That worries stem cell advocates. "I'm traditionally an optimist, but I don't take this as a very good sign," says Tim Leshan of the American Society for Cell Biology, which has been lobbying in favor of the research.

Meanwhile, Senators Arlen Specter (R–PA) and Tom Harkin (D–IA) introduced a bill on 5 April that would authorize NIH to fund derivation of and research on human ES cells. Two antiabortion senators are cosponsors, Senator Strom Thurmond (R–SC) and Senator Gordon Smith (R–OR).

–GRETCHEN VOGEL

JAPAN

Women Academics Propose Steps to Equity

TOKYO—The campaign has begun. On 30 March, 35 Japanese women scientists met here to draw up a list of obstacles they face in obtaining grants and plot a lobbying effort to create a better working environment. But initial reaction suggests that some of those barriers—while they pale in comparison to more serious forms of discrimination—are rooted in the country's culture or its economic woes.

"Women scientists [in Japan] face a mountain of troubles," says Mariko Kato, an astrophysicist at Keio University's Hiyoshi campus in Yokohama and one of the conference organizers. "We have to start with those problems that have easily identifiable solutions."

As is true elsewhere, women hold a disproportionately small share of senior faculty positions in Japan's universities (*Science*, 2 February, p. 817). Although participants suspect that discrimination and harassment play a major role in keeping them from achieving equity, they also point to a slew of seemingly innocuous policies that, in practice, put them at a disadvantage in competing for grants.

One such policy is the automatic termination of grant funding if the recipient goes on leave for more than 6 months. It clashes with the rule allowing women at national universities, and some private universities, a full year of leave after childbirth. The policy forces women returning from maternity leave to reassemble their labs and restart their research careers, say symposium participants, who also complained about a rule that restricts most grants for new investigators to those age 37 or younger. With more women wanting to resume their research careers after starting a family, they say, a ceiling based on years in the field rather than age would be more equitable.

An even bigger problem may be a rise in the number of part-time and nonpermanent university faculty and staff positions at private nonprofit institutes, a trend fueled by the sagging economy. "No one ever expected that so many researchers would be stuck in temporary positions," said Michiyo Nakane, a science historian now working as a part-time lecturer at Rikkyo University in Tokyo. Although the squeeze on tenured positions applies to both men and women, men are more likely to be appointed to permanent posts when they are offered.

Another source of irritation for women and confusion for reviewers is a rule requiring grant applicants to use the name entered in Japan's family registry. By law, married couples must register under one name, and most choose the husband's name. Although many women still use their family name on the job, some faculty members have been pressured by their superiors to use their registered name.

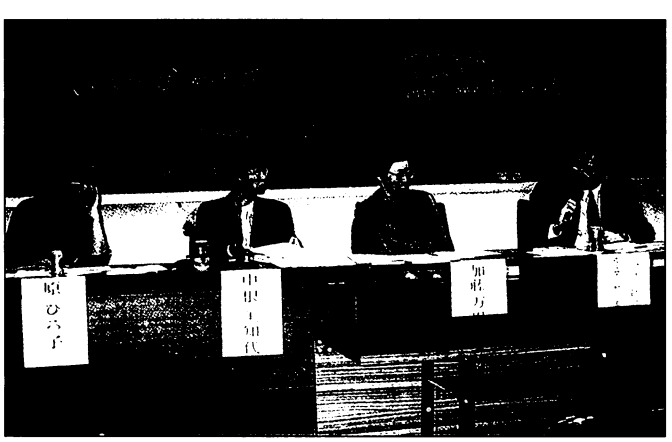
Gamely defending the government's current policies was Kenji Sakuma, director of planning in the Scientific Research Aid Division of the Ministry of Education, Science, Technology, Sports, and Culture (Monbukagakusho), which is the primary source of grants for researchers. Sakuma brought good news on some issues, including the fact that grant applicants will soon be able to choose which name they prefer to use. He also said that the ministry would like to find a way to make grants compatible with childcare duties. But those rays of light were more than overshadowed by his defense of the status quo on other topics.

Grants need to be terminated if researchers are on leave for extended periods, he explained. "The intent of research grants is to support world-class, leading-edge research," said Sakuma, adding that a hot idea can grow cold if put on hold for a year. And extending grants to nonpermanent employees, who are typically on 1-year contracts and often lack laboratory space, "would be very difficult."

The symposium participants took heart from what they see as a growing awareness of the issue. Hiroko Hara, a cultural anthropologist at the University of the Air in Chiba, noted that the Association of National Universities and the Science Council of Japan, the country's largest grouping of researchers, have recently issued statements in support of more women professors and researchers. "There is a lot of power behind these requests," she said.

Some noted that the meeting itself was a sign of progress. "A decade ago we were just trying to get women into research. Now we're getting to the point of addressing specific problems [that hold women back]," said Mitsuko Asakura, a professor of labor law at Tokyo Metropolitan University. Participants hope that, over time, such incremental changes in the grants process may ultimately achieve their goal of parity.

–DENNIS NORMILE



Under fire. The government's Kenji Sakuma, right, discusses gender issues with faculty members (from left) Hiroko Hara, Michiyo Nakane, and Mariko Kato.

CREDIT: D. NORMILE

WORKFORCE DIVERSITY

NSF Makes the BEST Of a Good Idea

Every PI should have it so easy. On 8 January, John Yochelson submitted a proposal to the National Science Foundation (NSF) to create a $10 million, industry-led organization to promote diversity in the U.S. scientific workforce. Barely 6 weeks later, Yochelson learned that eight federal agencies had agreed to give him $2.3 million, an award that was officially announced earlier this month at the national innovation summit of the Council on Competitiveness, a Washington, D.C.–based nonprofit. Its speedy success is testament to two government officials who decided not to let yet another federal report on the problem gather dust.

Yochelson heads the council, which will serve as midwife for a new entity called Building Engineering and Scientific Talent. BEST hopes to become a national clearinghouse on diversity in science and engineering, studying what works and publicizing its findings. The council has also pledged to raise an additional $7 million or more from corporations and foundations to get BEST off the ground.

The council's proposal dovetailed with a recommendation of the Commission on the Advancement of Women and Minorities in Science, Engineering, and Technology,

known informally as the Morella Commission after Representative Constance Morella (R–MD), its chief legislative sponsor. Last July, the commission recommended that an ongoing public-private body be established to help clear away barriers to underrepresented groups in science and engineering (www.nsf.gov/od/cawmset).

BEST man. John Yochelson's Council on Competitiveness has a new grant to boost the number of women and minority scientists.

Although the Morella panel made recommendations similar to those in a 1989 report by another congressionally mandated panel, this time there will be a visible follow-up. NSF director Rita Colwell, whose agency staffed both panels, spent the next few months cajoling the other federal agencies that had worked with the commission to chip in money for the proposed organization—an entity that didn't exist, not even on paper. And Morella urged her on. "It is extremely important," Morella wrote in a 30 November 2000 letter to Colwell, "that each agency steps forward and provides contributions to seed this collaborative entity."

In the end, eight of the nine agencies agreed. "NSF was pushing us hard," recalls Jane Coulter, deputy administrator for the Cooperative State Research, Education, and Extension Service within the Agriculture Department, one of two agencies to scrape together $50,000. NSF and five others each put up $367,000. The only agency to opt out was the Department of Education.

With the groundwork laid, the council jumped at a suggestion by NSF officials to submit a proposal. "We've been doing benchmarking for quite some time, especially in terms of regional development," says Yochelson about an organization formed in 1986 to combat the perception of Japanese technological dominance. "And the idea of looking at what works, and how communities have put together partnerships to increase diversity, seemed to resonate well with everybody we talked to."

There was no formal competition, and no other proposals were submitted. Representatives from the sponsoring agencies were asked to review the proposal, and NSF made the award official on 21 February.

A senior NSF official, Wanda Ward, will work with the council to help put BEST together. The council has already lined up a $1 million corporate donation, and it hopes to have a small staff assembled by summer. BEST will also draw advice from a public-private National Leadership Council, cochaired by Morella and Representative Eddie Bernice Johnson (R–TX). **–JEFFREY MERVIS**

CREDITS: (TOP TO BOTTOM) COUNCIL ON COMPETITIVENESS; KAREN MCCOMB

BEHAVIORAL ECOLOGY

Elephant Matriarchs Tell Friend From Foe

Elephants have good reason to love their mothers. New research reported on page 491 shows that the lifetime experience of a matriarch helps her group discriminate friend from foe and contributes in many other important ways to the well-being of her companions.

Not only is the work "a neat demonstration," but "it probably applies to a wide range of animals," says Timothy Clutton-Brock, a behavioral ecologist at Cambridge University in the United Kingdom. Furthermore, according to animal behaviorist Richard Connor of the University of Massachusetts, Dartmouth, "the conservation implications are really profound: If that older individual is killed, it could have a very negative impact on the group."

For this work, Karen McComb of the University of Sussex in Brighton, U.K., and Sarah Durant of the Institute of Zoology in London teamed up with Cynthia Moss and her colleagues, who have tracked some 1700 elephants for the past 28 years as part of the Amboseli Elephant Research Project in Kenya. The elephants McComb studied live in about 20 small family groups, typically containing several females and their calves. Each group moves independently, sometimes encountering other groups or individuals as it forages for food.

McComb and her colleagues played back recordings of elephant calls and watched the elephants' responses. Calls from complete strangers prompted the mothers to cluster around their young, whereas familiar calls were ignored. But the groups "differed in how good they were" at discriminating friend from foe, says McComb: Some groups bunched up even at the sound of familiar calls, while others were better at picking out the strangers.

A group's ability to tell acquaintances from strangers correlated strongly with the age of the oldest female. Other factors, such as the number of calves, number of females, or even the mean age of the females, were not important. "You have this older individual who has this great storehouse of knowledge," Connor notes.

That storehouse of knowledge also contributes to the group's reproductive success. When McComb combined her 7 years of audio playback data with Moss's 3 decades of observations, she found that groups with older matriarchs at the helm produced more young per female once factors such as age were taken into account. "In evolutionary terms, you can see why intelligence was selected for," McComb notes. The matriarch's ability to spot the riskiest encounters makes life easier for her companions.

"People who've studied elephants for a long time have always felt there are strong cultural attachments [within groups], but they're really hard to quantify," notes Andrew Dobson, an ecologist at Princeton University. McComb's approach provides "a way of actually showing how behavior and experience accrued over a long lifetime translates into benefits for the whole group," he says.

For that reason, the work sends a strong message to conservationists. "When you poach an animal, you are not just taking one life away; you're taking away the influence of that animal on other animals," says Hal Whitehead, a marine biologist at Dalhousie University in Halifax, Canada. That loss could be particularly great if the individual is an elder statesman of the group.

Grandma knows best. By having a keen nose for strangers, the matriarchs in elephant clans help their families prosper.

Sperm whales could be a case in point, notes Whitehead. They have a social structure similar to that of elephants, with small groups of females that communally look after and defend their young, wander many kilometers in search of food, and have chance encounters with other sperm whales. Given McComb's new data, Whitehead wonders whether the low birthrates recorded in sperm whales off the coasts of Peru, Chile, Japan, and even northwestern Europe—compared to whales in the Caribbean—are a vestige of