mode of nuclear process might exist, and demanded the nuclear products as proof of their heat claim. On the other hand, if that proof were forthcoming, he would then be willing to entertain the hypothesis that a Fleischmann and Pons electrolytic cell might generate excess heat power. He has placed the cart before the horse.

I am afraid that his approach to this field followed most like that of a pedant. As the Ichabod Crane of cold fusion studies, Huizenga stood before his class of unruly "believers" brandishing a fresh birch switch, demanding that Masters Fleischmann and Pons stand and recite their nuclear products.

Publications

Jerry E. Bishop, an intrepid science reporter for the *Wall Street Journal,* reported frequently on developments in the field of cold fusion research starting one day prior to its announcement in Utah. His reports came more often and were generally longer than those of most major newspapers, and he was not always writing as a skeptic as were other science reporters.

He was selected in March 1990 by the American Institute of Physics (AIP) as the winner of their annual science writing award for the year 1989. The announcement by the AIP, a professional umbrella group that includes the APS, that their annual award for excellence in science writing would be given to Bishop greatly annoyed the skeptics. I quote from Huizenga's book to sample the atmosphere of this little tempest.

> . . . I immediately contacted Professor Peter W. Trower, a physicist and one of the judges for the AIP award. In addition, I contacted the Office of Public Affairs of the APS [Park]. I was upset and particularly interested in learning about the criteria that were applied in making the Award . . . On March 20, 1990, Dr. Robert L. Park, Executive Director of the Office of Public Affairs of the APS wrote a letter to the Manager of AIP declining his invitation to attend the luncheon honoring Bishop for the AIP Science Writing Award. In addition, several other officers of the APS boycotted the ceremony (I declined my invitation to attend.)[9]

Kenneth W. Ford, the executive director of the AIP, had to plan his award remarks with special care. ". . . because the award was controversial, I wrote out my remarks with care and followed the text."[10]

I present the entire award text here so the unhurried reader may savor its ambiguities.

It is my pleasure to present to Jerry Bishop of the *Wall Street Journal* the AIP Science Writing Award for the best writing on Physics for the general reader by a journalist in 1989.

Jerry Bishop is a transplanted Texan who has been a distinguished science writer and reporter for several decades. His work has been recognized by numerous prizes in the past—by the American Heart Association, the American Medical Association, the National Association of Science Writers, and the AAAS. This year he won the American Chemical Society's Grady-Stack Lifetime Achievement Award. And this is his second AIP award. He won our science writing prize also in 1972.

His award this time is presented for his 1989 series on cold fusion in the *Wall Street Journal.* Jerry Bishop broke that story, with a one-day jump ahead of the now famous press conference held by Pons and Fleischmann at the University of Utah last March. During the weeks immediately following that announcement, he reported frequently on the claims emanating from Utah and from various other laboratories. The articles were well written, often under deadline pressures, and they conveyed to the general reader what nuclear fusion is about and what some of the cold fusion advocates were claiming. Beginning in May, it became increasingly clear that the Utah claims were without substance. Jerry continued to write on the subject and covered both sides of the controversy, although in the opinion of many (including, I must admit, my own opinion), he did not give as balanced a coverage as we would have liked, nor draw attention to the fact that the Utah researchers were violating accepted codes of scientific conduct.

I mention this concern because, as Jerry himself knows, and as many people in this room know, this particular award has become controversial. There are some, including the excellent panel of judges, who think that the clarity of his writing, and his consistent attention to an important and newsworthy topic, justify the award. There are others who greatly regret that he did not use his reportorial and writing skills to make clear to his readers—at least after May 1989—that there is no credible evidence for the claims of cold fusion. So I have to express the hope, Jerry, that you will not abandon the subject yet. It needs to be brought to closure, so that general readers understand what nearly every scientists now understands—that cold fusion as a practical power source is an illusion.

I am sorry for the roundabout route to this award presentation, but I could not let the disagreements that it has generated pass without notice. Whatever one thinks of this particular series, one must

> recognize Jerry Bishop as one of the finest science writers in America, with a long list of accomplishments. It is therefore my pleasure, Jerry, to present you with this award—consisting of a check for $3,000, a certificate, and a handsome chair guaranteed to encourage creative effort.[11]

This "hole" in the AIP's procedure was quickly mended after the presentation. As Huizenga explains it, "In response to the concerns of many of us, the AIP has changed its rules on the journalism award. In the future the awardee selected by the AIP judges will have to be approved by the AIP Board of Governors."[12] However, there is a footnote to his remark in the second edition of his book as follows "The AIP later reversed its decision on approval." The zigzag was indicative of the anxiety generated within the physics community by a distinctly threatening experiment created by scientists working in a different discipline. It also indicated that the outspoken skeptics were not necessarily representative of opinion within the APS and the AIP.

Bishop continued to report comprehensively on the field called cold fusion until the end of 1991. Reports on the emerging evidence for helium-four as the long sought for nuclear product were reported from the summer of 1991. The results of B. Bush and M. Miles experiments in series one were published. After that, WSJ reports became sporadic and then petered out within a year.

There are four scientific journals that are read by a broad audience. Scientists follow significant events in fields other than their own through these publications. Developments in cold fusion research were not known by most scientists because these four publications had maintained a silence on cold fusion developments for many years. I found in my travels and interviews that members of university physics departments were unaware of developments after 1989. It is appropriate, therefore, to illustrate some of the positions taken by these publications during the first ten years.

The critique of the Utah claims in *Nature* was aggressive, the journal becoming an immediate player in determining the destiny of the field. It was more patient than some of its audience in that it permitted itself twelve months before committing itself to an outlook dominated by the nuclear physics point of view. The failures were counted as well as the successes obtained by various experimenters, and thereby the journal obtained a useful measure of the experiment's reproduciblilty, which was poor, but not of its validity, which was good.

The journal gave preemptory consideration to particle and gamma ray detection, thus directing attention away from excess heat as the experiment's signature. It gave full credit to Fleischmann and Pons for their initial recogni-