

areas, we recognize the public health threat of dispensing mercury. However, we recommend also that the dangers of mercury be sensitively separated from the social-psychological benefits of spiritualism. In inner-city Hispanic communities, *espiritismo* is an indigenous source of community socialization and support. Spiritualists frequently represent the first line of extrafamilial mental health intervention. Since botanicas also sell medicinal plants and herbal remedies, they offer some basic health care familiar to the cultures of Latin America. Therefore, public health interventions must be aimed at helping spiritualists find safe alternatives to mercury. □

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# Blood Lead Levels, Scientific Misconduct, and the Needleman Case

## 1. A Reply from the Lead Industry

Together, industry, government, and the public health community have made great progress in reducing blood lead levels in this country. It is regrettable that a supposedly peer-reviewed journal with the stature of the *American Journal of Public Health* would choose to print the ill-conceived and misleading annotation by Ellen Silbergeld on the Herbert Needleman case.<sup>1</sup>

A carefully worded accusation in the opening line of Silbergeld's article charges that the lead industry somehow misused the National Institute of Health's Office of Scientific Integrity to attack Dr Needleman. Lead Industries Association, Inc, the trade association for the lead industry, has never contacted the Office of Research Integrity or anyone associated with it with respect to this case. To imply that Lead Industries Association, Inc, or this industry, has "used" the Office of Scientific Integrity or has had any influence on the deliberations of that organization is totally false and insults the Office of Scientific Integrity and its successor, the Office of Research Integrity.

The charges against Dr Needleman stemmed from a 1990/91 Environmental Protection Agency court case involving the Sharon Steel Company (not a lead company). The testimony of Dr Needleman, an expert witness for the government in that case, was challenged by expert witnesses Dr Claire Ernhart and Dr Sandra Scarr. The judge ordered Dr Needleman to make available his original data to these scientists in order to substantiate his statements. Dr Needleman, who received government grant money to perform research, previously had refused to reveal these data to the public.

A partial review of Dr Needleman's data by Drs Ernhart and Scarr apparently suggested enough irregularities to warrant further investigation, and since the research was sponsored by government funds, Drs Ernhart and Scarr filed a complaint with the Office of Scientific Integrity. The Office of Scientific Integrity then requested the University of Pittsburgh to conduct an inquiry.

The final report of that inquiry found "no evidence of deliberate falsification," as selectively quoted in the Journal article, but did find "a deliberate misrepresentation of procedures." This part of the finding was omitted from Silbergeld's article. The report concluded that "Dr. Needleman was deliberately misleading in the published accounts of the procedures used in the 1979 study." The board unanimously recommended that Dr Needleman submit corrective statements to the journals in which his original studies were published and that he make his complete data set available to any investigator. The Office of Research Integrity reiterated these same findings in its oversight report released in March 1994.

The lead industry never attempted to influence the University of Pittsburgh, the Office of Scientific Integrity, or their inquiries, and to imply otherwise is false.

Other implied accusations in the Silbergeld article, such as that the lead industry tried to stifle the truth about lead exposure and lead poisoning, are equally untrue, as evidenced by a careful reading of her text. For example, she states that the industry association's "greatest triumph" occurred in 1925 when "it overrode opposition to the introduction of tetraethyl lead as a gasoline additive." However, in the previous sentence she states that the association was founded in 1928, a full 3 years after it supposedly achieved its "greatest triumph." This obvious error makes us wonder whether your publication gave any sort of critical examination to the Silbergeld article before publishing it.

We are proud of our industry's outstanding record of encouraging proper use of our product. Lead today is safely used in vehicle batteries, electronic products such as computers and TVs, x-ray shielding, and scores of other applications that benefit society. □

Jerome F. Smith

Requests for reprints should be sent to Jerome F. Smith, Lead Industries Association, Inc, 295 Madison Ave, New York, NY 10017.

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1. Silbergeld EK. Annotation: protection of the public interest, allegations of scientific misconduct, and the Needleman case. *Am J Public Health.* 1995;85:165-166.

## 2. The Critics' Arguments

Dr Ellen Silbergeld portrayed Dr Herbert Needleman as a "courageous man of intellectual integrity" wrongfully

accused of misconduct by lead industry representatives, but she ignored the published facts. Although Needleman was found not guilty of scientific misconduct in the legal sense, the investigative bodies (the University of Pittsburgh and the federal Office of Research Integrity) found Needleman's studies scientifically flawed.<sup>1,2</sup> Both investigative groups described Needleman's work as involving a "pattern of errors, omissions, contradictions, and incomplete information from the original publication to the present." The University of Pittsburgh found that Needleman had engaged in "deliberate misrepresentation" and "substandard science"; they referred to Needleman's dismissal of critics as lead industry representatives and to his attempts to intimidate his investigators, including the university board itself. The university's report stated that had Needleman accurately described his methodology and subject selection, he "would have risked rejection" of his article by the *New England Journal of Medicine*. In addition, the Office of Research Integrity cited misplotted graph points, which were found "difficult to explain as honest error," and uncorrected mistakes in Needleman's original *New England Journal of Medicine* manuscript pointed out by a coauthor.

How could Dr Silbergeld's claims of Needleman's victimization be endorsed by the *American Journal of Public Health*<sup>3</sup> without any reference to the original University of Pittsburgh and Office of Research Integrity investigative reports and only a reference to an article that predated these two reports in which Needleman compared himself with the Salem witches? The replies of his critics,<sup>4,5</sup> like the investigative reports, are not cited. Have these become "nondocuments"? Please cite them here and allow your readers to draw their own conclusions based on published evidence. □

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## Acknowledgment

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  5. Ernhart C. Deliberate misrepresentations. *Pediatrics*. 1993;91:171-173. Letter.

## 3. A Reply from Scarr and Ernhart

Silbergeld's report<sup>1</sup> of Needleman's difficulties ignored his university's hearing-board finding of "deliberate misrepresentation" and the concurrence of the Public Health Service's Office of Research Integrity. Silver, without naming us, maligned us in his editor's note.<sup>2</sup> We have been denied space for a complete response; the following are highlights.

*Silbergeld*: Attempts by the lead industry to discredit Needleman were dismissed "after careful analysis" by an Environmental Protection Agency (EPA) expert committee.

*Response*: When the EPA was evaluating the criteria for lead exposure, Ernhart questioned Needleman's work; he himself attacked her research. EPA appointed an expert committee,<sup>3</sup> which included Scarr, to evaluate both Needleman's<sup>4</sup> and Ernhart's<sup>5</sup> studies. Ernhart's response to the evaluation was considered satisfactory. The committee could not resolve inconsistencies in Needleman's work. Nevertheless, the EPA used Needleman's study in policy decisions.

*Silbergeld*: The National Institutes of Health (NIH) Office of Scientific Integrity "provided the industry a weapon with which to intimidate one of its most accomplished critics." The "weapon" was allegation of scientific misconduct.

*Response*: We were consulted by defendants in a 1990 EPA Superfund case. Needleman was retained for the same case by the Department of Justice for the EPA. The court ordered our access to Needleman's data. The situation was bizarre<sup>6</sup> and included Needleman's demand that we destroy our findings. We refused. Needleman solicited Justice Department help in seeking a court order that we destroy our notes and report; we responded in court and prevailed. The judge's opinion stated, "Finally there are public policy reasons regarding the suppression of information and knowledge, particularly knowledge of a scientific nature. The pursuit of scientific knowledge is, in theory, an open process. There

is something inherently distasteful and unseemly in secreting either the fruits or seeds of scientific endeavors."<sup>7</sup>

Acting as responsible scientists, we informed NIH's Office of Scientific Integrity of our conclusions regarding Needleman's data. The lead industry was not involved.

The following are our responses to Silbergeld's queries regarding the current state of misconduct investigations.

1. *What is the basis for a charge of scientific misconduct?*

*Silbergeld*: Our charges were mere suspicions that should have been dismissed.

*Response*: Inquiries into Needleman's work were conducted in sequence by (1) us; (2) the NIH Office of Scientific Integrity; (3) the Inquiry Panel and (4) the Hearing Board at the University of Pittsburgh; and (5) the Office of Research Integrity. Reports document deliberate misrepresentation and poor science. We are four steps removed from the case, yet Needleman and his supporters abuse us.

2. *Who should investigate misconduct?*

*Silbergeld*: Universities will not exonerate defendants for fear of charges of institutional bias.

*Response*: Many whistleblowers report that universities avoid investigation of claims. However, in Needleman's case the university's panels demonstrated serious effort to hear and investigate his explanations. Even so, he sued the university.

3. *How should investigations be conducted?*

*Silbergeld*: She applauds "the right to an open and public process and the right to legal counsel."

*Response*: We've discussed the shortcomings of procedures for investigating scientific misconduct<sup>6</sup>; we advocate greater attention to due process. In this case, the University of Pittsburgh lacked the authority to conduct a thorough investigation, with whistleblower protection, that would withstand legal challenge. Efforts by the Office of Research Integrity were also undermined by inadequate procedures. The need for enlightened policy is critical.

Silbergeld credits Needleman with openness, yet he sought to have us gagged. The purpose of the open hearing was public harassment. Standards of due process were not met.

From Silbergeld's assertion of Needleman's "intellectual integrity," we