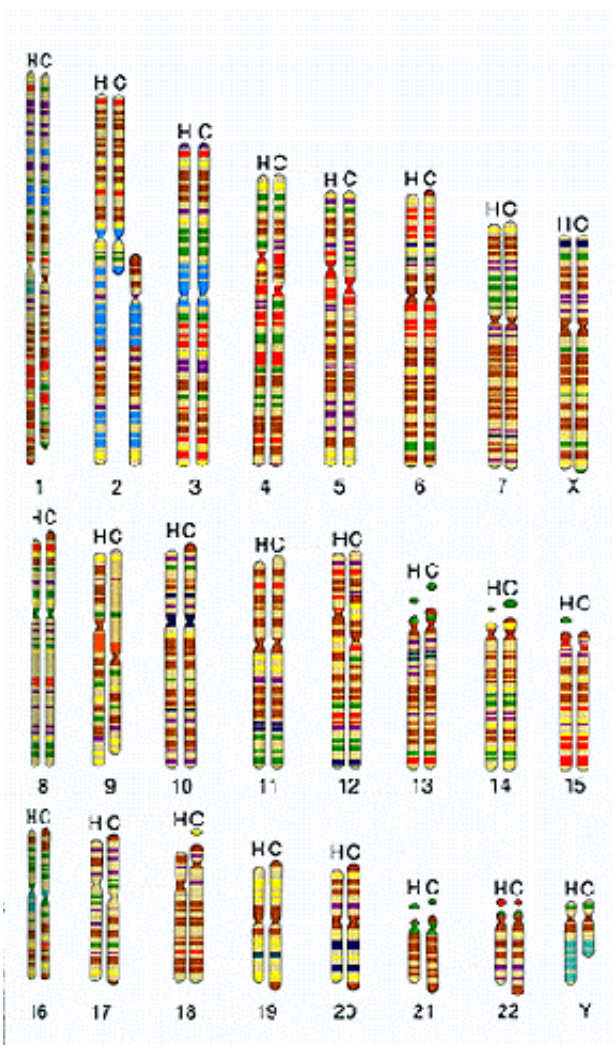


A chimp-pig hybrid origin for humans?

July 3 2013, by John Hewitt



Comparison of human and chimp chromosomes. Credit:
science.kqed.org/quest/2008/05/12/chromosome-fusion-chance-or-design/

(Phys.org) —These days, getting a Ph.D. is probably the last thing you

want to do if you are out to revolutionize the world. If, however, what you propose is an idea, rather than a technology, it can still be a valuable asset to have. Dr. Eugene McCarthy is a Ph.D. geneticist who has made a career out of studying hybridization in animals. He now curates a biological information [website called Macroevolution.net](#) where he has amassed an impressive body of evidence suggesting that human origins can be best explained by hybridization between pigs and chimpanzees. Extraordinary theories require extraordinary evidence and McCarthy does not disappoint. Rather than relying on genetic sequence comparisons, he instead offers extensive anatomical comparisons, each of which may be individually assailable, but startling when taken together. Why weren't these conclusions arrived at much sooner? McCarthy suggests it is because of an *over-dependence* on genetic data among biologists. He argues that humans are probably the result of multiple generations of backcrossing to chimpanzees, which in nucleotide sequence data comparisons would effectively mask any contribution from pig.

Generally speaking, [interspecies](#) hybrids—like mules, ligers (lion-tiger hybrids), or zedonks ([zebra](#)-donkey hybrids)—are less fertile than the parents that produced them. However, as McCarthy has documented in his years of research into hybrids, many crosses produce hybrids that can produce offspring themselves. The mule, he notes, is an exceptionally sterile hybrid and not representative of hybrids as a whole. When it comes time to play the old nuclear musical chairs and produce gametes, some types of hybrids do a much better job. Liger females, for example, can produce offspring in backcrosses with both lions and tigers. McCarthy also points out that fertility can be increased through successive backcrossing with one of the parents, a common technique used by breeders. In the case of [chimp](#) - pig hybridization, the "direction of the cross" would likely have been a male boar or pig (*Sus scrofa*) with a female chimp (*Pan troglodytes*), and the offspring would have been nurtured by a chimp mother among [chimpanzees](#) (shades of Tarzan!).

The physical evidence for this is convincing, as you can discover for yourself with a trip over to macroevolution.net.

When I asked McCarthy if he could give a date estimate for the hybridization event, he said that there are a couple broad possibilities: (1) It might be that hybridization between pigs and apes produced the earliest hominids millions of years ago and that subsequent mating within this hybrid swarm eventually led to the various hominid types and to modern humans; (2) separate crosses between pigs and apes could have produced separate hominids (and there's even a creepy possibility that hybridization might even still be occurring in regions where *Sus* and *Pan* still seem to come into contact, like Southern Sudan).

This latter possibility may not sound so far-fetched after you read the riveting details suggesting that the origin of the gorilla may be best explained by hybridization with the equally massive forest hog. This hog is found within the same habitat as the gorilla, and shares many uncommon physical features and habits. Furthermore, well-known hybridization effects can explain many of the fertility issues and other peculiarities of gorilla physiology.

It is not yet clear if or when [genetic data](#) might support, or refute, our [hybrid](#) origins. The list of anatomical specializations we may have gained from porcine philandering is too long to detail here. Suffice it to say, similarities in the face, skin and organ microstructure alone are hard to explain away. A short list of differential features, for example, would include, multipyramidal kidney structure, presence of dermal melanocytes, melanoma, absence of a primate baculum (penis bone), surface lipid and carbohydrate composition of cell membranes, vocal cord structure, laryngeal sacs, diverticuli of the fetal stomach, intestinal "valves of Kerkring," heart chamber symmetry, skin and cranial vasculature and method of cooling, and tooth structure. Other features occasionally seen in humans, like bicornuate uteruses and supernumerary

nipples, would also be difficult to incorporate into a purely primate tree.

McCarthy has done extensive research into the broader issues, and shortcomings, of our currently incomplete theory of evolution. As the increasing apparent, magnificent, speed with which morphological change can occur continues to present itself for us to comprehend, the standard theory of random mutation followed by slow environmental selection, seems to stall. In my own opinion, female choice undoubtedly provides much of the functional "speed-up" we observe, but other mechanisms of mutation, or pathways for acquired characteristics to be fed back to the gonads (through retroviral transfer?), now need to be considered anew. The role of hybridization in driving morphological change, as McCarthy has observed time and time again, particularly in his [studies of avian species \(Oxford University Press, 2006\)](#), may be the most powerful mechanism of all.

Follow-up story: [Human hybrids: a closer look at the theory and evidence](#)

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