

## Briefings

edited by CONSTANCE HOLDEN

### Stanford Surgeon to Stay—After All

Stanford neurosurgeon Frances Conley, who resigned in May because of alleged sexism in her department (*Science*, 14 June, p. 1484), has decided to stay on. Conley planned to leave partly in response to the proposed promotion of Gerald Silverberg, whom she accused of sexism, to chairman of the neurosurgery department.

According to a 4 September statement by Stanford University Medical Center, Conley has found recent actions by the medical school administration "reassuring." The administration has appointed a faculty senate "committee on sexual harassment and gender insensitivity," as well as a hospital task force on discrimination. Another committee has been assigned to clarify procedures on reporting sexual harassment.

And that's not all. Medical school dean David Korn has just appointed a committee to look

into all of Conley's complaints; appointment of a new chairman for the neurosurgery department will await the committee's findings. Press reports have said Conley made a national search for a new chairman a condition of her return, but at a 5 September press conference, associate dean for faculty affairs Robert Cutler said her return had involved no specific conditions.

Conley, who has been at the medical school for 23 years, said that she was unhappy with Silverberg because, among other things, he called female colleagues "honey" and provided an example of "the sexist, arrogant behavior that other male neurosurgeons copy."

### Early Quake Warning

Scientists have been saying for years that, despite the rudimentary state of earthquake prediction, it is technologically feasible to construct an early warning system that could prevent a lot of damage to life and property. Now, in a report calling for a prototype "real-time earthquake monitoring system," the National Research Council

**New chief for women's health.** *Vivian W. Pinn, chairman of the pathology department at Howard University College of Medicine in Washington, D.C., has been chosen by NIH director Bernadine Healy as the first director of NIH's Office of Research on Women's Health. Pinn, a renal specialist and a former president of the National Medical Association, is the third woman and the first black woman to chair an academic pathology department in the United States. The new office is designed to enhance research on illnesses that particularly affect women and to see that women are adequately represented in clinical trials.*



Scunliffe Studio

(NRC) has put some flesh on the idea.\*

Earthquake prediction currently ranges from longterm forecasts of probabilities to instruments that can pick up early seismic waves seconds before the most damaging part of a quake hits. The NRC panel, chaired by I. Selwyn Sacks of the Carnegie Institution of Washington, D.C., says the technology is ripe for something more—systems that

\*Copies of the report, "Real-Time Earthquake Monitoring," are available from the NRC, 2101 Constitution Ave. NW, Washington, D.C. 20418.

would automatically broadcast early warning signals, providing "tens of seconds" advance notice to areas more than 10 kilometers from the epicenter.

The panel recommends beginning by adding more capable instruments and enhanced processing to an existing California network—thus gaining data on which to base the upgrading of other systems. An enhanced system would give communities time to take measures such as slowing high-speed trains, shutting off pipelines, and turning off power plants. It would also include immediate post-quake information about magnitude and location.

The panel notes that in view of budgetary limitations, earthquake warnings could best be improved by upgrading existing infrastructures in earthquake-prone areas. It also warns that the growing number of smaller, special-purpose systems are going to find themselves incompatible with each other in the absence of comprehensive, coordinated regional systems.

### Russian AIDS Puzzle

Why is AIDS almost nonexistent in the Soviet Union? That's a question biologist and epidemiologist Andrei P. Kozlov has been asking for the past 5 years. He doesn't have any answers yet, but he thinks they may hold significant clues about how the disease spreads.

Kozlov, head of a new AIDS institute at the Bruce Rappaport Biomedical Center in Leningrad, has been directing a program that has screened about half of the city's 6 million residents for HIV. Since 1987, only 65 cases of infection have been found, 25 in foreign visitors.

But that picture presents a real puzzle, says Kozlov, who was in Bethesda, Maryland, last week for the annual meeting of National Cancer Institute researcher Robert C. Gallo's Laboratory of Tumor Cell Biology. If the virus originated in Africa, as most believe, it should have showed up in Leningrad, because there were more than 5000 African students there during the '60s and '70s.

So why didn't HIV infection explode? Kozlov's hypothesis is that the virus was present, but that "social containment factors" kept it from touch-



Jules Zalon/The Image Bank

Leningrad, soon to be St. Petersburg again.

ing off an epidemic. He is now trying to identify those factors, and at the same time keep a close watch on viral incidence to see if and when the numbers start to take off.

"This is a stage America passed through a decade ago with nobody knowing it," says Kozlov. Will current political upheaval—and the inevitable increase in foreign visitors—break down the barriers that have thus far held the virus in check? "We'll see," says Kozlov.

### Slamming Natural Gas Into Petrol

Simplifying the process of converting methane—the main component of natural gas—into the larger hydrocarbons that make up gasoline could be a boon for the global supply of transportation fuels. Now two Alaskan researchers think they're on to a technique for

doing just that.

William Sackinger, a geophysicist and electrical engineer at the University of Alaska in Fairbanks, has recently received a patent for an "electrical device for conversion of molecular weights"—that is, for transforming small hydrocarbon molecules into larger ones. In experimental prototypes, he and colleagues pump methane into an array of 6 million tiny glass reaction tubes where the gas molecules are ionized and accelerated by an electric field. The ions slam into and combine with other hydrocarbon molecules adsorbed elsewhere in the tubes. So far, Sackinger and his colleague Vidhyadhar Kamath have managed to produce 2- and 3-carbon molecules from the single-carbon methane feedstock. With refinements, Kamath says he anticipates being able to produce larger molecules such as heptane (7 carbon atoms) and octane (8).

The Alaskan researchers aren't the only ones trying to transform methane into its even more useful chemical brethren. Henri Amariglio and colleagues at France's University of Nancy report in the 29 August issue of *Nature* on a two-step technique using a platinum catalyst and hydrogen to form saturated carbon chains up to 6 atoms long.

Both methods are as yet too new and inefficient to compete with a large-scale zeolite-based process that has been converting methane into gasoline for 6 years in a New Zealand plant. But Sackinger's invention could offer a simpler, portable process that could be used even for converting gas from remote oil wells into pipeable liquid fuel.

## Disney Discovers

The Walt Disney Company has swooped in to purchase *Discover*, the last surviving popular science magazine.

The magazine's editorial staff will now be divided between Burbank, California, and New York City, according to its editor Paul Hoffman. Hoffman

will move to Burbank to continue in the job he has held since the monthly was purchased by Family Media Inc. from Time Inc. 4 years ago.

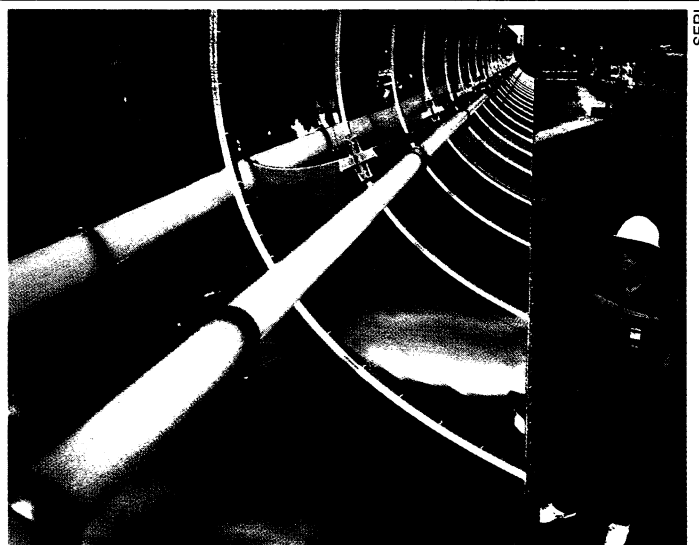
Hoffman says he has some "very exciting" plans, including the launch of foreign editions of the magazine, TV programs on Disney's cable channel, and even a children's *Discover*-type magazine. *Discover*, he says, will also now turn down undesirable advertising, particularly cigarette ads.

Hoffman says he can't reveal the financial details of the transaction. But he says *Discover* was a sought-after property that has continued to be "very profitable" (unlike other Family Media products that it was helping support) through the drop in advertising revenues that has afflicted the magazine industry. It now has monthly sales of 1.1 million.

## Children Who Want to Bear Children

There are many theories about why teenagers choose to become parents. Three of the leading contenders from social science: Teen childbearing is part of a pattern of socially deviant behavior; girls see it as a means of "achieving womanhood"; it is compensation for emotional deprivation.

The network of social influences that supports teenage pregnancy is complex, and it has not been easy to sort out these explanations. But now an unusual longitudinal study of women who were teenage mothers and the children they gave birth to lends weight to the third hypothesis. Sarah McCue Horwitz and her colleagues at Yale Medical School's department of epidemiology and public health were able to locate 111 black women 20 years after they had babies in the late '60s. The investigators found that among the 111 children, those who suffered from depression and low self-esteem were more likely to become teenage parents themselves.



**Solar water scrubber.** Glass pipes and reflecting troughs of Lawrence Livermore's portable detoxification unit.

## Let the Sun Shine In

Scientists at the Solar Energy Research Institute (SERI) in Golden, Colorado, claim they have found a workable way to harness sunlight to break down the hazardous chemicals in polluted groundwater.

The idea is simple: Add a photo-catalyst to the water, then pump it through long, narrow glass tubes that are exposed to sunlight. The high-energy photons activate the catalyst, which breaks down the pollutant into nontoxic components. To enhance the irradiation, the tubes are surrounded by reflecting glass troughs.

The technique has been tested at the Lawrence Livermore National Laboratory in California, where groundwater is heavily contaminated with trichloroethylene (TCE), a nasty chemical that was used as an industrial cleaner in the '60s. The water was mixed with titanium dioxide, a catalyst that reacts with H<sub>2</sub>O to create hydroxyl-radicals, which, in turn, break down TCE into water, carbon dioxide, and very diluted hydrochloric acid. In the first tests run this summer, the levels of TCE were reduced to well below those allowed by federal water pollution standards.

According to SERI scientist Alan Laxson, the same catalyst should also be effective on other chlorinated hydrocarbons, non-chlorinated ones such as benzene, pesticides, and dyes from textile mills. And by adding more troughs and pipes, Laxson says the installation can easily be scaled up for industrial use.

The relationship was particularly strong for girls.

Four major risk factors for teen parenthood were identified for females: early onset of sexual activity; depression; maternal depression; and having a mother who moved away from home within 2 years after giving birth. Sixty percent of the girls with two or more of the risk factors became teen mothers—compared with only 15% who had none of the risk factors.

Writing in the summer issue of *Family Planning Perspectives*, the researchers report

finding "no evidence" that problem behavior such as delinquency and dropping out of school "predated either the pregnancy or the birth." Nor did they find support for the theory that disadvantaged girls see early parenthood as "a means to establishing adult status."

The authors say their study has "important implications" for interventions—suggesting that programs to prevent teen pregnancy should target girls with depression, early emotional deprivation, and mothers who were themselves depressed.