Resume of <On the antiquity of language: the reinterpretation of Neandertal linguistic capacities and its consequences>

Various studies demonstrates that Neandertals shared with us something like modern speech and language.We are all under the language evolution and we have language contact in a sense.

Virtually modern language is phylogenetically quite old, being already present in the common ancestor of these two lineages about half a million years ago (that is, five to ten times older than is often assumed).Several proposals about language origins make the assumption that modern language is relatively recent, arising circa 50–100,000 years ago.

After their split from this common ancestor, the Neandertal and modern human lineages continued to diverge. Because of the geographical differences,the Neandertals are physically stronger than the morden human,and the shape of their faces are more angular.A split of the two lineages by at least 400 kya, although there was repeated contact between Neandertal and modern human populations from at least 100 kya.

Recent advances in genetics has already revolutionized our understanding of human evolution.It shows that Neandertals, Denisovans and modern humans were very similar, although of course not identical, hominins.

Morphologically,Neandertals are characterized by cranial dif- ferences from modern humans and by post-cranial robustness.The cranial differences involve long and low brain- cases with volume comparable to (even exceeding) that of modern humans, and the face was prognathous with projecting dentition, and chinless. Many minor details, such as dentition and angle of the semicircular canals, are distinctive. After the recent DNA evidence became available,we can know that modern humans and Neandertals consti- tuted different species.And interbreeding might be taken as evidence than modern humans, Neandertals and Denisovans all belonged to one biologi- cal species.

Modern human infants develop slowly after birth,Neandertal birth canal and conclude that there are some differ- ences in the orientation of the neonate during birth.Likewise, the neonate brain size was similar to that of modern humans,but the developmental trajectory seems to have been relatively different.Therefore,Neandertals and modern humans are capable of supporting the cultural trans- mission required for complex language and culture. Moreover, it seems highly probable that hybrids resulting from mixed mating would have been able to be born by mothers of any lineage and would have been capable of normal development.

Fossilized parts of the vocal and auditory anatomy provide impor- tant information about ancient capacities for speech production and perception. In principle, combined with appropriate models, they could allow relatively robust inferences concerning the capa- bilities of past humans. But, in practice, it turns out that there is enough latitude for fierce debates concerning the appropriateness of the models used and their capacity to distinguish competing hypotheses.Even if these fossils belong to the evolutionary lineage leading not to modern humans but to Neandertals, the date nevertheless sug- gests that modern audition almost certainly predates the common origin of these two lineages.In sum, the evidence points to modern speech capacities in the common ancestor of Neandertals and modern humans.All these changes occurred in the transition from Homo erectus to Homo heidelber- gensis, the common ancestor to both Neandertals and modern humans.Therefore

that this common ancestor was an articulate mammal.There are moreover many other reasons to suspect language was present to utilize the speech channel, which we now turn to.

The Neandertals had a complex stone tool technology (the Mousterian) that required considerable skill and training, with many variants and elaborations.They managed to live in hostile sub-Arctic conditions. They controlled fire, and in addition to game, cooked and ate starchy foods of various kinds.The meager investment in campsites, the relatively narrow range of prey and in particular the apparent neglect of fishing. The kind of cultural and technolog- ical elaboration characteristic of the post-Neolithic is intrinsically connected to intensive population pressure, and the ecological reworking associated with it. One possible reason for the cultural limitations of small populations has to do with the transmis- sion fidelity of culture, with only larger populations having the variance and division of labor to maintain the quality of skills.Finally, we should turn to the issue of Neandertal extinction, often presumed to be a consequence of cultural and technological failure—modern humans wiped them out, as we continue to do to so many other species, and indeed to small ethnic groups of our own species. At the present, there is no clarity on this issue. On the one hand, there were long periods of coexistence with modern humans, especially outside Western Europe, and much evidence of cultural borrowing as reviewed. On the other hand, some redat- ing of fossils suggests that Neandertals may have retreated from areas of Europe before modern humans ever got there, under the severe conditions of the last glaciation. Some scholars incline to the view that Neandertal populations were absorbed rather than extinguished, hence the intermediate traits sometimes found in late Neandertals. Their demography was always fragile. It is worth remembering that many modern human pioneers in diffi- cult environments (like the Norse of Greenland) also simply failed to make it through. Perhaps the disappearance of Neandertals was due to some mix of climate change, absorption, competition and genocide.

This paper is trying to review the evidence supporting the claim that Neandertals, Denisovans and contemporary modern humans shared a similar capacity for modern language, speech and culture.Help us understand the relatively small differences between modern humans, Neandertals and Denisovans will help shed more light on the nature and evolution of speech and language.

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