Homosexuality And the Jews

"Homosexuality, the Bible, and Us—A Jewish Perspective" by Dennis Prager, in *The Public Interest* (Summer 1993), 1112 16th St. N.W., Ste. 530, Washington, D.C. 20036.

"Thou shalt not lie with mankind, as with womankind; it is an abomination" declares the Bible (Leviticus 18.22). The language is so clear and direct, in the view of Prager, the author and publisher of his own quarterly journal, *Ultimate Issues*, that one need only be a serious Jew or Christian to be influenced by it. Nevertheless, he says, in the larger scheme of things, biblical sexual values are more "deviant" than homosexuality.

Homosexuality was, in a sense, an invention of Judaism and the Bible, Prager writes. "Before the Bible, the world divided sexuality between penetrator (active partner) and penetrated (passive partner)," and the partner's gender was not considered morally significant. Homosexuality was an accepted practice in Egypt, Greece, Rome, and throughout the ancient world. "When Judaism first demanded that all sexual activity be channeled into marriage, it changed the world," Prager writes.

The sexual revolution that Judaism initiated and Christianity later carried forward, Prager argues, forced "the sexual genie into the marital bottle. It ensured that sex no longer dominated society, it heightened male-female love and sexuality (and thereby almost alone created the possibility of love and eroticism within marriage), and it began the arduous task of elevating the status of women." The sublimation of the sex drive made it possible for Western civilization to advance beyond the level set by ancient Greece and Rome.

Marital sex remains the Jewish sexual ideal, Prager says. "There is . . . a continuum of wrong which goes from premarital sex, to adultery, and on to homosexuality, incest, and bestiality." Opening the Jewish door to homosexuality, he says, would mean opening the door to all other forms of sexual expression: "Once non-marital sex is validated, how can we draw any line?"

The Judeo-Christian development of Western civilization required deferral of gratification and a rechanneling of natural instincts. The family has served as the basic unit. "But the family is not a natural unit so much as it is a *value* that must be cultivated and protected. The Greeks assaulted the family in the name of beauty and Eros. The Marxists assaulted the family in the name of progress. And, today, gay liberation assaults it in the name of compassion and equality." Well-meaning Jews and Christians who have joined in this assault, Prager believes, do not realize what is at stake.

SCIENCE, TECHNOLOGY & ENVIRONMENT

Hubble's Universe

"Edwin Hubble and the Expanding Universe" by Donald E. Osterbrock, Joel A. Gwinn, and Ronald S. Brashear, in *Scientific American* (July 1993), 415 Madison Ave., New York, N.Y. 10017–1111.

For centuries, astronomers used the term *nebulae* to designate faint, cloudy objects in the heavens that seemed not to change in position or appearance. In 1755, Immanuel Kant suggested that some nebulae might be "island universes"—self-contained systems of stars like our own Milky Way. Nearly two centuries later, an American named Edwin Hubble proved the philosopher correct.

During the 1920s and '30s, the Missouri-born Hubble (1889–1953) "changed the scientific understanding of the universe more profoundly than had any astronomer since Galileo," write Osterbrock, of the Lick Observatory at Mount Hamilton, California, and his two colleagues. Hubble not only proved that the Milky Way is just one of millions of "island universes" (or galaxies), but also played a crucial role in establishing "the startling view that the entire universe is expanding."

Improved telescopic observations during the 19th century showed that while many nebulae were only clouds of luminous gas, there were

other, spiral-shaped nebulae that seemed different. By the beginning of the 20th century, astronomers were divided over whether these were distant galaxies. In 1924, when Hubble turned his attention to what is now the famous Andromeda galaxy, he himself "had not yet fully accepted the notion that these objects are galaxies outside our own." But using the giant 100-inch telescope at Mount Wilson Observatory in Pasadena, California, Hubble was able to bring into distinct resolution six stars in the Andromeda nebula. The brightest one was about 60,000 times fainter than the dimmest stars visible to the naked eye, Osterbrock and his associates note, but Hubble "managed to make 83 measurements of its brightness, an impressive feat at the time." From these data, he determined that the star's brightness rose and fell in a way characteristic of a class of stars called Cepheid variables. He then was able to deduce that the star and its surrounding galaxy were about 930,000 light-years away—far beyond the known bounds of the Milky Way.

Hubble's experience measuring cosmic distances helped him perform more trailblazing research. A 1929 paper he wrote "sent shock waves through the astronomical community." Measuring galaxies' distance from Earth and the

In the End Was the Word

Move over, virtual reality. Paul Saffo, a Research Fellow at the Institute for the Future in Menlo Park, California, announces in *Wired* (May–June 1993) the arrival of a hot new medium.

[The] written word . . . is flourishing like kudzu vines at the boundaries of the digital revolution. The explosion of e-mail traffic on the Internet represents the largest boom in letter writing since the 18th century. Today's cutting-edge infonauts are flooding cyberspace with gigabyte upon gigabyte of ASCII musings. . . .

In fact, our electronic novelties are transforming the word as profoundly as the printing press did half a millennium ago. For starters, we are smashing arbitrary print-centric boundaries among author, editor, and audience. These categories did not exist before the invention of moveable type, and they will not survive this decade. Just as monk scriveners at once wrote, edited, and read, information surfers browsing online services today routinely play all three roles: selectively scanning, absorbing, editing, and creating on-the-fly in real time. The printing press gave life and reach to the word, but at the terrible cost of making text formal and immutable. . . . Electronic text has become a new medium that combines print's fixity with a manuscript-like mutability. Flick a key and volumes of text disappear in virtual smoke; flick another and they are replicated over the Net in a flash. Severed from unreliable paper, text has become all but inextinguishable. E-mail passed between Oliver North and his Iran-Contra conspirators, survived numerous attempts at expungement, and now resides in the National Security Archives for all to inspect, even as historians naively lament that the switch to electronic media is depriving them of important research fodder. They needn't worry; paper may be on the skids, but text is eternal.

Immortality may be the least of the surprises that this new medium of electronic text will deliver. Video enthusiasts are quick to argue that images are intrinsically more compelling than words, but they ignore a quality unique to text. While video is received by the eyes, text resonates in the mind. Text invites our minds to complete the word-based images it serves up, while video excludes such mental extensions. . . .

Video suffers from a deeper problem, one of ever diminishing reliability in the face of ever more capable morphing [image-altering] technologies. . . . The age of camcorder innocence will evaporate as teenage morphers routinely manipulate the most prosaic of images into vivid, convincing fictions. We will no longer trust our eyes when observing video-mediated reality. Text will emerge as a primary indicator of trustworthiness, and images will transit the Net as multimedia surrounded by a bodyguard of words.

velocities at which they were moving away, he found that the velocities at which the galaxies receded were proportional to their distances. The Hubble law implies, the authors note, "that the universe is expanding: velocities seem to increase as one looks progressively farther outward from any point within the universe." The tall and handsome astronomer with a movie star's "compelling personality" had shown that the cosmos could no longer be regarded as static, and he pointed the way toward the "big bang theory" of the origins of the universe.

Aristotle's Paternity Claim

"Seeing Biology Through Aristotle's Eyes" by Robin Dunbar, in *New Scientist* (Feb. 20, 1993), Stamford Street, London SE1 9LS.

The intellect and greatness of Aristotle (384–322 B.C.) spanned many fields; but he seldom is regarded as the father of modern science. That honor usually goes to Francis Bacon (1561–1626), who denounced Aristotle's metaphysics and influence. Yet the credit for establishing genuine empirical science should go to Aristotle, contends Dunbar, a biological anthropologist at University College, London. In the philosopher's long-neglected work in biology, Dunbar says, he departed from the abstract cogitation favored by the ancient Greeks and pioneered the careful observation and deduction of causal explanations that became the foundation of empirical science.

"Aristotle's biology has stood the test of time in a way that his physics (which very conspicuously lacked an empirical dimension) has not," Dunbar observes. Aristotle's major biological works—*The Parts of Animals*, *The Natural History of Animals*, and *The Reproduction of Animals*—"read almost like modern textbooks." Some of his findings were not improved upon until recent decades.

"Time after time, Aristotle gets it right," Dunbar says. "He recognized the distinction between homologous and analogous parts—that some features of unrelated animal species are similar because they derive from the same common ancestor (like feathers and scales), whereas others represent convergent evolution from unrelated ancestors (like the wings of birds and insects)." From his detailed studies of anatomy, Aristotle grasped that dolphins are mammals, not fishes, something that even the great Swiss naturalist Charles Bonnet, at the end of the 18th century, did not understand. Aristotle discovered that some sharks gave birth to live young—which was not apparent to later scientists until the 1650s. He was the first to realize that the seed of a plant is equivalent to the embryo in animals, and that the mammalian fetus is fed directly through the umbilicus.

Aristotle had no theory of evolution; he thought that species were more or less fixed for all time. But he did understand adaptation. "Nature," he observed, "makes the organs to suit the work they have to do, not the work to suit the organ."

As a purely descriptive anatomist, Dunbar writes, Aristotle was first-rate. He correctly described the Eustachian tube that connects the middle ear with the throat; the next scientist to do so was the Italian Bartolomeo Eustachio in 1550, and he got the credit.

Even Aristotle made mistakes, of course. He contended, for example, that fleas and bugs are created out of mud. But in case after case, Aristotle did caution his readers: "The facts have not yet been sufficiently ascertained. If at any time in the future they are ascertained, then credence must be given to the direct evidence of the senses rather than to theories." Spoken like a true father of science.

Ferris At The Wheel

"The Ferris Wheel on The Occasion of Its Centennial" by Henry Petroski, in *American Scientist* (May–June 1993), Sigma Xi, P.O. Box 13975, Research Triangle Park, N.C. 27709.

A century ago, when the World's Columbian Exposition in Chicago celebrated the quadricentennial of Columbus's landing in America, the exposition's organizers faced a challenge: how to outdo the Eiffel Tower, the centerpiece of the French Exposition Universelle of 1889. "American pride was at stake," as one observer commented.