

ams voted with the majority.) Specific guidelines are still being crafted. The panel is expected to meet again next month and will submit its findings to the government by 1 December.

A White House spokesman has already responded to the panel's initial finding by

saying, "The President has decided he wants to take some step to limit the use of federal funds in this area. He will weigh advice from panels but ultimately the President will decide." For the moment, a moratorium remains in place and the outcome is uncertain.

■ BARBARA J. CULLITON

China Bans Panda Loans

The Chinese government announced last week that it has suspended short-term loans of giant pandas to the United States. The move is an apparent response to mounting criticism, mostly from Western conservation groups, that the loans are jeopardizing the future of this critically endangered animal. A lawsuit earlier this year by two Western groups brought the issue to a head. The Chinese ban, which also applies to the endangered golden monkey, is temporary.

Until now the Chinese have staunchly defended the loans, which began as a goodwill gesture in 1984. They say the loans raise public awareness of the panda's plight and provide much-needed money for conservation. Only about 1000 giant pandas are left in the wild, all in the mountains of easternmost China, and 100 or so are in captivity.

But since 1984 the short-term loans have proliferated as more and more Western zoos clamor for pandas. For zoos these exhibits are undeniably lucrative, bringing in perhaps several million dollars in additional admission fees and sales of soft drinks, T-shirts, and other novelties. A portion of that, up to about half a million dollars per loan, goes back to China for panda conservation.

There were five short-term loans to Western zoos last year; this year some 30 institutions have been negotiating with the Chi-

nese for panda loans.

Claiming that the loans are intended for commercial gain and not for the good of the species, World Wildlife Fund and the American Association of Zoological Parks and Aquariums sued the federal government in May to try to block the exhibit of two pandas at the Toledo Zoo (Research News, 29 July, p. 529). The case is pending.

The two groups maintain that the loans interfere with captive breeding efforts, which are essential if the species is to survive. Many of the pandas sent on tour, including the two now at the Toledo Zoo, are of prime breeding age, in violation of China's stated policy of sending only non-breeding animals.

All along, the Chinese have maintained that they loan out their treasured pandas only in response to intense pressure from Western zoos and politicians. Mayor Koch lobbied for last year's loan at the Bronx Zoo; Jimmy Carter put in a good word for the Atlanta Zoo when he was in Beijing.

As part of their new, tougher stance on panda loans, the Chinese government has just refused to extend the Toledo Zoo loan for a second 100 days. Thus, the two controversial pandas are heading home to the breeding facility at the Wolong Reserve.

■ LESLIE ROBERTS

Radon Survey Seen as Misleading by Some Scientists

The release last week by the Environmental Protection Agency (EPA) of a survey of indoor radon concentrations has stirred different reactions among the public and in scientific circles. The public learned from the media that the hazard of radon-related lung cancer is more severe and more widespread than EPA scientists had thought. Some scientists are saying it isn't so. "I'm appalled at the way the EPA is doing it," says Anthony Nero of the Lawrence Berkeley Laboratory, "They're grossly misrepresenting their own data."

The data involved are measurements of the radioactive gas radon made in a total of 22,600 homes in 17 states during the past two winters. In conducting the surveys, the states, with EPA assistance, exposed charcoal canisters in selected houses and measured the amount of radon retained by the charcoal. The space chosen was the lowest in the house, often the basement.

In releasing the new results, the EPA said that it intentionally designed the survey "to obtain measurements of the highest detectable radon levels." During the winter, closed windows trap more of the radon seeping through house foundations, and often the lowest space was the basement, the room closest to the source of radon. The resulting inflated concentrations of radon would assist the states in identifying areas of exceptional indoor concentrations to be targeted in subsequent work. Those homeowners in the survey who were informed that their readings were relatively low would also know that they probably have no problem to correct.

What the EPA did not manage to get across to the public was that such screening surveys are nearly useless in determining the prevalence of radon health hazards (*Science*, 29 April, p. 606). The intentionally inflated readings highlight problem regions and screen out the potential problem houses, but they are no measure of occupants' radon exposure, the likelihood of lung cancer being proportional to exposure.

Among the printed materials provided to the press, the only clear enunciation of this limitation came in footnotes to the two maps presenting survey results. "Note: These results represent screening measurements," they read, "and should not be used to estimate annual averages or health risks." The confusion was inevitably compounded by the joint release of the radon survey results with a national radon health advisory



China's goodwill ambassador. A hold on loans to U.S. zoos.

Jessie Cohen, National Zoological Park, Smithsonian Institution

by EPA Administrator Lee Thomas and Assistant Surgeon General Vernon Houk.

Stephen Page of the EPA's Office of Radiation Programs concedes that the message may have come through a bit garbled, but its presentation "couldn't have been clearer," he says. "We believe this is enough evidence for people to test their homes across the country," given the clear likelihood of high concentrations of radon in at least a few homes in any state.

Researchers outside the EPA deny that the EPA results demonstrate that radon, a serious problem of potentially national proportions, is any more severe or widespread than had been thought. "A large fraction of the higher readings were probably in basements," says Nero, who has been prominent in the measurement of indoor air pollution for many years. "One will find that most of these 'elevated levels' are not. These data do fit in the picture we had before." That picture included a 0.4% lifetime risk of dying from radon-related cancer for the average U.S. exposure. That about equals the risk of dying in a fall or fire at home.

"What's wrong is making the measurement in the basement and then presenting them as exposures," says Bernard Cohen of the University of Pittsburgh. "Most people don't spend much time in the basement. I've been fighting EPA for years on this."

John Harley, retired director of the Department of Energy's Environmental Measurement Laboratory, estimates that the screening survey results are "two to five times higher than actual exposures, if I had to guess. When they announce such results, the screening aspects are lost. It's very unfortunate. I do think you have to spell it out every time."

The controversy over the use of screening surveys should be settled in the spring of 1991, when EPA is scheduled to announce the results of a national survey. The survey is intended to determine how often annual average radon exposures are elevated, information not available from a screening survey. The yearlong survey in the living spaces of 5000 houses across the United States is to begin this winter.

■ RICHARD A. KERR

Harvard Tiptoes into the Market

There was no press conference in June 1987 when the Harvard Corporation, the university's managing board, voted to create a new \$30-million fund called Medical Science Partners (MSP). It will raise money for commercializing discoveries by the medical school faculty, with the goal of speeding along the birth of new technologies. The fund will have an independent management and will pass 10% of its profits and losses back to Harvard. Its directors will solicit proposals mainly from Harvard, although up to 15% of the investments may be made in outside projects.

The university put all the machinery into place this year and quietly began to raise venture capital, according to Stephen Atkinson, director of the Office of Technology Licensing and Industry-Sponsored Research. Although the university was not quite ready to tell the world about its new program, the *Boston Globe* learned of it last week and published the details. Atkinson since then has given out a number of fact sheets, even though Harvard itself has not published a press release.

To some, it looked as though Harvard had reversed itself, ending an earlier ban on for-profit investment in faculty research. Atkinson says there has been no policy reversal—just an elaboration of goals set out by President Derek Bok 8 years ago in a report to the Board of Overseers.

In 1980, Bok had the university withdraw

at the last minute from a joint venture it arranged with Mark Ptashne, a biologist in the Faculty of Arts and Sciences. Ptashne and colleagues had discovered an efficient way to make bacteria express human genes. They hoped to get development funding from Harvard, rather than the commercial world. But when a funding proposal came up for faculty review, it ran into a storm of criticism that reverberated around the campus and through the national press.

The main objections were that a dalliance with commerce might corrupt or distract Harvard's faculty members, leading them away from pure scholarship. Students might be channeled into narrow areas of work if their instructors had a monetary stake in the research. In scuttling the Ptashne venture, Bok said he was leery of becoming involved directly in the "search for commercial utility and financial gain." However, Bok said he would continue to look for safe ways for the university to invest in faculty inventions.

Many other universities permit or encourage faculty-industry collaborations, notably Stanford and the Massachusetts Institute of Technology (MIT). Harvard, in a sense, is a latecomer to this fashion.

In 1984, according to Atkinson, the Harvard Medical School hit upon a plan that might satisfy the purists as well as those who wanted to become more involved in the marketplace. The dean, Daniel Tosteson, developed a working concept for a limited

partnership between the university and an independent investment fund. In 1985 and 1986, he and others discussed the plan with some members of the medical faculty, graduate students, and postdoctoral fellows. The governing council of the medical faculty gave its approval in January 1987. President Bok and the Harvard Corporation approved it in June 1987. Fund-raising began this summer, and, Atkinson says, he was getting ready to make a public announcement this fall when the *Globe* beat him to the punch.

MSP consists of a limited 12-year partnership between Harvard and André Lamotte, the managing partner. Harvard and Lamotte will share profits and losses equally, up to 10% each. Lamotte has worked in the pharmaceutical industry for 13 years, serving most recently as the U.S. chief of Institute Merieux, a French vaccine company. He holds a Ph.D. in chemical engineering from MIT and a master's degree in business administration from Harvard. Harvard's interests will be represented in the partnership by a subsidiary called Ion, Inc. (The name was chosen by Tosteson, to suggest restless energy and creativity.) It will be directed by an eight-person board that includes Tosteson.*

The program is hedged about with safeguards to protect academic integrity. First of all, it is available to faculty members only at the medical school, for they alone have given approval. All investment proposals will have to be cleared by a department chairman and a new review committee in the dean's office, which will "assure that all projects supported by the fund are of the highest intellectual quality," according to Atkinson. Faculty members are also bound by existing rules on industry relations, which say that "no more than 20% of one's total professional effort may be directed to outside work, and this should not exceed one working day per week." Faculty members must disclose to the dean the nature of all outside work and the amount of remuneration, including equity options and consulting fees. Those who benefit from the fund also agree not to withhold scientific data in any way.

The strongest safeguard of all, Atkinson believes, is subtle social control; the participants will be held to account by "our community, which has a long cultural emphasis on basic research." ■ ELIOT MARSHALL

*The other members are: David M. Bray, dean for management of the Harvard Medical School; Walter Cabot, president of the Harvard Management Company; John H. McArthur, dean of the Harvard Graduate School of Business Administration; Roderick MacDougall, treasurer of Harvard College; Scott Sperling of the Harvard Management Company; Robert G. Stone, Jr., of the Kirby Exploration Company; and John F. Taplin, president of the National Health Research Foundation.