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SOME FACTS SUPPORTING AN IMMIGRATION THEORY OF ANATOMICALLY MODERN MAN INTO EUROPE RATHER THAN THE THEORY OF MORPHOLOGICAL TRANSITION FROM *H.S. NEANDERTHALENSIS* TO *H.S. SAPIENS*

by

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The chronological range in which Neanderthal existed in Europe is relatively estimated to between ca. 200 000 to 30 000 years B.P. However, very few remains of *Homo sapiens neanderthalensis*, as well as those of *H.s. sapiens*, have so far been dated directly by any absolute dating technique. Dates given are usually those processed on other organic materials, charcoal and wood but not bones, associated with cultural material – Mousterian. Especially the latter allow only a very general "relative" age estimation. Since there seems to be, however, some disagreement whether the Mousterian was solely associated with the Neanderthals and the succeeding Aurignacian solely with "anatomically modern man" (*H.s. sapiens*), dates associated with cultural materials do not actually and accurately assign secure chronological fixpoints to either group. The Mousterian seems to have lasted until 30 000 to 26 000 years B.P. and earliest *H.s. sapiens* seems to have appeared well before 32 000 years B.P. All known Neanderthal finds from France, Central Europe, and Eastern Europe have so far not been dated directly. The research conducted here deals with a few direct absolute dates on remains of bones of *H.s.n.* and *H.s.s.* from two cave sites in Jugoslavia (Velica Pecina and Vindija) as well as some on *H.s.s.* in Germany (Kelsterbach, Paderborn and others). The range of dates is from ca. 27 000 to 42 000 years B.P. Some were dated solely by Radiocarbon and some were dated by both Radiocarbon and Amino-Acid dating. As a control, dates on associated faunal material were processed. Admittedly a fex dates on latest Neanderthal and earliest anatomically modern man do not securely support a theory of the extinction of one group and the sudden appearance or immigration of another group. They are, however, a step forward in the direction of dating materials of hominids absolutely and directly, especially since latest and most earlier Neanderthals lived in cave sites, a circumstance which makes it possible to date these materials absolutely by Radiocarbon as well as Amino-Acid dating. Cave sites provide fairly accurate temperature readings for the computation of dates to Amino-Acid dating. Even though problems concerning the accuracy of dates, especially with Amino-Acid dating, are far from having been solved, a combination of techniques makes it possible to obtain fairly accurate

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dates in some sites. Where too much material is needed for conventional radiocarbon dating small samples can now be dated by C-14 acceleration dating, extending the chronological range from 55 000 to close to 100 000 years B.P. Present problems seem to be more in the availibility of samples excavated long ago, as well as in extensive contamination which is mostly due to the post-excavation history.