

## INVESTIGATING ORIGINS

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### “Lucy Gets Disinherited”

In the 1970’s, an earth-shaking discovery of a fossil was made in Ethiopia. The fossil was of a young female who appeared to bear anatomical similarities to both modern humans and chimpanzees. Dated to 3.2 million years ago and popularly named “Lucy,” she was at once decreed to be the missing link between modern humans (*Homo sapiens*) and our evolutionary ancestors.

Scientifically, she was assigned to the species *Australopithecus afarensis*, and, soon after, the remains of several other individuals of Lucy’s species were found in the same area. It soon became scientific dogma that *A. afarensis* branched off into two evolutionary paths: one that led to humans, and one that led to *Australopithecus robustus*, which eventually died out (Bower 2007: 230). “However,” reports the journal *Science News*, “an analysis of *A. afarensis* jaw from a skull discovered in 2002 near Lucy’s site in Ethiopia supports a long-standing minority viewpoint that Lucy’s kind occupied only a side branch of human evolution. *A. afarensis* evolved into the relatively small-brained, large-jawed robust australopithecines but didn’t contribute to the evolution of modern people, says anthropologist Yoel Rak of Tel Aviv University” (Ibid.).

Rak and his colleagues studied the size and shape of the ramus, a horizontal bone that connects the lower jaw to the upper one, and found that the ramus found in Lucy, in *A. robustus*, and in modern gorillas “looks much the same” (Ibid.). Rak’s team asserts that all other primates—including chimpanzees and fossil hominids that some believe to be direct human ancestors—share a ramus configuration different from the one possessed by Lucy, *A. robustus*, and today’s gorillas. According to Rak, these findings “cast doubt on the role of *A. afarensis* [Lucy] as a modern human ancestor” (Ibid.).

Rak and his team studied 146 jaws from 41 humans, 31 gorillas, 29 pygmy chimpanzees, 29 common chimpanzees, and 16 orangutans. They then used a computer program to calculate an average ramus contour for each species group, and found that people, chimpanzees, and orangutans all displayed a similar contour. They further saw that the ramus of a recently unearthed *A. afarensis* jaw, in addition to the ramus bones of partial jaws of the same species excavated earlier, “closely resembles that of the gorilla, Rak says....Two *A. robustus* specimens that retain part of the ramus also show a gorilla-like pattern, the investigators hold” (Ibid.).

The team further discovered that fossilized jaws from hominids called *Ardipithecus ramidus*, which are believed to be mankind’s evolutionary ancestors from 4.5 million years ago, as well as the jaws from ancient *Homo* species (also believed to lie in our evolutionary ancestry), “display a ramus configuration like that of modern chimps” (Ibid.). Rak concludes that Lucy’s species evolved a gorilla-like ramus independently, and passed this trait on to *A. robustus*, not the *Homo sapiens* (Ibid.).

Not all paleontologists and anthropologists agree with Rak, but that is the nature of the science of human origins. A discovery is made, it is sensationalized, and then it is touted as irrefutable evidence for one scientist’s—or one group of scientists’—preferred theory of human origins. The find remains controversial for decades, before another discovery comes along and knocks it from its throne.

Reference:

Bower, B. 2007. "Disinherited Ancestor." *Science News* 171, no. 15.

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