
Modelling radiocarbon dates and site counts: paleo-demographical dynamics in the western Scheldt Basin in Belgium and Northern France

Elliot Dewerte^{*†1} and Philippe Crombé^{‡1}

¹Research group Prehistory of Europe, Department of Archaeology, Ghent University –
Sint-Pietersnieuwstraat 35, 9000 Ghent, Belgium

Abstract

The Mesolithic in the western Scheldt drainage basin has been extensively studied during the last few decades. The total number of sites in western Belgium and Northern France already exceeds one hundred, in considerable part having been extensively dated.

Owing to the ever growing number of radiocarbon dates within this area, the opportunity presents itself to attempt to reconstruct paleo-demographic dynamics through the use of summed radiocarbon probability distributions. This has proven to be a popular, if flawed, proxy in modelling demographic processes; particularly during the preceding decade.

The distributions, after careful selection and correction of the data, form a preliminary model of demographic evolutions. The resulting major troughs in the probability distributions possibly coincide with short-lived climatic events such as the well-known 8,2 ka event. Due to its inherent flaws and uncertainties we have supplemented the summed probability distributions with site count analyses in order to compare results and test the validity of the method.

By utilizing the modelling of radiocarbon dates and site count analyses we present preliminary paleo-demographic reconstructions coupled with a critical approach of the use and evaluation of radiocarbon modeling of demographic processes.

Keywords: Scheldt drainage basin, Paleo, demography, summed probability distributions, site count analyses, Belgium, Northern, France

*Speaker

†Corresponding author: elliot.dewerte@ugent.be

‡Corresponding author: philippe.crombe@ugent.be