by deciding whether or not to call these assemblages Gravettian or not. Choosing whether to call an assemblage Gravettian or not should be based on an explicit, formal definition of Gravettian, such as the one suggested in this paper. Describing and analysing variation between assemblages is a different task that requires different tools and much more complex argumentation.

The effects of this type of definition on archaeological practice

The usefulness of this type of strict, materialist definition is best revealed by a discussion of how it plays out in terms of some major recurrent research questions.

The question of “the origin of the Gravettian” has received attention in numerous publications (*e.g.* Conard and Moreau, 2004; Kozłowski, 2015). However, if we use the above definition of Gravettian, it makes no sense to talk about “the origin of the Gravettian” because “Gravettian” is an adjective, not a noun. However, we can ask numerous precise questions of the archaeological record that might be of interest, for example:

- Which are the earliest Gravettian assemblages and

how old are they?

- What is the geographical distribution of the earliest Gravettian assemblages? Are any similar assemblages found outside of Europe at around the same time?
- Are there any similarities between the earliest Gravettian assemblages and preceding assemblages?
- What sort of differences are exhibited between the earliest Gravettian assemblages and preceding assemblages in terms of toolkit functions, subsistence strategies, and mobility patterns?
- Does palaeogenetic evidence suggest a population turnover at the time of appearance of the first Gravettian assemblages?

These questions are sometimes asked in studies of “the origin of the Gravettian” but a focus on Gravettian assemblages, rather than “the Gravettian” enables us to ask more precise questions than *e.g.* “where was the origin of the Gravettian?”, and helps us to clearly separate questions of population dynamics from questions of change in material culture. Importantly, if the approach proposed in this paper is followed, then we could answer all these questions satisfactorily but still not claim to have found “the origin of the Gravettian”—the concept of “the Gravettian” itself is deprecated here.

We can also extend this approach to other questions, including the subject of the current volume. Rather than asking something like “what is the relationship between the Maisierian and the Gravettian” we might ask:

- Do “Maisierian” assemblages in northwest Europe meet the above definition of Gravettian?
- What are the index features (including index fossils, but also specific, restricted technological features, symbols, etc.) that can be used to place Gravettian assemblages in northwest Europe into temporally and geographically coherent groupings? These index features need to be restricted in their distribution in the archaeological record as a whole but also to be found in geographical and temporal clusters.
- What do we know about population dynamics in northwest Europe around the Mid Upper Palaeolithic from genetic and/or palaeoanthropological studies? How does this compare to the variation that we see in the material culture record?

This sidesteps potentially fruitless debates on questions such as “was the Maisierian part of the Gravettian or not?” which essentially rest on the definitions that we choose to use for “the Maisierian” and “the Gravettian”. This is not to say that the relationship between assemblages typically described as Maisierian and other Early Gravettian assemblages is not worthy of investigation: it is. But a focus on abstract taxonomic units, rather than variation and similarities among assemblages themselves, risks digression from arguments based on the archaeological material. When we as a discipline discuss “the Maisierian”, the same problems arise as when we talk about “the Gravettian”—we are not all talking about the same thing.

Finally, we can even return to questions of taxonomic units, technocomplexes, etc., without necessarily reifying the group of assemblages we call “Gravettian”. Questions we might ask in this case include:

- Do Gravettian assemblages represent a “technocomplex” *sensu* Clarke (1968)?
- Is it possible to make a distinction between Gravettian and Epigravettian (or Magdalenian) assemblages that is *not* partially based on chronology?
- To what extent do groups of Gravettian assemblages established based on the presence/absence of different lithic index fossils (and other features) mirror each other?
- Can we test the possible relationship between Gravettian assemblages and a past population? What arguments and evidence can be used to do this?

These questions are formulated with conscious avoidance of any reference to “the Gravettian”. As a result, they sidestep any ambiguity concerning what is meant by “the Gravettian” in order to focus on the archaeological material and its interpretation.

Conclusions

The attention given in this paper to issues of terminology may seem excessive. But what I have tried to do here is to show a way that we can stop talking about terminology so much in the study of the Upper Palaeolithic. A shift to minimal, strictly descriptive, material-based definitions of taxonomic units means that we can cease having debates about nomenclature—over whether a site should be attributed to this or that unit—when we could instead be discussing technology, chronology, or something else similarly interesting.

Although it is conventional to discuss “the Gravettian” without giving any indication of what definition of that term is being used, we need to abandon this practice if we want to avoid opacity and ambiguity in our arguments. We need to be explicit about our definitions of terms like “Gravettian” and include them in our communications. Furthermore, if we make reference in our definitions of “Gravettian” etc. to concepts such as “technocomplex”, we also need to explain what we mean by *those* terms.

Here, I have proposed a simple, usable definition of Gravettian that can be adopted or adapted as necessary. It does not aim to say much about the assemblages to which it applies: although it does tell us that an assemblage belongs to a geographically and temporally coherent group of assemblages sharing a widespread technological feature, it does not tell us whether they were all made by a discrete population, or whether there was a Gravettian “identity” in the past, or anything about the relationships between Gravettian and non-Gravettian assemblages. All it does is provide some straightforward rules for whether we should describe an assemblage as Gravettian, so that we can rapidly set this taxonomic question aside and move onto questions of analysis and interpretation.

Beyond the definition of “Gravettian” as an adjective, “*the* Gravettian” as an idealist ontological concept is not, I think, salvageable. There are too many competing, and often very fuzzy, definitions in circulation. In short, despite the continuing usefulness of the term “Gravettian” as an adjective to describe assemblages, *the* Gravettian, in my view, is dead. More widely, the concept of the technocomplex (and archaeological culture, etc.) may also be dead for the same reasons, unless they can be revived by renewed debate to establish their significance and definition. Finally, the concept of “the Gravettians” as a population lacks a solid inferential basis and does not seem to be well supported by recent results of studies of Upper Palaeolithic ancient human genomes (Fu *et al.*, 2016; Posth *et al.*, 2016). Abandoning the concepts of “the Gravettian” and “the Gravettians” will help us to do better archaeology, as it will force us to be clearer in our use of language and concepts. It is certainly possible to write about Gravettian assemblages without ever mentioning “the Gravettian” or “the Gravettians” (see *e.g.* Reynolds *et al.*, 2017, 2019). We do not need to reify idealist conceptions of past cultures or groupings in order to study the past. What we need to do is to describe the archaeological record as accurately as we can, and to ask interesting questions of it. The Gravettian is dead. Long live the study of Gravettian assemblages.

Acknowledgements

I am indebted to the reviewers and editors for their thoughtful comments, which helped very much to improve the manuscript. All shortcomings naturally remain my responsibility. I am also very grateful to the organisers and participants of the Liège colloquium for the opportunity to test and refine the ideas presented here. This work was supported by the European Union's Horizon 2020 research and innovation programme under Marie Skłodowska-Curie grant agreement No. 747400.

Bibliography

- ANGHELINU M., NIȚĂ L. (2014) – What's in a Name: The Aurignacian in Romania. *Quaternary International*, 351, p. 172-192.
- ANGHELINU M., NIȚĂ L., STEGUWEIT L. (2012) – Not that Original after All: The Chrono-cultural Framework of the Upper Paleolithic on the Bistrița Valley (North-eastern Romania). *Arheologia Moldovei*, 35, p. 7-46.
- ANGHELINU M., NIȚĂ L., MURĂTOREANU G. (2018) – Le Gravettien et l'Épigraevettien de l'Est de la Roumanie : une réévaluation. *L'Anthropologie*, 122, p. 183-219.
- BANKS W.E., D'ERRICO F., PETERSON A.T., VANHAEREN M., KAGEYAMA M., SEPULCHRE P., RAMSTEIN G., JOST A., LUNT D. (2008) – Human Ecological Niches and Ranges during the LGM in Europe Derived from an Application of Eco-cultural Niche Modeling. *Journal of Archaeological Science*, 35, p. 481-491.
- BAR-YOSEF O. (2007) – The Archaeological Framework of the Upper Paleolithic Revolution. *Diogenes*, 54, p. 3-18.
- BERNALDO DE QUIRÓS F., MAÍLLO-FERNÁNDEZ J.-M., CASTAÑOS P., NEIRA A. (2015) – The Gravettian of El Castillo Revisited (Cantabria, Spain). *Quaternary International*, 359-360, p. 462-478.
- BODU P., SALOMON H., LEROYER M., NATON H.-G., LACARRIERE J., DESOLES M. (2014) – An Open-air Site from the Recent Middle Palaeolithic in the Paris Basin (France): Les Bossats at Ormesson (Seine-et-Marne). *Quaternary International*, 331, p. 39-59.
- BOSINSKI G. (2017) – Le Sungir-Streleckien. Le début du Paléolithique supérieur en Europe orientale. In: S. Vasilyev, A. Sinitsyn, M. Otte (dir.), *Le Sungirien*. Liège, Université de Liège (ERAUL, 147), p. 21-45.
- BRADTMÖLLER M., PASTOORS A., WENINGER B., WENIGER G.-C. (2012) – The Repeated Replacement Model – Rapid Climate Change and Population Dynamics in Late Pleistocene Europe. *Quaternary International*, 247, p. 38-49.
- BRADTMÖLLER M., ARRIZABALAGA Á., CALVO A., IRIARTE-CHIAPUSSO M.J., DE LA PEÑA P. (2015) – From Upper Perigordian to the Current Non-hierarchical Gravettian in the Cantabrian Region (Northern Spain). Recent Changes, Current Challenges. In: S. Sázelová, M. Novák, A. Mizerová. (ed.), *Forgotten Times and Spaces: New Perspectives in Paleoanthropological, Paleoetnological and Archeological Studies*. Brno, Institute of Archaeology of the Czech Academy of Sciences & Masaryk University, p. 245-257.
- CLARKE D.L. (1968) – *Analytical Archaeology* (Second Edition). London, Methuen, 526 p.
- CONARD N.J., BOLUS M. (2003) – Radiocarbon Dating the Appearance of Modern Humans and Timing of Cultural Innovations in Europe: New Results and New Challenges. *Journal of Human Evolution*, 44, p. 331-371.
- CONARD N.J., MOREAU L. (2004) – Current Research on the Gravettian of the Swabian Jura. *Mitteilungen der Gesellschaft für Urgeschichte*, 13, p. 29-59.
- DAVIES W. (2007) – Re-evaluating the Aurignacian as an Expression of Modern Human Mobility and Dispersal. In: P. Mellars, K. Boyle, O. Bar-Yosef, C. Stringer (ed.), *Rethinking the Human Revolution: New Behavioural and Biological Perspectives on the Origin and Dispersal of Modern Humans*. Cambridge, McDonald Institute for Archaeological Research, p. 263-274.
- DAVIS R.S. (1983) – Theoretical Issues in Contemporary Soviet Paleolithic Archaeology. *Annual Review of Anthropology*, 12, p. 403-428.
- DAVIS W. (1990) – Style and History in Art History. In: M. Conkey, C. Hastorf (ed.), *The Uses of Style in Archaeology*. Cambridge, Cambridge University Press, p. 18-31.
- DE LA PEÑA ALONSO P. (2012) – A propósito del Gravetiense... El paso de cultura a tecnocomplejo: un caso ejemplar de pervivencia particularista. *Complutum*, 23 (1), p. 41-62.

- DE LA PEÑA P., VEGA TOSCANO G. (2013) – The Early Upper Palaeolithic Puzzle in Mediterranean Iberia. *Quartär*, 60, p. 85-106.
- DINNIS R., BESSUDNOV A.A., REYNOLDS N., DOUKA K., DUDIN A.E., KHLOPACHEV G.A., SABLIN M.V., SINITSYN A.A., HIGHAM T.F.G. (2018) – The Age of the ‘Anosovka-Tel’manskaya Culture’ and the Issue of a Late Streletskian at Kostënki 11, SW Russia. *Proceedings of the Prehistoric Society*, 84, p. 21-40.
- DJINDJIAN F., BOSSELIN B. (1994) – Périgordien et Gravettien : l’épilogue d’une contradiction? *Préhistoire Européenne*, 6, p. 117-131.
- DUNNELL R.C. (1971) – *Systematics in Prehistory*. New York, Free Press, 214 p.
- FARBSTEIN R. (2011) – The Significance of Social Gestures and Technologies of Embellishment in Paleolithic Portable Art. *Journal of Archaeological Method and Theory*, 18 (2), p. 125-146.
- FINLAYSON C., CARRIÓN J.S. (2007) – Rapid Ecological Turnover and its Impact on Neanderthal and Other Human Populations. *Trends in Ecology and Evolution*, 22, p. 213-222.
- FLAS D. (2015) – The Extension of Early Upper Palaeolithic with Blade Leaf-points (Lincombian-Ranisian-Jerzmanowician): the Issue of Kostenki 8 Level I. In: N. Ashton, C. Harris (ed.), *No Stone Unturned: Papers in Honour of Roger Jacobi*. London, Lithic Studies Society (Occasional Paper, 9), p. 49-58.
- FU Q., POSTH C., HAJDINJAK M., PETR M., MALICK S., FERNANDES D., FURTWÄNGLER A., HAAK W., MEYER M., MITTNIK A., NICKEL B., PELTZER A., ROHLAND N., SLON V., TALAMO S., LAZARIDIS I., LIPSON M., MATHIESON I., SCHIFFELS S., SKOGLUND P., DEREVIANKO A.P., DROZDOV N., SLAVINSKY V., TSYBANKOV A., GRIFONI CREMONESI R., MALLEGGNI F., GELY B., VACCA E., MORALES M.R., STRAUS L.G., NEUGEBAUER-MARESCH C., TESCHLER-NICOLA M., CONSTANTIN S., MOLDOVAN O.T., STEFANO BENAZZI S., PERESANI M., COPPOLA D., LARI M., RICCI S., RONCHITELLI A., VALENTIN F., THEVENET C., WEHRBERGER K., GRIGORESCU D., ROUGIER H., CRÈVECŒUR I., FLAS D., SEMAL P., MANNINO M.A., CUPILLARD C., BOCHERENS H., CONARD N.J., HARVATI K., MOISEYEV V., DRUCKER D.G., SVOBODA J., RICHARDS M.P., CARAMELLI D., PINHASI R., KELSO J., PATTERSON N., KRAUSE J., PÄÄBO S., REICH D. (2016) – *The Genetic History of Ice Age Europe*. *Nature*, 534, p. 200-205.
- GAMBLE C., DAVIES W., PETTITT P., HAZELWOOD L., RICHARDS M. (2005) – The Archaeological and Genetic Foundations of the European Population during the Late Glacial: Implications for ‘Agricultural Thinking’. *Cambridge Archaeological Journal*, 15, p. 193-223.
- GARROD D.A.E. (1938) – The Upper Palaeolithic in the Light of Recent Discovery. *Proceedings of the Prehistoric Society*, 4, p. 1-26.
- GOUTAS N. (2009) – Réflexions sur une innovation technique gravettienne importante : le double rainurage longitudinal. *Bulletin de la Société préhistorique française*, 106 (3), p. 437-456.
- (2013) – De Brassempouy À Kostienki : l’exploitation technique des ressources animales dans l’Europe gravettienne. In: M. Otte (dir.), *Les Gravettiens*. Paris, Errance, p. 105-160.
- (2016) – Gravettian Projectile Points: Considerations about the Evolution of Osseous Hunting Weapons in France. In: M.C. Langley (ed.), *Osseous Projectile Weaponry*. Dordrecht, Springer, p. 89-107.
- GRIGOR’EV G.P. (1993) – The Kostenki–Avdeevo Archaeological Culture and the Willendorf-Pavlov-Kostenki-Avdeevo Cultural Unity. In: O. Soffer, N.D. Praslov (ed.), *From Kostenki to Clovis: Upper Paleolithic – Paleo-Indian Adaptations*. New York, Plenum Press, p. 51-65.
- HERMON S., NICCOLUCCI F. (2017) – Formally Defining the Time-Space-Archaeological Culture Relation: Problems and Prospects. *Archeologia e Calcolatori*, 28, p. 93-108.
- HOFFECCKER J.F. (2002) – *Desolate Landscapes: Ice-Age Settlement in Eastern Europe*. New Brunswick, Rutgers University Press, 298 p.
- KAMINSKÁ L. (2016) – Gravettian and Epigravettian Lithics in Slovakia. *Quaternary International*, 406 (A), p. 144-165.
- KLARIC L. (2003) – *L’Unité technique des industries à burins du Raysse dans leur contexte diachronique. Réflexions sur la diversité culturelle au Gravettien à partir des données de la Picardie, d’Arcy-sur-Cure, de Brassempouy et du Cirque de la Patrie*. PhD thesis, University Paris 1 – Panthéon-Sorbonne, 426 p.

- (2007) – Regional Groups in the European Middle Gravettian: a Reconsideration of the Rayssian Technology. *Antiquity*, 81, p. 176-190.
- KLARIC L., GUILLERMIN P., AUBRY T. (2009) – Des armatures variées et des modes de productions variables : réflexions à partir de quelques exemples issus du Gravettien d'Europe occidentale (France, Portugal, Allemagne). *Gallia Préhistoire*, 51, p. 113-154.
- KLARIC L., LIARD M., BERTRAN P., DUMARÇAY G., DE ARAUJO IGREJA M., AUBRY T., WALTER B., REGERT M. (2011) – La Picardie (Preuilley-sur-Claise, Indre-et-Loire): neuf ans de fouille sur un gisement rayssien finalement pas si mal conservé! *In*: N. Goutas, L. Klaric, D. Pesesse, P. Guillermin (dir.), *À la recherche des identités gravettiennes: actualités, questionnements et perspectives*, Proceedings of the round table of Aix-en-Provence (6-8 October 2008). Paris, Société préhistorique française (Mémoires, 52), p. 291-310.
- KOZŁOWSKI J.K. (2015) – The Origin of the Gravettian. *Quaternary International*, 359-360, p. 3-18.
- KUHN S.L. (2013) – Questions of Complexity and Scale in Explanations for Cultural Transitions in the Pleistocene: A Case Study from the Early Upper Paleolithic. *Journal of Archaeological Method and Theory*, 20, p. 194-211.
- LENGYEL G. (2016) – Reassessing the Middle and Late Upper Palaeolithic in Hungary. *Acta Archaeologica Carpathica*, 51, 47-66.
- LENGYEL G., WILCZYŃSKI J. (2018) – The Gravettian and the Epigravettian Chronology in Eastern Central Europe: A Comment on Bösken et al. (2017). *Palaeogeography, Palaeoclimatology, Palaeoecology*, 506, p. 265-269.
- MIHAILOVIC D., MIHAILOVIC B. (2007) – Considérations sur le Gravettien et l'Épigravettien ancien des Balkans de l'ouest. *Paléo*, 19, p. 115-128.
- MORALA A. (2011) – La spécialisation des activités : concept de l'archéologue et réalité archéologique; les données du site gravettien moyen du Callan (Lot-et-Garonne). *In*: N. Goutas, L. Klaric, D. Pesesse, P. Guillermin (dir.), *À la recherche des identités gravettiennes : actualités, questionnements et perspectives*, Proceedings of the round table of Aix-en-Provence (6-8 October 2008). Paris, Société préhistorique française (Mémoires, 52), p. 343-358.
- MOREAU L., BRANDL M., NIGST P.R. (2016) – Did Prehistoric Foragers Behave in an Economically Irrational Manner? Raw Material Availability and Technological Organisation at the Early Gravettian Site of Willendorf II (Austria). *Quaternary International*, 406 A, p. 84-94.
- MUSSI M., ROEBROEKS W. (1996) – The Big Mosaic. *Current Anthropology*, 37, p. 697-699.
- NEEDHAM R. (1975) – Polythetic Classification: Convergence and Consequences. *Man*, 10, p. 349-369.
- NOIRET P. (2009) – *Le Paléolithique supérieur de Moldavie. Essai de synthèse d'une évolution multi-culturelle*. Liège, Université de Liège (ERAUL, 121), 609 p.
- OTTE M. (dir.) (2013) – *Les Gravettiens*. Paris, Errance, 351 p.
- OTTE M., KEELEY L.H. (1990) – The Impact of Regionalism on Palaeolithic Studies. *Current Anthropology*, 31, p. 577-582.
- PÉAN S., PUAUD S., CRÉPIN L., PRAT S., QUILES A., VAN DER PLICHT J., VALLADAS H., STUART A.J., DRUCKER D.G., PATOU-MATHIS M., LANOË F., YANEVICH A. (2013) – The Middle to Upper Paleolithic Sequence of Buran-Kaya III (Crimea, Ukraine): New Stratigraphic, Paleoenvironmental, and Chronological Results. *Radiocarbon*, 55, p. 1454-1469.
- PERLÈS C. (2013) – Tempi of Change: When Soloists Don't Play Together. Arrhythmia in 'Continuous' Change. *Journal of Archaeological Method and Theory*, 20, p. 281-299.
- PESESSE D. (2008) – *Les premières sociétés gravettiennes: analyse comparée des systèmes lithiques de la fin de l'Aurignacien aux débuts du Gravettien*. PhD thesis, Université de Provence, 276 p.
- (2013) – Le Gravettien existe-t-il? Le prisme du système technique lithique. *In*: M. Otte (dir.), *Les Gravettiens*. Paris, Errance, p. 67-104.
- (2017) – Is it still Appropriate to Talk about the Gravettian? Data from Lithic Industries in Western Europe. *Quartär*, 64, p. 107-128.
- (2018) – Le Périgordien, quelle erreur! *Paléo*, 29, p. 179-199.
- PESESSE D., FLAS D. (2011) – The Maisierian, at the Edge of the Gravettian. *Proceedings of the Prehistoric Society*, 78, p. 95-109.

- POLANSKÁ M., HROMADOVÁ B. (2015) – Réflexion autour des industries gravettiennes ‘post-pavloviennes’ de Slovaquie occidentale et de Moravie (25,500/24,500–22,000 BP non calibré). In: S. Sázlová, M. Novák, A. Mizerová (ed.), *Forgotten Times and Spaces: New Perspectives in Paleoanthropological, Paleoetnological and Archaeological Studies*. Brno, Institute of Archeology of the Czech Academy of Sciences & Masaryk University, p. 132-154.
- POSTH C., RENAUD G., MITTNIK A., DRUCKER D.G., ROUGIER H., CUPILLARD C., VALENTIN F., THEVENET C., FURTWÄNGLER A., WISSING C., FRANCKEN M., MALINA M., BOLUS M., LARI M., GIGLI E., CAPECCHI G., CRÈVECŒUR I., BEAUVAL C., FLAS D., GERMONPRÉ M., VAN DER PLICHT J., COTTIAUX R., GÉLY B., RONCHITELLI A., WEHRBERGER K., GRIGOURESCU D., SVOBODA J., SEMAL P., CARAMELLI D., BOCHERENS H., HARVATI K., CONARD N.J., HAAK W., POWELL A., KRAUSE J. (2016) – Pleistocene Mitochondrial Genomes Suggest a Single Major Dispersal of Non-Africans and a Late Glacial Population Turnover in Europe. *Current Biology*, 26 (6), p. 827-833.
- PRAT S., PÉAN S., CRÉPIN L., DRUCKER D., PUAUD S., VALLADAS H., LÁZNIČKOVÁ-GALETOVÁ M., VAN DER PLICHT J., YANEVICH, A. (2011) – The Oldest Anatomically Modern Humans from Far Southeast Europe: Direct Dating, Culture and Behavior. *PLoS ONE*, 6, p. e20834.
- REVEDIN A., LONGO L., MARIOTTI LIPPI M., MARCONI E., RONCHITELLI A., SVOBODA J., ANICHINI E., GENNAI M., ARANGUREN B. (2015) – New Technologies for Plant Food Processing in the Gravettian. *Quaternary International*, 359-360, p. 77-88.
- REYNOLDS N. (2020) – Threading the Weft, Testing the Warp: Population Concepts and the European Upper Palaeolithic Chronocultural Framework. In: H. Groucutt (ed.), *Culture History and Convergent Evolution: Can We Detect Populations in Prehistory?* Cham, Springer, p. 187-212.
- REYNOLDS N., LISITSYN S.N., SABLIN M.V., BARTON N., HIGHAM T. (2015) – Chronology of the European Russian Gravettian: New Radiocarbon Dating Results and Interpretation. *Quartär*, 62, p. 121-132.
- REYNOLDS N., DINNIS R., BESSUDNOV A.A., DEVIÈSE T., HIGHAM T. (2017) – The Kostënki 18 Child Burial and the Cultural and Funerary Landscape of Mid Upper Palaeolithic European Russia. *Antiquity*, 91, p. 1435-1450.
- REYNOLDS N., GERMONPRÉ M., BESSUDNOV A.A., SABLIN M.V. (2019) – The Late Gravettian site of Kostënki 21 Layer III, Russia: a Chronocultural Reassessment Based on a New Interpretation of the Significance of Intra-site Spatial Patterning. *Journal of Paleolithic Archaeology*, 2, p. 160-210.
- ROBERTS B.W., VANDER LINDEN M. (2011) – Investigating Archaeological Cultures: Material Culture, Variability, and Transmission. In: B.W. Roberts, M.V. Linden (ed.), *Investigating Archaeological Cultures: Material Culture, Variability, and Transmission*. New York, Springer, p. 1-21.
- ROEBROEKS W., MUSSI M., SVOBODA J., FENNEMA K. (ed.) (2000) – *Hunters of the Golden Age: The Mid Upper Palaeolithic of Eurasia 30,000 – 20,000 BP*. Leiden, University of Leiden (Analecta Praehistorica Leidensia, 31), 410 p.
- RONCHITELLI A., MUGNAINI S., ARRIGHI S., ATREI A., CAPECCHI G., GIAMELLO M., LONGO L., MARCHETTINI N., VITI C., MORONI A. (2015) – When Technology Joins Symbolic Behaviour: The Gravettian Burials at Grotta Paglicci (Rignano Garganico – Foggia – Southern Italy). *Quaternary International*, 359-360, p. 423-441.
- SCHMIDT I., BRADTMÖLLER M., KEHL M., PASTOORS A., TAFELMAIER Y., WENINGER B., WENIGER G.-C. (2012) – Rapid Climate Change and Variability of Settlement Patterns in Iberia during the Late Pleistocene. *Quaternary International*, 274, p. 179-204.
- SIMONET A. (2017) – Gravettians at Brassempouy (Landes, France), 30,000 BP: a Semi-Sedentary Territorial Organization? *World Archaeology*, 49, p. 648-665.
- SINITSYN A.A. (2015) – Perspectives on the Palaeolithic of Eurasia: Kostënki and Related Sites. In: N. Sanz (ed.), *Human Origin Sites and the World Heritage Convention in Eurasia*, Vol. 1 (HEADS 4). Paris & Mexico City, UNESCO, p. 163-189.
- ŠKRDLA P., NEJMAN L., BARTÍK J., RYCHTAŘÍKOVÁ T., NIKOLAJEV P., EIGNER J., NÝVLTOVÁ FIŠÁKOVÁ M., NOVÁK J., POLANSKÁ M. (2016) – Mohelno – A Terminal Last Glacial Maximum Industry with Microlithic Tools made on Carenooidal Blanks. *Quaternary International*, 406 A, p. 184-194.

- SØRENSEN M.L.S. (2014) – The Archaeological Culture Concept: Hot or Cold Understandings. In: H. Alexandersson, A. Andreeff, A. Bünz, (ed.), *Med Hjärta Och Hjärna: En Vänbok till Professor Elisabeth Arwill-Nordbladh*. Gothenburg, Department of Historical Studies, University of Gothenburg, p. 247-258.
- STAUBWASSER M., DRĂGUŞIN V., ONAC B.P., ASSONOV S., ERSEK V., HOFFMANN D.L., VERES D. (2018) – Impact of Climate Change on the Transition of Neanderthals to Modern Humans in Europe. *Proceedings of the National Academy of Sciences*, 115, p. 9116-9121.
- STEGUWEIT L., CÂRCIUMARU M., ANGHELINU M., NIŢĂ L. (2009) – Reframing the Upper Palaeolithic in the Bistriţa Valley (Northeastern Romania). *Quartär*, 56, p. 139-157.
- SVOBODA J.A. (2007) – The Gravettian on the Middle Danube. *Paléo*, 19, p. 203-220.
- (2015) – Perspectives on the Upper Palaeolithic in Eurasia: the Case of the Dolní Vestonice-Pavlov Sites. In: N. Sanz (ed.), *Human Origin Sites and the World Heritage Convention in Eurasia*, Vol. 1 (HEADS 4). Paris & Mexico City, UNESCO, p. 190-204.
- TALAMO S., PERESANI M., ROMANDINI M., DUCHES R., JÉQUIER C., NANNINI N., PASTOORS A., PICIN A., VAQUERO M., WENIGER G.-C., HUBLIN J.-J. (2014) – Detecting Human Presence at the Border of the Northeastern Italian Pre-Alps. ¹⁴C Dating at Rio Secco Cave as Expression of the First Gravettian and the Late Mousterian in the Northern Adriatic Region. *PLoS ONE*, 9, p. e95376.
- TEYSSANDIER N., ZILHÃO J. (2018) – On the Entity and Antiquity of the Aurignacian at Willendorf (Austria): Implications for Modern Human Emergence in Europe. *Journal of Paleolithic Archaeology*, 1, p. 107-138.
- TOMÁŠKOVÁ S. (2003) – Nationalism, Local Histories and the Making of Data in Archaeology. *Journal of the Royal Anthropological Institute*, 9, p. 485-507.
- TOUZÉ O. (2018) – Aux prémices du Gravettien dans le Nord-Ouest européen. Étude de la production des pointes lithiques à Maisières-Canal (Province de Hainaut, Belgique). *Bulletin de la Société préhistorique française*, 115, p. 455-495.
- TRIPP A. (2016) – A Cladistics Analysis Exploring Regional Patterning of the Anthropomorphic Figurines from the Gravettian. In: L. Mendoza Straffon (ed.), *Cultural Phylogenetics: Concepts and Applications in Archaeology*. Cham, Springer, p. 179-202.
- VALENTIN B. (2008) – *Jalons pour une paléohistoire des derniers chasseurs (XIV^e-VI^e millénaire avant J.-C.)*. Paris, Publications de la Sorbonne (Cahiers archéologiques de Paris 1, 1), 325 p.
- VANDER LINDEN M., ROBERTS B.W. (2011) – A Tale of Two Countries: Contrasting Archaeological Culture History in British and French Archaeology. In: B.W. Roberts, M.V. Linden (ed.), *Investigating Archaeological Cultures: Material Culture, Variability, and Transmission*. New York, Springer, p. 23-40.
- WILCZYŃSKI J., WOJTAL P., ŁANCZONT M., MROCZEK P., SOBIERAJ D., FEDOROWICZ S. (2015) – Loess, Flints and Bones: Multidisciplinary Research at Jaksice II Gravettian Site (Southern Poland). *Quaternary International*, 359, p. 114-130.
- WOJTAL P., WILCZYŃSKI J. (2015) – Hunters of the Giants: Woolly Mammoth Hunting during the Gravettian in Central Europe. *Quaternary International*, 379, p. 71-81.
- WOJTAL P., WILCZYŃSKI J., NADACHOWSKI A., MÜNZEL S.C. (2015) – Gravettian Hunting and Exploitation of Bears in Central Europe. *Quaternary International*, 359-360, p. 58-71.
- YANEVICH A. (2014) – Les occupations gravettiennes de Buran-Kaya III (Crimée) : contexte archéologique. *L'Anthropologie*, 118, p. 554-566.