Judge Halts H-Bomb Article

Commenting that it will make him notorious, Robert Warren, the federal district court judge in Milwaukee, on 26 March issued the first prior restraining order for a publication in U.S. history: He told *The Progressive* magazine it could not publish an article describing the design of the U.S. hydrogen bomb. The magazine's editors say they will appeal this infringement of their constitutional rights.

Warren sided with the government, he explained, in view of the "disparity of risk" involved in this confrontation between national security and freedom of the press. If he made a mistake favoring the government, there would be some infringement of the magazine's First Amendment rights. But if he made a mistake favoring the magazine, and let the article be published, the result could be "a threat of thermonuclear disaster to us all," he said.

Judge Warren evidently concluded that the information in the article constituted a genuine secret under the terms of the 1954 Atomic Energy Act. Lawyers for *The Progressive* had argued that the act's language was too vague to apply, since it restricts "dissemination" of "all data" related to atomic weapons. *The Progressive* argued, moreover, that the information was not secret, since the author, Howard Morland, had gathered it from unclassified sources and with the government's help (*Science*, 30 March, p. 1323).

Curiously, both the government's claim that the material in the article is a national secret and *The Progressive*'s claim that it is not, may be true. This is because what writer Morland deduced are not only the general principles of the H-bomb but the unique configuration that has made the H-bomb practical. Developed in 1951, this design transformed the American H-bomb program from a batch of unworkable possibilities into what J. Robert Oppenheimer called a "sweet" problem. The design was based on an insight by mathematician Stanislaw M. Ulam and developed in further work between himself and Edward Teller. As Herbert F. York, a participant in the program, wrote in 1976, "There is only one truly central technological fact in all this that still remains secret, and that is the precise nature of the Teller-Ulam invention of 1951."*

Oppenheimer described the importance of the invention to the U.S. program thus:

> The program we had in 1949 was a tortured thing that you could well argue did not make a great deal of technical sense. It was therefore possible to argue also that you did not want it even if you could have it.
>
> The program in 1951 was technically so sweet that you could not argue about that. The issues became purely the military, the political, and the humane problems of what you were going to do about it once you had it.†

The invention led immediately to test programs, code-named IVY and CASTLE, which resulted in the first H-bomb explosion, in November 1952, code-named "Mike." Since the Teller-Ulam secret made "Mike" possible, it caused other nations to learn that the H-bomb was not only theoretically, but practically, feasible.

In a friend-of-the-court brief, Lawrence Livermore scientist Hugh E. DeWitt says the portions of the Morland article the government wants deleted "describe very qualitatively the Teller-Ulam idea which led to the first successful hydrogen bomb explosions by the United States in the early '50's. This 'secret' has been regarded for over 25 years as highly classified. Yet there is by now enough information in open publications that a capable physicist could deduce the basic idea for himself. . . . [A]nd I understand that this is in fact what Morland has done."

Ironically, it may have been the government, rather than the press, who nearly gave away the "secret" of the H-bomb. For, while Morland or someone else might have deduced this particular design from unclassified sources, the fact that this particular design is uniquely useful was not known until the government started trying to suppress the article. In their affidavits, government witnesses say, in effect, that this is the correct design, and so may have given the game away.—DEBORAH SHAPLEY

**The Advisors: Oppenheimer, Teller and the Superbomb* by Herbert F. York. W. H. Freeman and Co. San Francisco 1976 $6.95. 175 pp. p. 8. †*Ibid.*, p. 81.

with Zbigniew Brzezinski's National Security Council (NSC) for scheduling a series of trips to China leading up to recognition of the Peoples Republic. "We tracked developments in China almost on a weekly basis . . . and at the right moment I told them [the NSC] that in our estimation China is ready to receive a delegation of senior officials." Brzezinski, along with Benjamin Huberman, who works for both OSTP and the NSC, went to China in May to propose a series of exchanges. Press made a trip in July with a group of top-ranking federal research officers. Visits accelerated from then on, culminating in the signing of formal agreements in January.

Other major projects that Press mentioned included the proposal to create an Institute for Scientific and Technological Cooperation—an agency for sharing technology with developing countries—and a high-level review of the problems in industrial innovation. He brought out a handwritten list of more than 20 lesser projects that he had scribbled on the back of his written testimony for the Stevenson committee—a note to himself to which he meant to refer when answering criticism of his leadership.

Despite these successes within the Executive Branch, Press is being asked to take a more active public role, a summons which he regards with no enthusiasm.

Press is a slightly built man, careful, and "retiring," as one friend described him. He was a distinguished geophysicist and chairman of the earth sciences department at the Massachusetts Institute of Technology (MIT) before moving to Washington. As the technical adviser of a technically minded President, he has good access to the Oval Office, "better than 99 percent" of those who seek the President's attention, Press said. But he remains an inconspicuous figure in the Executive household, one who consistently dodges controversy.

This is just as it should be, the OSTP staff believes. Eugene Skolnikoff, a political scientist at MIT and adviser to numerous science advisers, including the incumbent, said that Press's personality fits the job. "If I were forced to choose between a science adviser who never saw the light of day and a public spokesman, I'd certainly choose the former," Skolnikoff said. "Press sees his primary role as serving the President." Another member of OSTP, Philip Smith, said that Press knows that "he serves a constituency of one." Smith added that people with a large ego do not last long at the White House. It is true that one does not get things accomplished in the White

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