Drew Bradford

Lecture MSCI-160

April 12th 2013

Christopher Jensen

Java Man, chapter 4 is the focus of my final Project. Eugene Dubois, inspired by Darwin's theory of evolution expanded on Darwin's principles and scientific concepts that allowed the scientific community to come to a consensus that there is an evolutionary link between humans and apes. Through the use of fossils, discovered within dated rock layers, Dubois was able to raise the question that there once was a missing link that evolved from apes. Through the analysis of fossils Scientists are able to make educated guesses about details about each species. In order to represent these ideas I re-created the partial skull found by Dubois called Trinil 2. All modeling was done in Autodesk Maya 2013. In order to identify certain characteristics that link Java Man to other branches within the primate lineage, I additionally modeled a modern human skull as well as the earliest known species within the human family tree. The latter species name is called Sahelanthropus tchadensis, specifically modeled after the fossil called TM 266-01-060-1 which was found in 2001 by a team led by Michel Brunet.

By looking and analyzing these three models the concepts of evolution are presented in visual form in a gradual transition into what we consider the modern human. Looking at TM 266-01-060-1 scientists are able to distinguish apelike qualities and compare them to the humanlike features. Humanlike features include small canine teeth, a short middle part of the face, and a spinal cord that is underneath the skull in a way that would insinuate that this species was bipedal. Apelike features include a small brain, sloping face, elongated skull and very prominent brow ridges. This species is estimated to have lived 7-6 million years ago. Fast forward 4-5 million years and the Homo erectus species lived in Africa, Asia, China and Indonesia. This is the same species as Trinil 2, the fossil that Dubois discovered. This top half of this early human skull found in 1891 is long with a flat forehead with a less prominent browridge and sagittal keel. Today modern humans have small flat teeth a large brain relative to our face, as well as a flat forehead. Comparing these 3 fossils in progression of date offers a clear visual indication of the progression that was taken in terms of facial structure during the evolution of humans.

Works Cited

"Human Family Tree." *Human Evolution by The Smithsonian Institution's Human Origins Program*. N.p., n.d. Web. 12 Apr. 2013.

Drew Bradford:

https://vimeo.com/63625981