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INTRODUCTION

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This volume is the outcome of an ambitious three-year program of educational and research exchanges between students and faculty of the *Center for the Study of Human Origins* at *New York University* (CSHO), allied with the *Center for International Research in the Humanities and Social Sciences* (CIRHUS - UMI 3199 CNRS-NYU), and the *CNRS-UMR 5608 TRACES* at the *Université Toulouse Jean Jaurès*. The collaboration has been generously funded by the *Partner University Fund* (PUF) with the help of additional contributions to that fund by the *Mellon Foundation*. The goal of the PUF is to foster collaboration and exchange between French and American researchers and students.

The current set of papers results from the PUF-funded international symposium held in New York in April, 2013 entitled, *Aurignacian Genius: Art, daily life and social identity of the first modern humans in Europe*. Because of the nature of the PUF enterprise, there was a predominately French presence within the *Aurignacian Genius* project. In order to broaden the geographic scope of researchers (Floss *et al.*; Álvarez; Garate *et al.*) and subjects at the symposium, we sought and received additional funding from CSHO at *New York University*. While the geographic scope of the symposium and the resulting volume of papers still lacks a certain geographic breadth, it was the best that could be accomplished with the resources available.

The focus of this collaboration and of the current set of papers is the Aurignacian phenomenon (ca. 43 000 to 33 000 BP cal.), a remarkable set of innovations that permitted modern *Homo sapiens* to replace the longstanding and successful populations of Neandertals across a vast area extending from the Arabian Peninsula and Central Asia in the East, to the area of France and the Iberian Peninsula in the West (Bon; Tryon). These new developments constitute what in Western Eurasia is known as the Middle to Upper Paleolithic transition.

Although there are some isolated glimmerings of modern human behavior among Neandertals and among Modern Human ancestors in Africa and the Near East extending back 100 000 years or more, the European Aurignacian saw a veritable explosion of innovations as it expanded northward and westward in the hands (and minds) of the first members of our species to set foot in Europe. In a zone extending through France, Germany, Belgium, Spain, Italy, Romania, the Czech Republic, Austria and European Russia, Aurignacians left behind a remarkable record of esthetic genius in the form of engraving, painting, stone and ivory sculpture (Floss), personal ornamentation and decorated clothing.

Like an old fashioned photograph, our knowledge of the Aurignacians has been “developing” over the past century with some elements being clearly in focus and others still emerging. Intense scholarly interest has relied heavily on an archeological record recovered decades ago when most important sites relevant to an understanding of this important cultural/biological threshold

were excavated by means of techniques that did not allow for precise spatial and stratigraphic plotting of recovered artifacts. Fine-grained recovery was not practised. Early archeologists were also highly selective in the artifacts that they kept, and which constitute existing research collections. These highly subjective samples of artifacts are inappropriate for many modern forms of analysis (for example the detailed study of the spatial organization of activities across ancient campsites).

The slowly emerging image of the Aurignacians has been accelerated in recent years by the application of a wide range of new methods in archeology, in the context of new, longterm excavations and analyses of newly discovered painted caves (Fritz and Tosello; Garate *et al.*; Petrognani; Sauvet). A new generation of young and dynamic researchers, well represented in this volume, is dramatically changing our understanding of the Aurignacians.

With the aid of modern fine-grained recovery techniques and the study of reduction sequences and spatial distributions of artifacts, even our understanding of Aurignacian lithic and osseous technology and the way it is organized within sites and across regions, is being reconsidered (Chiotti *et al.*; Flas; Tartar). In addition, the more than thirty ¹⁴C dates obtained in the course of the PUF project are beginning to chip away at some old assumptions about directional change through time.

Aurignacian weapon systems, using antler and stone projectiles, were characterized by ingenious fabrication and hafting systems for arming the tips of spears. Now much better understood thanks to Élise Tartar's work in the *Aurignacian Genius* project (Tartar), the technological logic underlying Aurignacian split-based point technology remains puzzling.

The Aurignacians met the challenge of cold, glacial conditions with innovations in fire technology that included pit fireplaces lined with heat-reflecting stone slabs and fuelled with fat-containing bones and resinous woods. These fire features seem to have been the focal point for Aurignacian technical and social action. In some cases, such as at Abri Castanet, these fire features appear to have been sheltered behind draperies of skin, anchored by cords to free-standing stone blocks and to the overhang ceilings of caves and rock shelters. In other cases, such as at Régismont-le-Haut, there is evidence for pyrotechnology on a scale previously unknown for the Upper Paleolithic.

Awls and smoothing tools bear witness to clothing technology that made use of animal skins and plant / animal fibers for sewing them. There is now clear evidence that such garments were decorated with hundreds of sequin-like beads made of ivory and soapstone. This clothing technology allowed Aurignacian survival in some of the coldest, harshest environments of the past 100 000 years; yet it is always invested with ornamentation and symbolism.

Aurignacian personal ornaments are rich and variable in form, both through time and across space (Wolf and Conard). They were certainly visually stunning and tactilely evocative, composed of noble raw materials such as ivory, enamel, mother-of-pearl, soapstone and amber. In the context of their dispersal into Europe, Aurignacians invented the use of metallic abrasives (powdered hematite) for creating brilliant, lustrous and highly tactile surfaces.

Aurignacian cosmology was complex and imaginative, including the presence of mythological human-animal figures sculpted in ivory, painted on cave walls and engraved on rockshelter ceilings. Represented animals are almost never the same as the ones that were dietarily important, harking back to Levi-Strauss's old dictum that "some animals are good to eat and others good to think".

Aurignacian funerary practices leave us perplexed. No burials are known but there is new evidence of the recovery, perforation and wearing of teeth from human corpses (White and Normand).

Paintings are technically elaborate and made use of complex paint mixes. Construction of painted panels was highly structured and purposely (Fritz and Tosello). At Chauvet, the different panels coalesce into a narrative about lion hunting (Azéma). Even more remarkably, different panels on different planes were conceptualized to converge into a single three-dimensional image, part of what Marc Azéma refers to as “the prehistory of cinema”.

Far from Chauvet, in SW France, painted and engraved representations on shelter ceilings and on free-standing blocks within living sites speak to a more quotidien context. The stunning engraved aurochs from Abri Blanchard, discovered in the course of the *Aurignacian Genius* project, provides entirely new insights into the dating and context of Aurignacian graphic arts in the classic zone of Aurignacian research (Bourrillon and White).

It is not trivial that the sites excavated during the Aurignacian Genius project have yielded more than forty new engraved / painted / perforated limestone slabs, fourteen from Abri Cellier alone. These expand our understanding of the Aurignacian “repertoire” and, combined with experimental replication, have given us new insights into techniques of the earliest graphic representation.

The Aurignacians also invented the first known wind instruments, four-holed flutes generally manufactured of vulture wing-bones, but also of meticulously-worked mammoth ivory.

The greatest Aurignacian innovations may have been social ones, for example, far reaching social networks that involved long distance procurement of exotic materials such as amber, soapstone, marine shells and even flint. A rich corpus of personal ornamentation is patterned regionally and is best interpreted as a communicator of social identity at local, regional and inter-regional scales. The same is true of graphic and plastic representation, which shows clear regional variability against a common Aurignacian backdrop of subjects, forms and techniques. The study of lithic and osseous equipment leaves us to suspect important sociological changes at the beginning of the Aurignacian.

Many of the contributions to this volume, published simultaneously in French and English, present entirely new research programs, data and discoveries that result directly from the research undertaken during the PUF Aurignacian Genius project (O'hara *et al.*). Importantly, much of that new information about the Aurignacian is being produced by younger scientists, including doctoral students. There is still much to learn about the Aurignacian phenomenon, but *Aurignacian Genius* has certainly taken us a few steps forward in our understanding of these remarkable early European ancestors.

