

Of the culprits behind labor's downfall, none has been more influential, Geoghegan argues, than the federal government. In 1947, for example, the Republican-controlled Congress passed the Taft-Hartley Act outlawing the tactics—mass picketing, sit-downs, and secondary strikes—that had made union-building so successful. Yet it was Ronald Reagan, Geoghegan says, who dealt labor its worst blows. Thanks to Reaganomics, America in the 1980s lost one out of three jobs in heavy industry, creating “a pool of scabs as big as Lake Michigan.” And Reagan's decision in 1981 that the air traffic controllers' strike was unlawful signaled that the strike as a bargaining tool was dead. In 1972 organized labor called 443 strikes nationwide; in 1989, only 43.

Geoghegan tries hard “to be for labor when it's flat on its back,” but perhaps the surest sign of the times is that he, too, seems as befuddled by the events of the past decade as the rank-and-file he represents. He would like comprehensive labor-law reform, for Congress to change the Taft-Hartley and Wagner Acts, and for union members to be able to strike effectively, but he has no practical suggestions for bringing such things about. Organized labor may be thriving in Canada and Japan and Sweden, but in America—or so Geoghegan claims—one can only watch as “labor shambles around like Frankenstein [with] half its brain gone.”

Science & Technology

TOO HOT TO HANDLE: The Race for Cold Fusion. By Frank Close. Princeton. 376 pp. \$24.95

On March 23, 1989, Martin Fleischmann and Stanley Pons, two chemists at the University of Utah, announced an astonishing discovery: They had uncovered the secret of cold fusion.

During fusion, the nuclei of two atoms are melded together, freeing substantial new energy. This is what the sun does on a massive scale at a temperature of 100 million degrees Celsius. Pons and Fleischmann, however, announced they had achieved it with a battery, palladium metal, and water at room temperature (hence the name *cold* fusion). Through

cold fusion, Pons and Fleischmann reported, a glass of water could power a car for 19 years. The chemists made their announcement at a press conference one day after the Exxon Valdez disaster in Alaska, when the world was more than receptive to news of a clean, safe, limitless energy source. Newspapers from London's *Financial Times* to the *Wall Street Journal* gave front-page coverage to the miracle.

If their experiment had proved valid, Fleischmann and Pons's achievement would rank somewhere near the invention of the wheel. But, according to Frank Close, a prominent physicist and science writer, there were three things wrong with the picture. First, it was unlikely that chemists would find the key to a problem in nuclear physics. Second, they announced their findings to the public before they could be reviewed by other scientists. And last and most important, their claim was incorrect. Pons and Fleischmann had misread a small element in the data. What had occurred in the test tube was a simple chemical reaction, not a nuclear one.

Ordinarily the mistake would have been detected because ordinarily scientific discoveries are announced through scientific journals, where the material can be mulled over and tested by peers. Why did the Utah scientists break protocol? Initially, they feared being scooped by competitors. After they got swept up by the enthusiasm for their findings, they and the University of Utah did not have the courage to turn back. For “the most bizarre 500 days in the history of modern science,” dozens of laboratories and hundreds of scientists attempted to repeat Pons and Fleischmann's experiment—but to no avail. Instead of acknowledging their error, the Utah chemists questioned the calibration of the equipment other experimenters used.

Research on fusion, however, remains a high priority among physicists. “Pollution from the dregs of an ever increasing energy consumption threatens to poison everyone in their own waste,” Close writes. “The only real hope for mankind in the long term appears to be fusion.” On four continents scientists have consumed billions of dollars trying to produce utilizable fusion. Likely there will be no overnight, miracle discovery; the Pons and Fleischmann fairy tale, alas, will never come true.