

those who benefit from the electricity rather than by future generations. They would also guard against the possibility of the general public being forced to pay cleanup costs when a utility lacks the means to do so, which may be the case with the Three Mile Island accident.

The utilities, however, would prefer a more flexible arrangement, in which the states are given the chief responsibility for ensuring that adequate financial provisions are made for decommissioning.

The states may, however, be no more lenient than the NRC. Bills have already been introduced in several legislatures that would require utilities to establish decommissioning funds over which they would have no control.

Although the age of commercial nuclear power is already a quarter century old, the problem of what to do with worn-out reactors has not yet become critical. Only four reactors are currently potential candidates for decommission-

ing (Humboldt Bay in California, Dresden in Michigan, Indian Point I in New York, and Three Mile Island in Pennsylvania). So far, the utilities have been happy to let the federal government pave the way by dismantling disused DOE reactors. But a combination of new regulations and the impending retirement of the first generation of commercial power reactors could soon force the industry to take the plunge into the demolition business.—COLIN NORMAN

Rehnquist's Drug Dependence Poses Dilemma

How broad is the right of privacy during detoxification if the patient is a Justice of the Supreme Court?

It is not entirely clear how Supreme Court Justice William Rehnquist developed a dependence on a common sedative, but it is clear that his habit was serious enough to require a medically managed program of detoxification. The therapy was directed by Hugo Rizzoli, chief neurosurgeon at the George Washington University Hospital in Washington, D.C.

This news, which reached the press on New Year's Day, created a dilemma for hospital officials. They felt trapped between their obligation to let the public know what was happening to an important government figure and their duty as physicians to guard the patient's privacy. As a result, they said very little. The record of events remains cloudy, with the prospects for Rehnquist's recovery and future performance on the Court not well defined.

Neither Rehnquist nor Rizzoli will speak to the press about the case. Questions have been referred to hospital spokesman Dennis O'Leary, the physician who spoke before the cameras when President Reagan was being treated in the same hospital for bullet wounds received in the assassination attempt.

O'Leary describes Rehnquist's problem essentially as back pain, with complications. He says that Rehnquist came to Rizzoli sometime in December complaining of pain. He had been referred by his own physician. Rizzoli's staff soon learned that Rehnquist had been taking large doses of a tranquilizing drug, and they recommended that the dose be curtailed. O'Leary says that the Justice has suffered from "degenerative lumbar disc

disease" for many years, enduring a chronic backache that waxes and wanes in severity. Rehnquist's personal physician, who has not been identified, apparently prescribed a sedative during one of the periods of waxing pain.

O'Leary declines to name the drug, other than to say that it is not narcotic. The reason for reticence, he adds, is that "We were pretty specific about drug names last spring when the President was here," and "some of the drug companies used that information for purposes other than we had intended."

After the drug use was curtailed at Rizzoli's direction, Rehnquist began to experience more pain. On 27 December he was admitted to the hospital, ostensibly for treatment of his back. On 30 December the drug withdrawal symptoms became so intense, as O'Leary told one reporter, that Rehnquist suffered "disturbances in mental clarity" and "distorted" perceptions of reality. The hospital staff decided to resume administering the sedative. Rehnquist was sent home several days later, on 3 January, with pain-killing medication and a quantity of the mystery sedative to be taken in smaller doses. He was placed on a sort of maintenance therapy, and returned to work on 6 January.

Speculation about the mystery drug focused on two likely candidates: Valium, a mild tranquilizer considered to be a muscle relaxant in heavy doses, and Placidyl, a strong sleep medicine or hypnotic. O'Leary will not say which drug is causing the problem, but neither does he deny the *New York Times*' report that it is Placidyl.

A brief survey of professional opinion revealed that there is no consensus about the wisdom of using sedatives like these for treating back pain. Nevertheless, it is agreed that these are potent, habit-forming chemicals which can have serious side effects. The 1981 *Physicians' Desk Reference (PDR)* for prescription drugs says that Placidyl is meant to be administered for no longer than 1 week for the short-term control of insomnia. After a week, the *PDR* notes, a patient should be asked to go without the drug for at least a week and should undergo "further evaluation" before being given a new prescription. (O'Leary says that Rehnquist was using his sedative for at least 2 weeks.) The *PDR* gives this warning in bold type: "Prolonged use of Placidyl may result in tolerance and psychological and physical dependence. Prolonged administration of the drug is not recommended."

Some of the symptoms of Placidyl intoxication, according to the *PDR*, are incoordination, tremors, confusion, slurred speech, and muscle weakness. Withdrawal symptoms, which may appear as late as 9 days after use of the drug has stopped, include delirium, schizoid reactions, perceptual distortions, memory loss, slurring of speech, unusual anxiety, and other signs of agitation. To treat a patient who has become dependent on Placidyl, the *PDR* says, one should administer a dose roughly equal to the dose used during the period of intoxication. "A gradual stepwise reduction of dosage may then be made over a period of days or weeks."

Although none of the neurosurgeons

who spoke with *Science* advocated the use of Placidyl or Valium to treat back pain, few strongly opposed the practice. Russell Patterson, chairman of the department of neurosurgery at the New York Hospital in Manhattan, offered a comment characteristic of those received. He said, "Everybody has his own recipe for dealing with lower back pain. I'm a therapeutic nihilist myself. I try to talk to the patient and urge him to take aspirin." But Patterson believes it is

"perfectly acceptable" to prescribe Valium or other soothing drugs in an effort to "sedate those back muscles." He adds: "I am sure there are oodles of patients cruising around the country, taking those drugs for back pain."

Nelson Hendler, chief psychiatrist for Johns Hopkins University's Pain Treatment Center, argues strongly against the use of tranquilizers, although he thinks it is common to treat back pain with them. Hendler would never prescribe Placidyl

or Valium because he does not consider them to be pain-killers or muscle relaxants. However, he says, they are addictive mood-altering drugs which can impair the intellect, weaken the memory, and interfere with natural sleep.

The important question in this controversy, said one media-shy neurosurgeon at Tufts University, "is not whether doctors are prescribing these drugs; it is whether Supreme Court Justices should be taking them."—ELIOT MARSHALL

At AAAS Meeting, a Closing of Ranks

Scientists mount a counterattack on creationism; worries about budget are up, confrontations down

If attendance at the AAAS annual meeting can be taken as an informal indicator, American science appears to be holding its own. The official count for the 5 days of the Washington meeting was just shy of 5000, about the same as the last time the association met in the nation's capital, 1978.

• In the week in which advocates of creation science saw a major court decision go against them in Little Rock, evolution was a lively topic on and off the AAAS program in Washington. Evolution occupied a symposium category of its own this year with all-day sessions on each day of the meeting devoted to scientific aspects of the subject. The creation-evolution controversy was aired in a full-day session on science and belief at a history and philosophy symposium.

The AAAS meeting also served as a rallying ground for efforts to organize national opposition to teaching of creationism. Representatives of some 42 state "committees of correspondence" met on 4 January to discuss ways of opposing infusion of creationist doctrine into the school curriculum.

The AAAS added its official stamp to the counterattack on creationism by passing a resolution against "Forced teaching of creationist beliefs in public school science education." Adopted by both the association's board of directors and the governing council, the resolution charges that "Creationist groups are imposing beliefs disguised as science on teachers and students to the detriment and distortion of public education in the United States." The resolution urges opposition to inclusion in the curricula of "beliefs that are not amenable to the

process of scrutiny, testing and revision that is indispensable to science." AAAS Executive Officer William D. Carey also issued a statement in behalf of the association specifically welcoming the court ruling. Exponents of evolution seemed to be preaching to the converted, since there were no dyed-in-the-wool creationists in evidence at the Washington meeting.

• The level of conflict at the meeting was generally low this year. In the past, controversy has been kindled by issues

ful, is nevertheless necessary and may even be beneficial.

The nub of Keyworth's message was that the "realities of today's competitive world" make it impossible for the United States to be preeminent in all things scientific. This country can still remain the leader in many areas, however, said Keyworth. But to do this, "tough choices [must be] made, and priorities established, before resources are allocated." He went on to say, "The scientific and technological community must learn

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external to science, notably the Vietnam war, or internal, like sociobiology. Political action groups like Science for the People were on the scene at the meeting, and matters such as U.S. policy in El Salvador and nuclear arms policy were broached. But the public policy issues that attracted most attention and concern this year appeared to be those resulting from developments in biology such as the commercialization of biotechnology.

• This year's keynote speaker, President's science adviser George A. Keyworth II, brought no glad tidings, but spoke with the candor that has come to be expected of him. Keyworth repeated his now familiar theme in respect to the science budget: smaller, if not beauti-

to participate in this assessment by playing a more forceful and critical role."

A few days later in his presidential address, the top elected AAAS officer, D. Allen Bromley of Yale, hit the ball back into Keyworth's court when he noted, "... unlike other countries we have not developed coherent national science policies. Indeed, the idea is abhorrent to many. Our free enterprise laissez-faire system has served us well during periods of expansion and growth; but in retrenchment the development of more formal science and technology policies seems to me to be essential if we are to preserve the best aspects of our system."

Bromley then offered some advice on the subject, suggesting that relations be-