

But some people have wondered whether Ratiner's recent actions and statements have muddled the waters for Richardson. "I would not do what Leigh is doing," says Melvin Conant, Ratiner's boss when he worked on ocean mining matters for the Federal Energy Administration. And, says Stuart French, who was the Department of Defense's expert on the sea law conference until very recently, "You have in the law that a man can't serve two masters. What master is he serving in his capacity as a public adviser? What capacity is he serving as counsel to Kennecott? . . . It obviously could be a problem of how objective Ratiner can be in the light of all these circumstances."

Ratiner already appears to have disclosed information that he presumably acquired as a government negotiator in a way that could benefit the ocean mining industry. The industry has been arguing that it needs a law to guarantee its deep seabed investments in the event that the conference fails or the treaty confiscates, in some way, the companies' assets and their technology. On 26 April, before a subcommittee of the House Science and Technology Committee, Ratiner testified that "leading Third World negotiators" had secretly pledged to put grandfather rights into the treaty, but that they could not "go public right now" with such a pledge because of the political sensitivities of the rest of the Third World.

A Senate staffer says that this revelation could spur Congress to pass the protective legislation sought by the mining industry because it might "undermine such supposedly secret agreements in the conference itself."

Frank Hodsell, a Richardson lieutenant who is working on the ocean mining negotiation, declined to comment on whether there is such a deal with the Third World to get grandfather rights in the treaty. "Talking about deals—theoretical or actual ones—in public does not increase the chances of their being kept," Hodsell said.

Ratiner's other activities have also aroused some criticism because of the ambiguity of whether he is speaking for Kennecott, for the mining industry, or whether as a dispassionate former government negotiator. Hodsell says that Ratiner has given the Richardson group several long briefings on the status of the negotiations and continues to be in touch with the staff and with Richardson himself.

One problem, says DOD's French, is "if I were a competing mining company, I'd be hopping mad that this gives Ken-

necott a competitive edge." In fact, a spokesman for another ocean mining group, Richard Greenwald of Deepsea Ventures, Inc., says Ratiner's work for Kennecott gives that company a competitive edge. "I am uncomfortable with the arrangement," he says. "I am uncomfortable when he appears to speak for industry because I don't know what he perceives his function to be or what other people perceive his function to be."

Ratiner's appearances before Congress, where he often urges passage of the Murphy-Breaux bill which would guarantee the industry's investments, have been ambiguous in this regard. During the 3-hour House science and technology subcommittee appearance, for example, Ratiner at no time mentioned his role with Kennecott, although he appeared with Dubs, Greenwald, and other industry witnesses. He was identified on the witness list only as with the law firm and as a former negotiator.

Earlier, in April, House staffers received an invitation to an ocean mining-ocean law briefing from John Breaux (D-La.) saying "Mr. Leigh Ratiner, former Committee One negotiator for the U.N. law of the sea conference, will be available for any questions." But the session was a Kennecott slide show by Dubs, at which an alleged spy for another company was ushered from the room. Only when Ratiner was asked by a staffer for Berkley Bedell (D-Iowa) did he state he was counsel to Kennecott. The staffer later told *Science*, "I thought that was outrageous. It was so deceptive." Ratiner says he was not responsible for the way the written invitation to the session was worded.

Ratiner also flew to Geneva in March, where the Richardson group was meeting with foreign delegates to try to break the deadlock on ocean mining. Both the State Department and Kennecott's Dubs deny they instructed Ratiner to go there. But while in Geneva, Ratiner says that he met socially with "close friends" who were foreign delegates to the meeting. Ratiner also confirmed widespread accounts that he had asked to be allowed into the meeting and that Richardson told him not to enter.

If Ratiner's status was unclear in Geneva, it will be no less so, it seems, in New York. Dubs, a long-term member of the public advisory committee, says, "I will be the only one speaking for Kennecott Copper" in New York. On the other hand, Richardson, reportedly concerned about the appearance of a conflict of interest, was told by the State Department's legal adviser that no federal law

would be violated if Ratiner were put on the advisory committee. Richardson did so, according to informed sources, so he could give Ratiner a confidential clearance and hence consult with him about the negotiations. But whether Ratiner will also be allowed to socialize with foreign delegates, or sit in on the negotiations—to speak for Richardson, Kennecott, the industry, or whomever—is not clear.—DEBORAH SHAPLEY

RECENT DEATHS

Daniel E. Berlyne, 52; professor of psychology, University of Toronto; 2 November.

Robert M. Burns, 86; chemist and retired director of chemical and metallurgical research, Bell Laboratories; 14 November.

William K. Calhoun, 54; biochemist and chief, nutrition group, Food Sciences Laboratory, U.S. Army Natick Research and Development Command; 31 October.

Mervin S. Coover, 85; dean emeritus, College of Engineering, Iowa State University; 24 November.

Helen T. Gaige, 86; former curator of amphibians, reptiles and amphibians division, University of Michigan Museum of Zoology; 24 October.

Frederick McM. Gaige, 86; former director, University of Michigan Museum of Zoology; 20 October.

Sidney Laskin, 57; professor of environmental medicine, New York University; 28 November.

Trofim D. Lysenko, 78; agriculturist and former president, Soviet Academy of Agricultural Sciences; 20 November.

Jesse F. McClendon, 95; retired research professor of physiology, Hahnemann Medical College; 21 November.

Theodor Rosebury, 72; professor emeritus of bacteriology, Washington University; 25 November.

Clayton O. Rost, 90; professor emeritus of soil chemistry, University of Minnesota; 23 October.

Theodore Shedlovsky, 78; professor emeritus of physical chemistry, Rockefeller University; 5 November.

Samuel Silver, 61; professor of engineering science, University of California, Berkeley; 5 November.

Erratum. According to the latest information the publisher has provided to *Science* the current price of *The Nervous System* (Donald B. Tower, Ed.; Raven Press), reviewed by John G. Hildebrand, 22 April 1977, p. 419, is \$15 a volume, rather than \$25 a volume and \$65 for the three-volume set, the prices listed at the head of the review.