

*Were the 'modern humans' really all that Modern?*

In the two articles being reviewed *Neandertals and moderns mixed, and it matters* by João Zilhão and *Separating "us" from "them": Neanderthal and modern human behavior* by Pat Shipman. Zilhão suggests that Neanderthals were the original modern species of Europe, that they were as equally advanced to the modern humans they encountered and that their disappearance was actually a genetic fusion. Shipman believes that Neanderthals are extinct, that they were genetically inferior and surprised at any similarities found between the two.

It is now known that Neanderthals were on par with modern humans in cognitive reasoning, and in some technologies, possibly even more advanced. They were successful at creating unique symbolic art forms, for example their jewelry, but the Chauvet cave paintings and figurines in particular. Zilhão states that this art form "...thus postdates by some 5,000 years the arrival of moderns in Europe" (Zilhão p.9). They left behind much in the way of advanced lithic artifacts, blades, and spears, and that they had also been in contact with modern humans for thousands of years, sharing many cultural similarities.

Zilhão suggests that the lose of Neanderthals is not so much a genetic decline leading to extinction, though he does acknowledge that is feasible. He puts forth the suggestion that in the last 5,000 years of their existence, they experienced more of an anagenetic combining, Neanderthals with modern humans. The final and primary push to the merging was more due to a sudden and intense climatic change, causing an extreme demographic decline, one they were just simply unable to recover from. Shipman's view is more skeptical, in his article he says the Neanderthals are no longer here because of the lack of genetic viability he says only moderns had. He says "Neanderthals were clearly outside of the range of morphological and genetic variability of modern humans" (Shipman p.2) and it is just that simple.

Throughout the article Shipman brings forth suggestions of cultural differences that seem, in a rather backhanded sort of way, an acknowledgment of their advancements and also their brutish ancestral-ness. In essence to confirm that in actuality, the old ideas of Neanderthal behaviours as being unrefined are quite justifiably valid. Then saying he acknowledges the contradictory evidence and is surprised at the display of *“unexpectedly modern and complex subsistence strategies”*(Shipman p.1). Though he agrees in part that evidence is coming to light, the Neanderthals have been in the past often looked upon with the equivalence of a lumbering ape it is still an idea he has yet to totally revise. He seems to be just a little too surprised at how advanced Neanderthals have proven to be. Shipman goes on to describe Neanderthals as being powerfully built, bodies specialized to hunt large and dangerous prey and in other words brutish. Sighting the evidence of *“postcranial morphology being adapted for high mobility and close-contact hunting”*(Shipman p.1) not adaptations to cold climates as previously thought, as well as a *“high frequency and distribution of fractures”*(Shipman p.1) . He also gives a comparison of the skills sets of Neanderthal vs modern Human *“left-right asymmetry of arm bones that suggest spear thrusting (rather than throwing) to kill prey”*(Shipman p.1). It is known that modern humans used the Atlatl as an aid in spear throwing. Thus giving them the technological advantage of killing potentially dangerous prey at a distance. It allowed one to use leverage rather than muscle to throw long distances. The implied suggestion here is clear. Modern humans were not brutish they used brains over brawn, they thus had very little in common.

Shipman also doesn't acknowledge the validity of any fossil evidence though is aware of its existence and suggests that much more research has to be done before one can formulate any real conclusions. Zilhão argues that there exists ample proof of the existence of inherited traits that are both modern human and Neanderthal in origin. He says *“Nothing in the genetic and fossil evidence suggests any barriers to the existence of cultural or biological compatibility.”*

(Zilhão p.2) Reminding the reader of the Lagar Velho Child skeleton as a prime example of this hybridization. Zilhão suggests that the idea of admixture is strengthened by archaeological proof of cultural diffusion. Particularly evident is with symbolic art forms in the way of pierced and grooved teeth possibly used strung like necklaces in the Neanderthal regions of Europe but not with modern humans. Modern humans out of Africa did not make personal adornments similar in nature until the time they migrated into Europe. Even though they had the same access to shells, animal teeth, bones etc. Zilhão states that “*Clearly, the alternative view that, after 30 ky of total and absolute conservatism, moderns would have suddenly decided to adopt such kinds of ornaments at precisely the time of contact with the Neanderthals, but independently of any influence from them, amounts to a virtually impossible coincidence.*”(Zilhão p.9)

Shipman discusses and compares what he says is typically considered the four “*hallmarks of modern human behavior*” (Shipman p.2). The first being “*the exploitation of a wide range of terrestrial resources*” (Shipman p.2). He discusses these points from evidence found at the archaeological site of Gorham’s Cave at Gibraltar. He refers to these caves as the Neanderthal last refugeum. He notes evidence of rabbit, deer, and even a rhinoceros. The cave being rich in remains that had been butchered and showing evidence of being cooked and chewed on. The second “*The exploitation of marine resources*” (Shipman p.2). was most evident with the presence of numerous marine animals and shells. The third “*The use of small scale resources*” was evident in the presence of rabbit, mollusks and fish bones. The finally “*seasonality or scheduling in the use of resources*” he gives examples of Neanderthals exploiting the site seasonally due to the evidence of remains immature youth and therefore “*used seasonally to hunt for vulnerable young*”. But even here though he acknowledges the similarities, Shipman shows his biases in the statement “*That modern human subsistence behaviors would show up among archaic humans like Neanderthals, even as late as 28,000 B.P., is startling.*”(Shipman p.2).

It would seem plausible for a race that lived as long as the Neanderthals to have passed on to modern humans through ongoing diffusion, the skills that they had developed. These new humans smaller and less robust could have build on the newly acquired skills and develop or adapted the technologies to be more suited to their smaller size and claimed them as their own.

Zilhão on the other hand suggests *“There is no such thing as Neanderthal behavior”* (Zilhão p.9) and that whenever attempts are made to categorize or define modern human or Neanderthal behavior the analyses ends up simply falling apart. They can’t describe one behavior that they cannot find in the other. Even with the very modern analyses of *“cognition dependent on the acquisition of enhanced working memory (EWM)”* (Zilhão p.9) this function is expected to be in parallel with the use of language and being able to visualize an outcome. This was demonstrated by the discovery of Neanderthals manufacturing a birch bark resin, 40,000 years before modern humans had show any capabilities of doing.

Zilhão determines that the eventual disappearance of all Neanderthals was primarily due a lack of resources and a resultant severe population drop such as through Heinrich Event a cold snap which brought a dramatic and sudden decline in temperatures. This, as well as an explosion of the Phlegraean Fields Caldera, which in turn left them with very few choices in movement. A union with an equally advanced culture and the diffusion of skills and technologies previously unknown would be to their mutual advantage.

The question here is that were the Neanderthals really outside of the range of genetic variability? Or were they as Zilhão seem to suggests more victims of environmental and demographic circumstance. That is extreme climatic changes and a severe lack of resources, effecting the an ability to resume to their previous levels existence. To survive they had to adapt quickly, and blending with modern humans was a simple solution. Another point here being they were just simply genetically outnumbered. The primary advantage the modern humans had was

their overwhelming numbers. Hence the strong genetic influence of modern humans DNA over Neanderthal “... because modern humans were African and Neanderthals European, the modern human gene reservoir must have been many times larger than the Neanderthal one”(Zilhão p.10)

Shipman’s argument of Neanderthals genetic inferiority appears weak and lacks the bases of scientific reasoning that naturally questions old concepts in the light of new evidence. It seems he finds it difficult to move forward and be open to possibilities even when he acknowledges them. Zilhão on the other hand is generous enough to acknowledge the old paradigms can have a valid place, but also understands in the light of the evidence seeing other possible outcomes.

If the situation had been reversed and modern humans did not have the geographical advantage of being in Africa, at the time of the explosion of the Caldara outside of present day Naples. Nor the rapid drop in temperatures experienced in Europe this paper might have the reverse question being posed. Why did ‘modern humans’ become extinct? Weren’t they just like ‘Us?’ Zilhão argument of genetic admixture seems a more balance logical conclusion where as Shipman seems to be trying in vain, despite evidence to the contrary to hold onto the past.