

ARCHE Seminar Series

Australian Research Centre for Human Evolution



“Why did Moderns replace Neanderthals and not vice versa?”

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Abstract

Great attention and heated debate have been directed towards the causes of the Neanderthals' repaid replacement across Europe by Modern humans between 50,000-40,000 years ago. But what did we expect would happen? Is the replacement so different from what a null model would suggest?

Further, less attention has been directed towards an even more intriguing question: given that replacement across Europe could be so swift, what can explain the tens of thousands of years during which the two species' front of interaction was geographically localised to the Levant, and the sudden breakdown of this front? And how come highly divergent cultures seem to have closely co-existed in the Caucasus in this period, for thousands of years?

Finally, it seems unlikely that it is merely a coincidence that the transition from the simple(r) Middle Palaeolithic to the more advanced Upper Palaeolithic complexes of cultural artefacts happened at the same time as the Neanderthal-Modern replacement; however, the simple explanation, of a cognitively and culturally advanced sub-species emerging out of Africa and replacing Neanderthals and Denisovans seems to be missing key supporting evidence that would have been expected.

We suggest that the species' interaction(s), over time and space, and the respective transmission of genes, pathogens, and culture, hold they key to these questions. I will propose a series of eco-evo-inspired models that may provide insight regarding these dynamics, bringing together biological and cultural evolution.

Date/Time: Thursday, 19 March 2026 @ 11:00am
Location: N78_-1.13 and/or MS Teams
MS Teams: **Meeting ID:** 495 056 319 048 65 | **Passcode:** Nn3df7dC