**On the antiquity of language: There interpretation of Neandertal linguistic capacities and its consequences**

The author thinks the modern language is not a recent phenomenon, is likely an ancient feature of our genus pre-dating at least the common ancestor of modern humans and Neandertals about half a million years ago. This reassessment will make us understand our own evolution in general and especially for the sciences of speech and language. And the present-day linguistic diversity might better show the properties of the design space for language.

Several lines of evidence suggest that Neandertals lacked language but they used instead perhaps some form of proto language.

1. The general anatomical difference between the modern human and Neandertals.

2. The modern and Neandertal were a different species though the significant differences of their genomes.

3. The differences of the fossil vocal tract and auditory system. Fourth, there seems to be a large gap between the cultural products of Neandertals and their contemporaneous modern humans that might be accounted for in terms of a linguistic deficit.

In summary, Neandertals lacked the specialized speech machinery, the higher language adaptations that would have gone with it, and the general cognitive flexibility to make good use of language.

After their split from this common ancestor, the Neandertal and modern human lineages continued to diverge probably with minimal contact due to the very different and geographically distant areas which they inhabited .And the populations between the Neandertal and modern human form at least 100 kya. Neandertal DNA seemed to support the then current view that they did not contribute to the modern human genetic diversity, however t Neandertals, Denisovans and modern humans were very similar, although of course not identical. The Neandertal and Denisovans had the basic genetic underpinnings that they can recognize modern language and speech but it is possible modern language outstrip their language in some parameter.

The developmental schedule for maturation of Neandertal infants is one important area concerns. Human and Neandertal infants were development slowly , but those hybrids resulting from mixed mating would have been able to be born by mothers and would have been capable of normal development.

Neandertal culture, with its complex tool assemblages and behavioral adaptation to sub-Arctic conditions, therefore there is no possible that Neandertal did not have recognizably modern language. Moreover, the disappearance of Neandertals may be due to some mix of climate change, absorption, competition and genocide.

The direct consequences of speech and language capacities would have been comparable and compatible:

1. We have to think in terms of an evolutionary trajectory where language and cognitive abilities accumulate and change a process still ongoing to this day.
2. The deep time frame supports the idea that the foundations for language were incrementally acquired
3. There may be ample scope for the interplay between population genetics and linguistic diversification.
4. If languages have much deeper historical roots than we have so far supposed, we need to find some way to extend the reach of historical linguistics
5. The greater antiquity of language has important consequences for our theories of linguistic diversity

Therefore, we can assume that the two human lineages probably interacted, interbred, and borrowed culture. So we can speculate some scenarios:

SCENARIO 1

Language shift: modern humans adopted Neandertal languages

SCENARIO 2

Language extinction: Neandertals interacted little and when they did they adopted modern human languages

SCENARIO 3

Pidginization: a new type of language is born by radical simplification

SCENARIO 4

Sustained low intensity contact: a moderate exchange of lexicon and structure

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