

H-Bomb Issue Hits Where It Hurts

The case of *United States v. The Progressive*, the liberal Wisconsin-based magazine that has been enjoined from publishing an article on the inner workings of the H-bomb, pricks many scientists where it hurts.

On the one hand, many scientists, including those who consult with the Pentagon and hold clearances, criticize government classification as excessive and wage guerrilla warfare against the system to get more information into the public domain. On the other hand, they often invoke the "secret of the H-bomb" as the classic example of something they would *not* reveal because of national security considerations.

The *Progressive* case may also come to involve some scientists directly, if a Wisconsin court adopts an American Civil Liberties Union motion to have a panel of technical experts tell the court whether the material in the article is indeed secret, as the government contends.

The article, now titled "The H-bomb secret," was written by Howard Morland, a 36-year-old free-lancer whose technical training consists of undergraduate courses in physics, chemistry, and quantum mechanics. Morland researched the article using unclassified sources over a period of 6 months on assignment from *The Progressive*. The government learned of the article's existence when George Rathjens, an M.I.T. scientist who is currently deputy U.S. representative to the nuclear nonproliferation talks, fearing the consequences of publication, forwarded a copy to the government. (Rathjens was apparently not the only scientific reader who was alarmed. Sources say that Bernard Feld, a senior M.I.T. physicist, veteran arms controller, and writer on nuclear weapons issues, tried to talk *The Progressive* out of going ahead with the article.)

According to sources, *Progressive* editors were first furious with Rathjens for having given the manuscript to the government, but later, when they heard nothing from the authorities, they forwarded their own copies of the article, effectively starting a series of events that led to the 10-day temporary injunction issued by U.S. District Court judge Robert Warren on 15 March.

But the case could wind up in the Supreme Court as a test of the press's First Amendment rights under the constitution—a possibility that has many news organizations and civil libertarians worried. In the only previous such case, involving publication of the Pentagon papers, the press won the right to publish. But many people feel that in this case the press could lose, setting a historical precedent for further government suppression of news. So several newspapers, including the *Washington Post*, have urged that *The Progressive's* editors withdraw the article from publication voluntarily.

For one thing, the portions of the Morland article the government wants deleted may indeed be classified material—although the magazine contests this. Both Robert N. Thorn and Roger Batzell, the directors of the nation's two nuclear weapons laboratories, have filed affidavits affirming that the article contains information about the H-bomb not previously published in the open literature. However, Theodore A. Postol of Argonne National Laboratory, in an affidavit filed for *The Progressive*, contends that the Morland article is similar to one in the *Encyclopedia Americana* that was written by the "father of the H-bomb" and

well-known critic of government secrecy, Edward Teller.

The government is also trying to meet the legal test it failed in the Pentagon papers case—to show that publication will "surely result in direct, immediate, and irreparable damage to our nation or its people." In one government affidavit, Jack W. Rosengren, who designed the Polaris warhead and one of the Minuteman warheads, describes current public literature about H-bomb design as "a vast collection of good and bad ideas and hints" on the many possible ways an H-bomb can be designed. The Morland article, he says, gives specifics of the U.S. design, which is "far superior in efficiency and practicality to any other known type of design."

According to the affidavits, other countries already possessing A-bomb technology have taken from 2 to 9 years to progress to a practical thermonuclear weapon, but "once the key concepts were discovered by researchers in the United States, it took only a matter of months to translate it into practice." Rosengren says that the Morland article could help other countries "obviate" lengthy, expensive research into many other impractical H-bomb designs.

By implication, then, the government is arguing that nations possessing atomic weapons technology as well as money and resources—which could include India, Israel, and possibly even South Africa—could obtain thermonuclear weapons more quickly, thus collapsing the time frame of U.S. efforts to negotiate a new nonproliferation agreement. "Such accelerated development of thermonuclear weapons would increase the adverse consequences of nuclear proliferation," writes Spurgeon Keeney, acting director of the Arms Control and Disarmament Agency.

Progressive editor Erwin Knoll told *Science* that the article should be published in full to "demystify the whole business of secrets." Publication would help, not hurt, the cause of nonproliferation, because "we've got to get people to understand that it isn't keeping a secret that protects us, it's taking international decisions and policies that are sound and sensible." Knoll said he would be "dismayed" if, for example, the Israelis obtained the hydrogen bomb. But if *The Progressive* with its "pathetically limited resources could get this information," he added, Israeli intelligence could get it "more quickly and effectively."

What purpose is served by publishing specific details of the bomb, which is, after all, the point at issue? Knoll says the article could improve the debate on the proposed international nuclear test ban, and whether testing of the weapons is necessary. "We explain what it is exactly they are testing for. Everyone knows they are trying to build a better bomb. But why can't we stop building new bombs now and just use the ones we have? That's the kind of information our article will provide."

Knoll said that several scientists, including Charles Schwartz of the University of California at Berkeley and Henry P. Noyes of the Stanford Linear Accelerator Center, had signed affidavits on the side of *The Progressive*. He criticized other scientists, including the Federation of American Scientists, who oppose publication of the controversial sections. "I've been appalled at the number of scientists who have prejudged the issue without reading the article. That disqualifies them as scientists."

—DEBORAH SHAPLEY