

COLUMBIA SPECTATOR ARCHIVE

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[ARTICLE+ILLUSTRATION]

NIH reseacher speaks about finding 'gay gene'

By ZACH SERBER

Spectator Staff Writer

Dean Hamer, a scientist at the National Institutes of Health (NIH), spoke last night in Pupin Hall and discussed his research, which strongly suggests the existence of at least one gene that influences sexual orientation in men.

The speech, which was co-sponsored by the Rabi Scholars and the Biology Club and drew approximately 60 students and faculty members, focused on his research methodology and on his findings, while also ad-

dresssing some of the ethical issues that arise when conducting research on a topic so "socially, politically, and religiously controversial."

Hamer's research was chronicled in an article, "A Linkage Between DNA Markers on the X Chromosome and Male Sexual Orientation," which appeared in the July 16, 1993 edition of *Science* magazine, and a book he wrote, titled *The Science of Desire*.

Hamer's investigation consisted of two

experiments using two of the standard techniques of modern human genetics, pedigree analysis and family DNA-linkage studies. He said his objective was simply to discover if a 'gay gene' exists and, if so, to locate it.

The first experiment, pedigree analysis, consisted of searching the family trees of 76 homosexual volunteers for relatives who were also homosexual. Hamer found that a disproportionately large number of relatives on the mother's side of the family were also homosexual, particularly among maternal uncles and maternal aunts' sons.

Evidence of maternal inheritance immediately suggests that the gene is on the X chromosome. In men, the X chromosome is inherited only from the mother, while the father contributes a Y chromosome.

The second experiment, a DNA-linkage study, focused on finding the location of the gay gene on the X chromosome. Genes close together on the chromosome are more likely to be inherited together. Hamer analyzed the DNA of 40 pairs of homosexual brothers and their mothers by using recognizable sections of the X chromosome as markers. Hamer said he was able to find the approximate location of the gay gene in relation to these

markers with a certainty of 99.99 percent.

The gene related to sexual orientation is most likely contained on the very tip of the X chromosome in a region, called Xq28, which holds 0.2 percent of the entire human genome—several hundred genes. Hamer said the next step in his research will be to narrow the site down to a single gene. Once accomplished, the difficult process of determining the role of the gay protein will begin.

“The gene may make something in the brain which determines how sex signals are received,” Hamer said.

Hamer is also currently involved in a similar study searching for genes that may influence lesbian behavior.

Hamer said he frequently receives extremely positive responses to his research.

“Most people react by saying, ‘This is fabulous. Knowing homosexuality has a genetic basis will eliminate homophobia,’” Hamer said. “But this response is overly optimistic since homophobia is primarily irrational. [My research] does, however, often help people get over their prejudices long enough to change their attitudes.”

Hamer said he received a great deal of opposition from religious groups and other people who feel that his research will lead to a

“homosexual test.”

“Such a test could be used by the military, insurance companies and, in the worst-case scenario, on fetuses that may then be aborted. Such a test would be fundamentally unethical,” Hamer said.

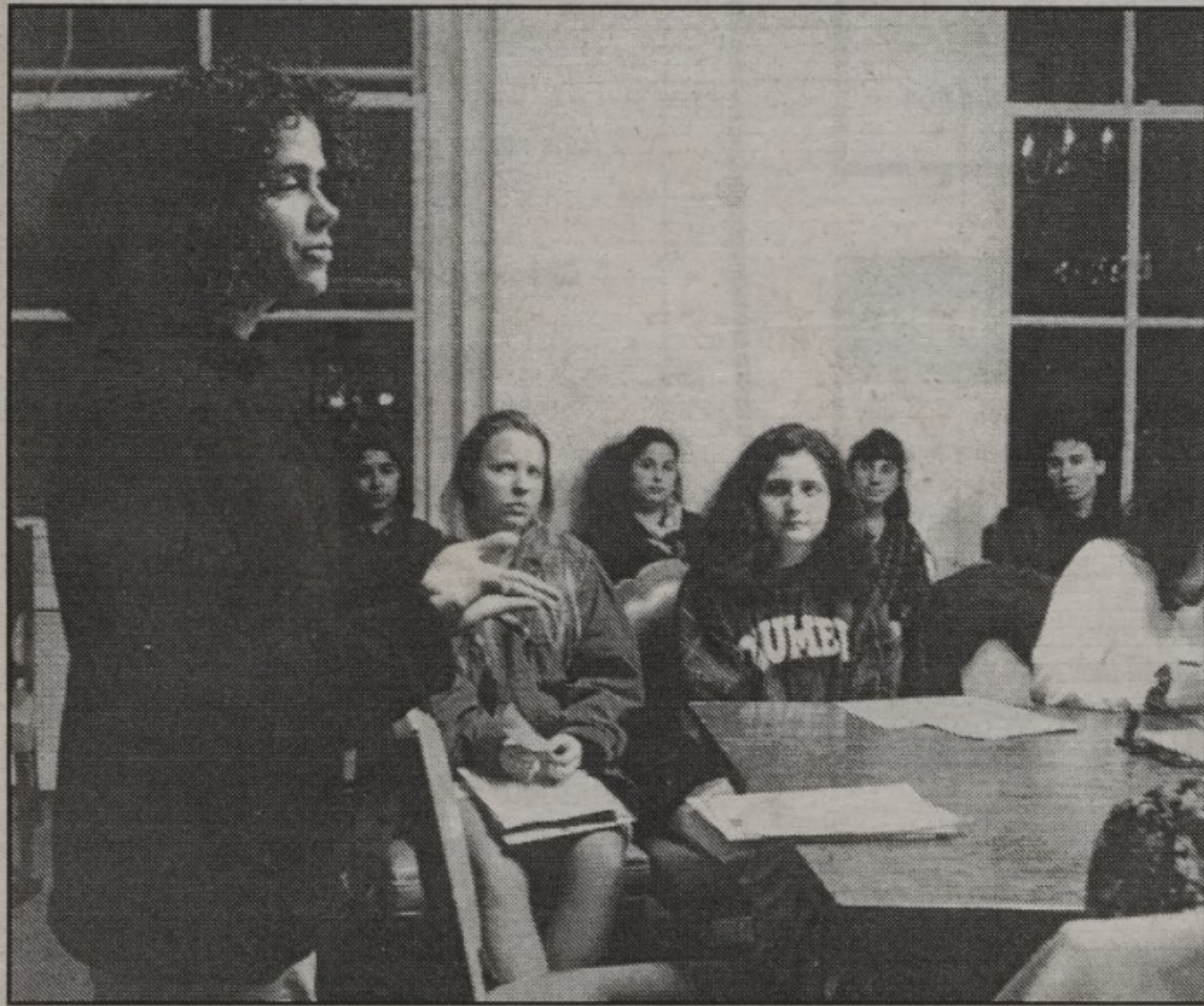
Hamer said he is making efforts to establish a set of bioethical guidelines—like those already in place in many countries—that will help prevent abuse of his research.

Associate Professor of Biology Deborah Mowshowitz asked Hamer about the difficulties of distinguishing between genetic disorders that should be cured and unpopular genetic traits.

“A retarded baby with a life expectancy of two months has an affliction we should cure,” Hamer responded. “Homosexuality or eye color are natural traits. Lots of cases fall in between the two and have to be addressed individually.”

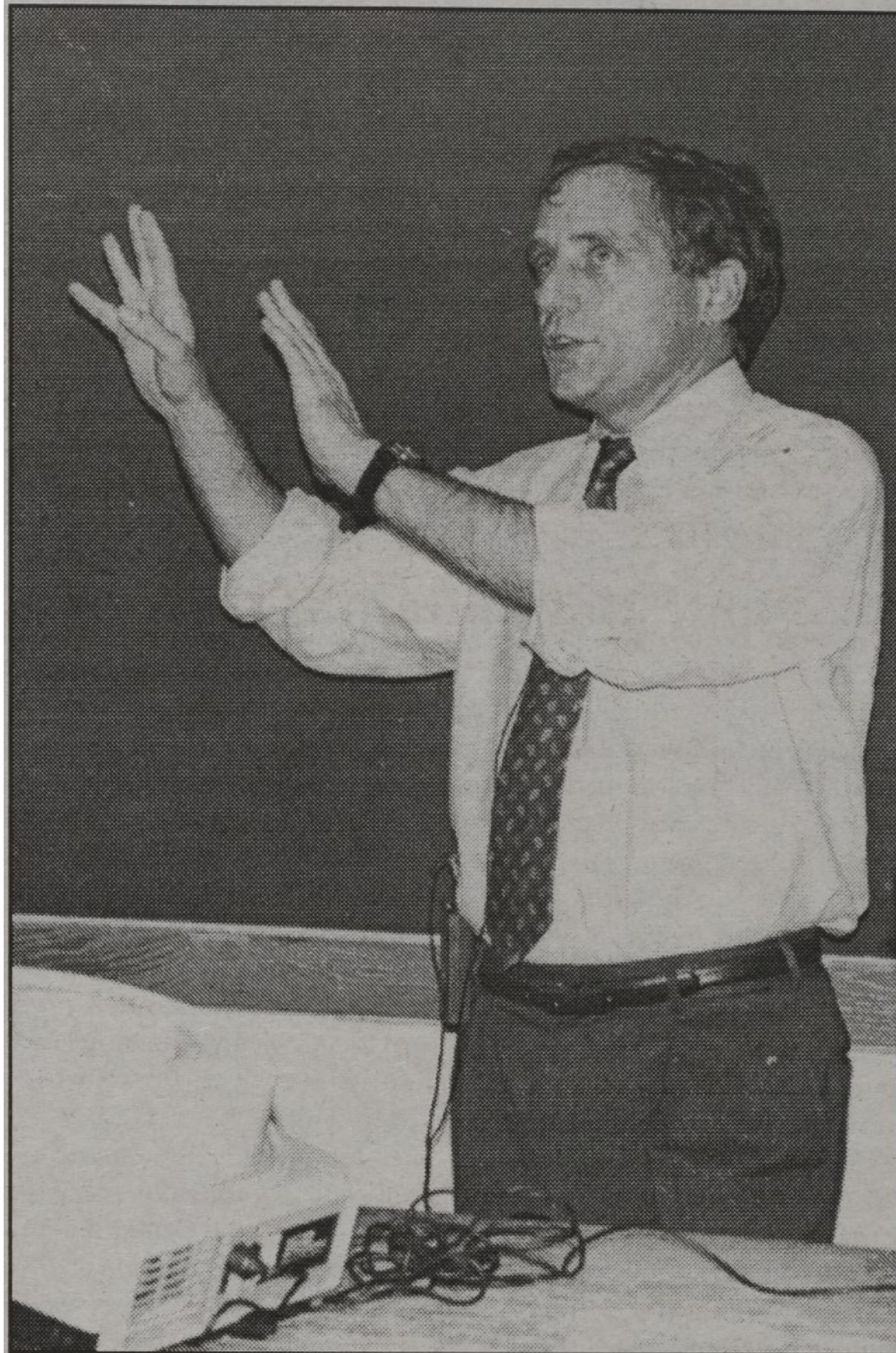
Hamer warned that avoiding the study of sexuality could pose a grave threat to humankind.

“There are remarkably few hard scientists working on sex. Most studies are conducted by *Playboy* and *Cosmopolitan*,” Hamer said. “We have no idea of the sexual practices of Americans and no idea how to educate people to use safe sex. We were completely unprepared to deal with the AIDS epidemic.”



STAFF PHOTOGRAPHER—KAREN DAVIS

Barnard College Dean Catherine Webster addresses sexual assault forum.



STAFF PHOTOGRAPHER—AARON UNGER

Dean Hamer spoke about his genetic research last night in a lecture in Pupin Hall.