Archaeological genetics: It's not all as old as it at first seems

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Genomic analyses suggest that patterns of genetic diversity which indicate population movement may not be as ancient as previously believed, but may be attributable to recent events. This study published in BioMed Central's open access journal *Investigative Genetics*, based in the Netherlands, is able to genetically characterize geographically separated subpopulations within the country and map them to population movement within the last 2000 years.

Looking at more than 400,000 SNPs (genetic variations) of almost 1000 people across the Netherlands, this study found that the genomic diversity across the Netherlands follows a southeast to northwest gradient and that the Dutch population could be separated out genetically into four geographic groups (south, north, central-west and central-north).

These results could be explained by invoking movement of ancient, Paleolithic-Neolithic humans, similar to that proposed to explain the genetic diversity across central entire Europe. However the data also fits a model involving movement of people within the last 70 generations of modern Dutch, for which there is a wealth of archaeological evidence.

Prof Manfred Kayser from the Erasmus University Medical Center in Rotterdam, who led the study, commented, "Because of the overwhelming geological and archaeological records for strong genetic discontinuities we explain our findings by recent rather than ancient events in Dutch population history. Our results not only are of

epidemiological and forensic relevance but additionally highlight that future population history studies need to take into account recent demography before assuming all genetic variation observed is due to ancient events."

More information: *Investigative Genetics* 2013, 4:7
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