

Homer's great literary masterpieces dated by study of Greek language evolution

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(Phys.org)—Homer's great masterpieces, *The Iliad* and *The Odyssey*, have been dated to around 762 BCE by new research based on the statistical modelling of language evolution.

Scientists from the University of Reading used evolutionary-linguistic [statistical methods](#) to compare the [language](#) in Homer's *Iliad* with Modern Greek and Hittite (an [extinct language](#) in Anatolian branch of Indo European languages, 1200-1600 BCE) and have confirmed what many historians and classicists have long believed; that these literary classics date from the 8th century BCE.

Professor Mark Pagel's research team analysed the differences in a common set of vocabulary items between Homeric Greek, Modern Greek and ancient Hittite and assessed the probable times in years separating these languages, given the percentage of words they shared combined with the knowledge of the rates at which different words change. The research dated the Homeric epics with a 95% certainty within a date range of 376 BCE and 1157 BCE, with a mean estimate of 762 BCE.

Professor Pagel said: "Our analysis of *The Iliad* has not been informed by historical, archaeological or cultural information but by a statistical analysis of shared vocabulary between three languages and the rates of lexical replacement in Indo European languages. Yet, our estimated dates fall in the middle of classicists' and historians' preferred date for Homer. The outcome of this research on *The Iliad* demonstrates the way in

which language can be used, like genes, to unravel questions in history, archaeology and anthropology."

Professor Pagel's previous research on the evolution of [human languages](#) has built up a picture of how our 7,000 living human languages have evolved. Professor Pagel and his research team have documented the shared patterns in the way we use language and researched why some words succeed and others have become obsolete over time by using statistical estimates of rates of lexical replacement for a range of vocabulary items in the Indo-European languages. The variation in replacement rates makes the most common vocabulary items in these languages promising candidates for estimating the divergence between pairs of languages.

Professor Pagel's research has been published this week in the journal *BioEssays*.

More information: onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291521-1878/earlyview

Provided by University of Reading

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