



Europe at 30.000 BP: Conservative Neanderthals and innovative early Moderns? A comparison between the Black Sea region and Central Europe

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Whereas the question about the earliest arrival of *Homo sapiens sapiens* in Europe is still unresolved after new AMS-dates for the calvarium from Vogelherd in South-western Germany showed that previous dates around 32 kyr were much too old, early moderns unquestionably reached the western “cul-de-sac” of Eurasia at 30 kyr. Wherever found securely dated in an undisputable association with artifacts, earliest European *Homo sapiens sapiens* fossils were assigned to the Gravettian. Neanderthal remains, however, appear until 30 kyr in the archeological record of Eurasia, but were never found in archeological horizons bearing Gravettian materials. Even if compared to earlier Upper Paleolithic industries, e. g. the Aurignacian, Gravettian assemblages are characterized by many innovative features such as backed implements, shouldered points, advanced methods for the production of blades, sophisticated artifacts made of bone, antler or ivory, large settlements with complex structures, and a widely distributed, yet diverse range of non-utilitarian objects. To the contrary, it is generally agreed upon the assumption that late Middle Paleolithic industries correlating with Neanderthal man not only lack the majority of truly Upper Paleolithic features, but at the same do not exhibit much potential for innovations. But still, Neanderthals managed to survive in Iberia, the Balkans and Crimea until approximately 28 kyr, when the Gravettian was well established in other areas of Europe. It has to be questioned whether late Middle Paleolithic societies really tend to be conservative rather than innovative, and, if so, what reasons were responsible for these differences. In addition, it may be asked if Europe’s last Neanderthals lived in remote refuges, untouched by “Out-of-Africa II”-movements, or were able to compete for areas with favorable resources. To explore this question, two regions with numerous sites dating between 30 and 25 kyr are compared: Southwestern Germany, which some authors interpret

as a center of early Upper Paleolithic inventions at 30 kyr, and Crimea, where Neanderthals simultaneously lived in a Middle Paleolithic context. All stratigraphical sequences from Southern Germany show a clear break between Middle and Upper Paleolithic at 38 kyr, with no indications of a temporal overlap. Instead, Aurignacian assemblages mark the beginning of a phase in which innovations occur in rapid succession. Finally, assemblages like Geißenklösterle or Hohle Fels are amongst the earliest in Europe that contribute to the rise of Gravettian technologies and behavior shortly after 30 kyr. Crimea tells a different story. At the momentary state of knowledge, it becomes more and more apparent that Crimean Neanderthals living at sites like Kabazi II, Kabazi V, Chokurcha I, Starosel'e and Buran-Kaya III established an Upper Paleolithic settlement pattern. In doing so, they were using advanced, but nevertheless Middle Paleolithic concepts of artifact production and usage. It is not before 28 kyr that Aurignacian and (Epi-)Gravettian industries indicate a continuous presence of *Homo sapiens sapiens*, and Middle Paleolithic assemblages disappear. If at all, earlier appearances of moderns in Crimea were only sporadic.

With several deeply stratified sites, well dated between 30 and 28 kyr, and environmental data at hand, both regions offer the possibility to test hypothesis that might help to answer the questions stated above. Among others, these hypotheses include possible differences in the speed and amplitude of environmental changes, different demographic developments (that might be linked to the richness and spatial distribution of resources as well as to hunting and subsistence strategies), and differences in the social acceptance of innovations between archaics and moderns.