

# Mother tongue comes from your prehistoric father

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(PhysOrg.com) -- Language change among our prehistoric ancestors came about via the arrival of immigrant men - rather than women - into new settlements, according to new research.

The claim is made by two University of Cambridge academics, Peter Forster and Colin Renfrew, in a report to be published in *Science* on September 9.

They studied the instances of [genetic markers](#) (the male Y chromosome and female mtDNA) from several thousand individuals in communities around the world that seem to show the emergence globally of sex-specific transmission of [language](#).

From Scandinavian Vikings who ferried kidnapped British women to

Iceland – to African, Indian and Polynesian tribes, a pattern has emerged which appears to show that the arrival of men to particular geographic locations – through either agricultural dispersal or the arrival of military forces – can have a significant impact on what language is spoken there.

Professor Renfrew said: “It may be that during colonisation episodes by emigrating agriculturalists, men generally outnumber women in the pioneering groups and take wives from the local community.

“When the parents have different linguistic backgrounds, it may often be the language of the father which is dominant within the family group.”

Dr Forster also pointed to the fact that men have a greater variance in offspring than women – they are more likely to father children with different mothers than vice versa. This has been recorded both in prehistoric tribes such as the 19th and 20th century Polar Eskimos from Greenland and in historic figures like Genghis Khan, who is believed to have fathered hundreds of children.

Indeed, his Y chromosome is carried by 0.5 per cent of the world’s male population today.

Perhaps the most striking example of sex-biased language change however comes from a genetic study on the prehistoric encounter of expanding Polynesians with resident Melanesians in New Guinea and the neighbouring Admiralty Islands. The New Guinean coast contains pockets of Polynesian-speaking areas separated by Melanesian areas. The Polynesian [mtDNA](#) level (40-50%) is similar in these areas regardless of language, whereas the [Y chromosome](#) correlates strongly with the presence of Polynesian languages.

Past studies have shown similar findings in the Indian subcontinent among the speakers of Tibeto-Burman and among the immigrant Indo-

European languages as opposed to indigenous Dravidian languages.

In the Americas, too, language replacement in the course of postulated farming dispersal has also been found to correlate for the Uto-Aztecan language family.

Added Forster: “Whether in European, Indian, Chinese or other languages, the expression ‘mother tongue’ and its concept is firmly embedded in popular imagination – perhaps this is the reason why for so many years the role of fathers, or more likely, specific groups of successful males, in determining prehistoric language switches has not been recognised by geneticists.”

“Prehistoric women may have more readily adopted the language of immigrant males, particularly if these newcomers brought with them military prowess or a perceived higher status associated with farming or metalworking.

“We’re very grateful to all those thousands of people across the world who participated in our DNA ancestry tests and thereby contributed to our research.”

Provided by University of Cambridge

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