Upper Paleolithic Radiocarbon Chronology in Levant and Europe

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In our own research project for chronological reevaluation, we began to evaluate reliability assessment of radiocarbon dates from the Levantine Upper Paleolithic industries. A series of reviews of chronological data has been reported by leading archaeologists (e.g., Bar-Yosef et al. 2006); however, the qualification of absolute data was not counted in previous works and the integrity of stratigraphic layers was assumed. In terms of technical confidence in the measurements and adequacy of material types and archaeological provenance, the data reliability is rated on a scale of one to five. All of the \(^{14}\text{C}\) data with its reliability and cited reference have been managed on the Neandat database run by project B02. To discuss the detail duration of an archaeological site and lithic industry, we have calibrated the \(^{14}\text{C}\) age to the calendar date, and estimated likelihood time-span on the basis of cumulating of the calibrated dates.

Tables present the estimated durations of upper Paleolithic and Epipaleolithic industries. They were calculated from all of the \(^{14}\text{C}\) data, the highly reliable \(^{14}\text{C}\) data and archaeological chronology respectively. The estimation from the reliable \(^{14}\text{C}\) data provided relatively agreement with archaeological chronology. It is important to notice that this estimation is derived from only scientific assessment without archaeological data screening and represented as calendar dates. To validate this approach, we are investigating the \(^{14}\text{C}\) data from not only Levant but also Europe in which chronological works have already been developed in the Stage 3 project (Van Andel and Davies 2003).

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Estimated durations of the lithic industries. Late/terminal Upper Paleolithic (LTUP); Kebaran (KB); Geometric Kebaran (GKB); Mushabian and Related Industries (MSB); Natufian (NTF); Hurifian (HIF); Non Natufian Microlithic (NNM); Non Microlithic (NM); Natufian and Related Industries (NTF).