

## SCIENCE &amp; TECHNOLOGY

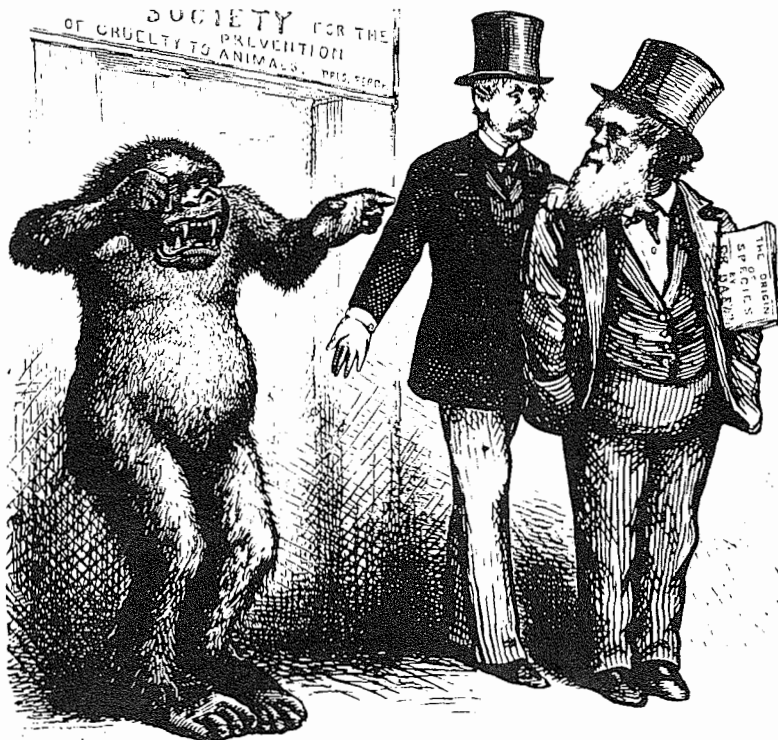
*Of Men and Apes*

"Which Ape Is Man's Closest Kin?" by Lawrence Martin, in *The Sciences* (Mar.-Apr. 1988), New York Academy of Sciences, 2 East 63rd St., New York, N.Y. 10021.

In *Descent of Man* (1871), Charles Darwin embraced a view, first proposed by his staunch defender, T. H. Huxley, that the closest relative to man on the evolutionary tree "is either the Chimpanzee or the Gorilla."

For a hundred years, many scientists questioned this closeness. Martin, an anthropologist at the State University of New York, Stony Brook, shows that in recent years researchers have come to agree with Darwin—for reasons he could have hardly imagined.

Darwin believed that "man's closest relatives" would naturally live on the same continent where humans first evolved—Africa. But he mistakenly assumed that the *modern* distribution of apes in the world also prevailed in prehistoric times. During the 1920s, British paleontologist Guy Pilgrim, studying fossils in India, concluded that the great apes (orangutans, gorillas, and chimpanzees) of Africa *and* Asia were more closely related to each other than any one of them was to man.



In this Thomas Nast cartoon, a gorilla complains to Charles Darwin about evolution. "That man wants to claim my Pedigree," the ape protests.

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But Pilgrim, like all students of evolution in his day, believed that the best way to judge how closely species were related was to consider *all* their physical similarities. This view changed during the 1960s, when West Germany's Willi Hennig argued that only similarities that linked species to a common ancestor—"shared derived" characteristics—mattered. Horses, zebras, and rhinoceroses all belong to the order *Perissodactyla* because they have fewer than five toes. But one-toed horses and zebras are more closely related than either is to the three-toed rhino; therefore, horses and zebras may be a "clade," species with a common ancestor.

Who belongs in the same clade with humans? Men, great apes, and Old World monkeys (baboons, macaques) are in a clade because they have narrow noses, large brains, and 32 teeth. Men and great apes form a smaller clade because both have elbow joints and large premolar teeth. But two species of great apes, chimpanzees and gorillas, both have arms designed for "knuckle walking"—thick skin pads on the fingers and wrists that can "lock into position" somewhat like human knees. Because humans do not have these features, Martin concludes that the great apes form their own clade, making them "first cousins" to each other and "second cousins" to man. Thus, Martin says, Darwin guessed right: "Man must look to both the gorillas and the chimpanzees to uphold his family dignity."

### *Feminist Science?*

"Caring New World: Feminism and Science" by Margarita Levin, in *The American Scholar* (Winter 1988), 1811 Q St. N.W., Washington, D.C. 20036.

In recent years, a growing number of feminist scholars have argued that science in the West is inherently biased against women.

These feminists contend that women have been "systematically excluded" from science. Even the words scientists use—physicists who describe forces "acting on" objects, or biologists who describe the "competition" between animals to survive—are said to reveal rampant male supremacism. Male-dominated science, asserts philosopher Sandra Harding, author of *The Science Question in Feminism* (1986), produces "sexist, racist, homophobic, and classist projects."

Levin, a philosopher at Yeshiva University, believes that women who differentiate between "male" and "female" science are mistaken: "The whole idea of a 'masculine' theory or problem is extremely dubious."

Personal preferences do play a role in determining what research projects are initiated. But, Levin notes, the scientific method, with its emphasis on free discussion and replicable experiments, ensures that unprovable theories are swiftly discredited. If, as feminists charge, men are able to perceive only "hierarchical and uni-directional relationships," how did male scientists discover such examples of cooperation as symbiosis, catalysis, and biofeedback?

Feminists have failed to show how "female" science would differ from existing practice. Proposed language changes seem pointless: To say that nature is "bounteous" rather than "parsimonious," for example, simply substitutes a "caring" for a "dominating" word without providing new information. Moreover, some feminists, in their zeal to find hidden mascu-