ment of the findings of Evans and others. In an interview with *Science*, Landrigan said that some of the Navy's initial objections to the Portsmouth study centered on the view that the British data were not very convincing. The committee's strong endorsement of those data "really supports our position," about the effects of low-level radiation, Landrigan said.

The Wolff committee was equally unpersuaded that studying the Portsmouth shipyard workers for sperm abnormalities would be useful. Although the NIOSH protocol included analysis of sperm samples from each of 266 men who have been exposed to radiation and 266 controls, a number sufficiently large to detect an effect, the proposed group does not contain 266 men who have been recently exposed to 5 or more rems of radiation. According to the committee, "Between 1971 and 1977, the records at [Portsmouth] indicate that only three . . . employees have been exposed to more than 3 rems in any one year." Because sperm production recovers after low doses of radiation, recent exposure would be necessary to obtain meaningful data. The committee concluded that there is "no reasonable chance" of obtaining such data with the present NIOSH protocol.

Although the Academy's report is primarily a critique of the particular NIOSH protocol in question, it is also a statement of the difficulties inherent in many studies designed to assess a connection between exposure to low doses of radiation. "Well-designed studies of the effects of ionizing radiation at low-dose or low-dose rate exposures over an extended period could be informative, but such studies are confronted with a formidable array of difficulties," the report states. Existing data indicate that adverse health effects are "rare or hard to detect within a reasonable period." Furthermore, results in the field are muddied by the fact that age, health status, socioeconomic position, and exposure to other environmental agents, including alcohol, can effect chromosomes and sperm. "Thus, it is not certain whether any study of an occupationally exposed population, or combination of populations, will produce unambiguous results," the committee concludes.

Nevertheless, the committee is not against trying if a good, long-range study of the right group of workers could be devised. Uranium miners, workers who bury radioactive wastes, certain medical researchers, and personnel in nuclear power plants are cited as candidates for study.—BARBARA J. CULLITON

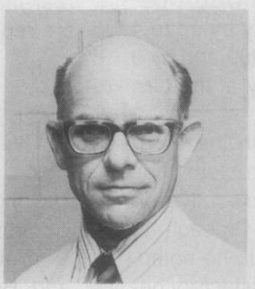
Acid Electioneering at ACS

Old tensions between academic and industrial members of the American Chemical Society (ACS) came to the surface again this fall during the presidential election campaign, due to end on 15 November. The controversy erupted with the appearance of a letter to some ACS members written by the academic candidate, F. Albert Cotton of Texas A & M University, describing his opponent as "an undistinguished, mid-level industrial chemist who is due to retire in December." He added that he had been informed that the man was "defensive and indecisive."

In unusually strong invective, Cotton wrote that his opponent, Warren Niederhauser of the Rohm & Hass Company, has "nothing in his background to suggest that he is capable of leadership. . . . He is supported by a small but politically hyperactive faction of the ACS whose primary interest is in employment conditions for industrial chemists."

Cotton added that this group, known as the "grass roots" lobby, is not to be underestimated. "They play hard ball," he wrote. "A few years ago they succeeded in electing a total nonentity against a distinguished opponent by dint of hard campaigning." He warned against complacency—the assumption that "Cotton ought to beat whoosis easily." Recipients of the letter were urged: "Give particular attention to contacting everyone you know in industry, ask them to vote for me, and ask them to ask other industrial chemists that they know to vote for me."

The grass roots group referred to in Cotton's letter is an informal coalition made up chiefly of industrial chemists who believe the ACS should worry less about its academic journals and do more to advance the careers of members. One of the founders of the group, Alan C. Nixon, says that he and his colleagues believe that in addition to promoting chemistry, the ACS should "promote chemists." By this, he means specifically that chemists should act in concert to raise their salaries and improve working conditions. With the support of the strong Californian grass roots contingent, Nixon won a place on the ACS ballot and was elected president of the ACS for 1973. Since his retirement, he and another Californian, Attila Pavlath, have continued to promote the cause of professional services for ACS members.



F. A. Cotton

W. D. Niederhauser

This year, for example, the grass roots people backed Niederhauser and helped circulate a petition that got Niederhauser on the election ballot. More recently, the grass roots people have circulated hundreds of copies of the Cotton letter, for they believe it is damaging to the author.

By tradition, the ACS tries to nominate exclusively academics or industrial chemists in alternating years. The ACS nominating committee intended 1982 to be an academic year: two prominent university chemists were selected for the ballot this fall. They were Cotton and George Pimentel of the University of California at Berkeley. Thus, when Niederhauser's petition came in, it spoiled the purity of the 1982 ballot. On 2 August, Pimentel withdrew from the race, pleading overcommitment. He had just agreed to chair a massive review of the discipline of chemistry, a successor to the Westheimer study of 1965. Many people believe one reason he stepped aside was to avoid splitting the academic vote in the ACS election.

In the meantime, a letter of support for Niederhauser, written by a former colleague now teaching at the University of Notre Dame, has been circulating in the academic community. And Cotton has written a remorseful note to Niederhauser, apologizing for his harsh words, calling the letter a private communication, and ascribing the lapse to faulty information provided by overzealous supporters.—***Eliot Marshall***

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