

### **The better angels of our nature**

A master of iambic pentameter, the eminent English poet with a scientist's sensibility, Alexander Pope (1688-1744), wrote:

"Know then thyself, presume not God to scan,  
The proper study of mankind is Man."

If Pope lived today, he might say "the proper study of mankind is the Great Apes," though it would ruin the rhyme. Earth was once truly The Planet of the Apes. Fossils found around the world show at least 100 such species existing over the past 20 million years. Today, only five are left: Bonobo, Chimpanzee, Gorilla, Orangutan and Human. What? Humans are Great Apes? Well, consider that chimpanzee shares approximately 95 percent of our DNA, bonobo a bit more, gorilla and orangutan somewhat less, showing that all Great Apes share common ancestors. We are all cousins, if very distant ones. (The familiar cartoon showing a straight-line progression from knuckle-walking chimp to upright man is misleading, though I like the variation showing a final stage, a man bent over knuckling his computer.) The Neandertal Man, almost human, coexisted with us until just 25,000 years ago. The more we learn about the other Great Apes, past and present, the greater the understanding of ourselves: how we got this way, where we are headed.

**Unlike the other Great Apes, humans** (*Homo sapiens*) have the physical ability to speak. Speech makes our complex societies possible, allows us to pass learning on to others, and nourishes our creativity and abstract thinking. But here's a mystery: The first *Homo sapiens* show up in the fossil record about 200,000 years ago, yet it took another 150,000 years before humans could use the gift of speech to develop the unique human culture. These included beautiful artwork on cave walls, new tools for hunting, music played on bone flutes and burial rituals that indicate a belief in the afterlife.

Great Apes lack the proper anatomy of mouth and throat to produce speech, but some individuals have learned to express words and ideas using American Sign Language, or by punching at symbols on a keyboard. It is still a matter of fierce debate whether such skills represent true 'language' or human-like consciousness; and their conversations with humans deal with concrete matters, not abstract ideas, not poetry.

**Nonetheless, each of our Great Ape cousins** has a very distinct "culture" of behavior. The chimpanzee is the ruffian on the block, a meat-eater; males conduct war-like raids on neighboring troops, abuse their women and children. The bonobos, by contrast, "make love, not war," settling disputes with sex, all kinds of sex, and females are the leaders. Gorillas, led by a nurturing silverback male, are vegetarian, peaceable, plain laid back (forget King Kong). Orangutans, also vegetarians, are solitaries, living in trees in the forests of Borneo and Sumatra. The human displays all these characteristics! The question crucial to our time is which will dominate? Our very aggressive intelligence leads us to destroy other species, including the Great Apes, as well as our environment; but our intelligence can also make us principled caretakers of our planet if, as Abraham Lincoln pleaded, we are "touched by the better angels of our nature."

Norbert Hirschhorn is a retired physician and poet, adopted by marriage into a Minnesota family, but now living in London. He taught at the University of Minnesota and headed the Division of Family Health in the Minnesota Department of Health.

(There's more information about Great Apes' language skills and ongoing research at the Gorilla Foundation and the Great Ape Trust Web sites. A useful summary of the family tree of Great Apes may be found at: [http://en.wikipedia.org/wiki/Evolution\\_of\\_Homo\\_sapiens](http://en.wikipedia.org/wiki/Evolution_of_Homo_sapiens).)

St. Paul Pioneer Press

Monday, August 14, 2006