

Tobacco Science Wars

The industry has been bullying scientists, according to researchers who lead the campaign against environmental tobacco smoke

THE debate over cigarettes and public health broke new ground with the release last year of two reports on the danger tobacco use poses for nonsmokers. The National Academy of Sciences (NAS) and the U.S. Surgeon General found that exposure to other peoples' cigarette smoke may have lethal consequences. The tobacco industry has reacted strongly, attacking not only this information, but the scientists behind it.

In a recent interview, two outspoken scientists, James Repace of the Environmental Protection Agency (EPA) and Stanton A. Glantz of the University of California at San Francisco, accused the tobacco industry of grossly misusing scientific data. The propaganda war has grown ugly, they say, and in order to feed it, the industry has used the work of its consultants to denigrate sound research and confuse the public.

Industry representatives, meanwhile, say their experts have been harassed by anti-smoking "zealots" and that their right to free expression has been infringed.

According to Repace and Glantz, the industry faces a crisis because new data link environmental tobacco smoke with lung cancer and other chronic diseases. Industry consultants—for example, Sorell L. Schwartz of Georgetown University—concede that smokers get lung cancer and that children of smoking mothers are more likely to have respiratory problems. But they have focused their considerable intelligence on refuting a much narrower point: the case that environmental smoke causes lung cancer in nonsmokers. For the industry, the objective may be to forestall prohibitions on smoking in the workplace.

Over a dozen epidemiological studies, some strong, some weak, have found an association between exposure to smoke and an increased risk of lung cancer in nonsmokers. One problem in them is that nearly all rely on marriage as the link. Women married to smokers are considered the high-risk "exposed" group, and are compared with "unexposed" wives of nonsmokers. The spouses of smokers have about a 30% greater risk of getting lung cancer, according to the National Academy of Sciences report.

One potential weakness of this approach is that people tend to have the same smoking

habits as their spouses, regardless of what they tell researchers, and "never-smokers," in fact, may be ex-smokers. This tendency to misclassify may explain why the spouses of smokers are more likely to get cancer. But a careful analysis of the epidemiological research, conducted by Nicholas Wald of St. Bartholomew's Hospital, London, for the NAS, found in all the studies a "highly significant association" between lung cancer and exposure to environmental tobacco smoke, a result too great to be explained by systematic bias. The NAS concluded that there is a cause-and-effect relationship.

The number of nonsmokers who die each year may be perhaps several thousand, small when compared with 350,000 deaths caused by direct smoking. But public health problems smaller than this have prompted government action. A huge bureaucracy now regulates pesticides, food additives, and airborne chemicals. The question arises: why not control tobacco smoke? The tobacco industry worries that this kind of reasoning may lead to a ban on smoking indoors. At a minimum, it may lead to a quarantine of smokers.

Repace, a physicist who runs the technical services office for EPA's indoor air program, wrote some early influential papers linking ambient smoke and cancer, most of them on his own time.* Glantz, an associate professor of medicine, has published a biostatistics textbook and is chairman of the UCSF graduate program in bioengineering. Both regard cigarette smoke as a toxic pollutant that should be kept out of public places.

The Tobacco Institute, the industry's arm in Washington, claims it is "anti-smoking activists" who are guilty of abusing the scientific process. The Institute made such charges in a 53-page booklet in December 1986 ("Tobacco Smoke and the Nonsmoker: Scientific Integrity at the Crossroads"). It says, among other things, that anti-smoking advocates forced a scientific workshop at Georgetown University to be cancelled last year because it was sponsored by industry.

*"A quantitative estimate of nonsmokers' lung cancer risk from Passive Smoking," by J. L. Repace and A. H. Lowrey, *Environment International*, vol. 11, pp. 3-22 (1985), and "Indoor air pollution, tobacco smoke, and public health," by J. L. Repace and A. H. Lowrey, *Science*, vol. 208, pp. 464-474 (1980).

Repace responded in an interview with *Science* by laying out his own version of the propaganda war. As he began, he was hit unexpectedly with what he calls "the most powerful threat that can be made against a government employee." On 12 March, Representative Don Sundquist (R-TN) sent a letter to the head of EPA, Lee Thomas, denouncing Repace for personal misconduct.

Sundquist was not available to comment. His aide, Thomas McNamara, said this was an old matter that had been "percolating" for about 2 years, ever since Sundquist had been involved in a study of passive smoking by the Office of Technology Assessment. Echoing an industry complaint, Sundquist said he found Repace's study confusing because it was the work of an EPA scientist, but had no official EPA backing. In response, Repace says he always attaches a disclaimer to his papers to make it clear that he does not speak for the agency.

Sundquist alleges that Repace has violated EPA's code of ethics by serving for pay (while on leave) as a witness in labor grievance hearings and trials for people with smoking complaints. He has also testified as a citizen in favor of controls on smoking. This career, according to Sundquist, conflicts with Repace's public role because it makes him unable to give a fair hearing to the tobacco company side.

Repace denies this, saying he is always open to new scientific information, and has received advance clearance for each case of off-hours testimony. He was shaken by the letter, however, because it has triggered a full-scale ethics inquiry. He says, "I now face a protracted investigation. Even if I am fully exonerated, it will give my supervisors extra work. They may ask, 'Do we really want someone who causes this kind of trouble?'" The information on fees in Sundquist's letter, according to Repace, is highly detailed, the kind a detective might dig up. "I wonder where he got it."

According to McNamara, "We asked around town who this guy was, and obviously we asked the tobacco industry. They provided us with this information, which we sent to the administrator" of EPA.

Repace says this is the latest of many examples of industry meddling in the scientific debate. He claims to know of other cases in which industry consultants have lobbied against papers about to be published in scientific journals. He also mentions a Japanese scientist, Takeshi Hirayama, who reported in 1981 that non-smoking wives of smokers in Japan were twice as likely to get lung cancer as wives of nonsmokers. Suddenly he found his research attacked not just in letters to the *British*

Medical Journal, but in full-page magazine and newspaper ads all across the United States. Scientists are capable of dealing with substantive criticism, Repace says, but not multimillion-dollar ad campaigns.

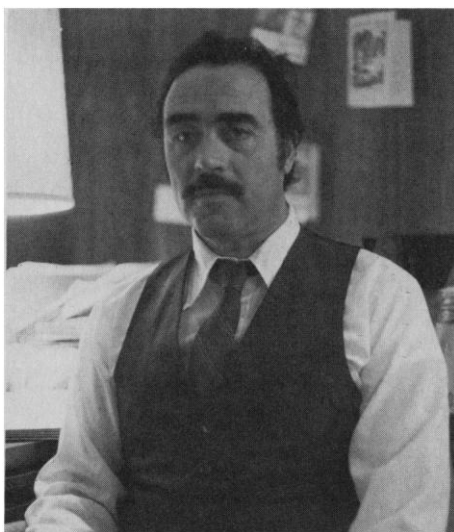
Repace's own work was the target of a tobacco industry blast in May 1985 ("Situation Report: Tobacco Smoke in the Air"). Of Repace, it said, "He can hardly be described as a qualified authority," because he is merely a physicist, not a physician. It attacked several weak points in his study, points that Repace says he dealt with in the text of the paper. One issue was Repace's use of a group of Seventh Day Adventists for his "control" group of nonsmokers. Critics point out that the Seventh Day Adventists use a diet loaded with green and yellow vegetables, which are thought to aid in the prevention of cancer. Repace cited other research indicating that the Adventists' healthy diet is not enough to account for the entire reduction in risk, and, in any case, that it would be offset by exposure to smoke in offices where some of them work.

The industry report stressed an ad hominem approach, calling Repace and other researchers "long-time, highly vocal anti-smoking activists." On this point, Repace finds himself in good company. Surgeon General C. Everett Koop, who would like to create a "smokeless society" in the United States, also has been attacked many times in harsh terms.

It was about a year after publication of this pamphlet that Repace wrote a memo for the American Lung Association that truly incensed the Tobacco Institute. Repace focused on the testimony of Philip Witorsch, a pulmonary specialist at George Washington University, who had traveled at industry expense to municipal hearings around the country to point out flaws in Repace's work. The memo, distributed by the Lung Association, says that tobacco industry consultants are "notable for their lack of expertise" and should be viewed as "paid advocates who receive hefty consultant fees to defend an industry from potential economic losses."

More insidious than the challenge to individuals, says Glantz, are the attempts to jam the scientific airwaves with noise. Glantz quotes from a cigarette company (Brown and Williamson) document subpoenaed by the Federal Trade Commission in 1969. He says it lays out a public relations strategy still used by the industry:

Doubt is our product since it is the best means of competing with the 'body of fact' that exists in the mind of the general public. It is also the means of establishing a controversy. If we are successful at establishing a controversy at the public level, then there is an opportunity to put across the real facts about smoking and health.



Eliot Marshall

James Repace. *Indoor air pollution expert and a target of tobacco industry criticism.*

One industry method of fomenting doubt, according to Glantz, is to run scientific meetings to which well-established researchers and industry consultants are invited as speakers. The consultants voice doubts about other peoples' research, and the doubts are repeated in letters to the editor and advertisements in the popular media.

There have been several skirmishes over the propriety of such conferences in recent years. The bitterest broke out last summer at Georgetown University. Sorell Schwartz, a Georgetown pharmacologist and tobacco industry consultant, put together a group of experts for the industry called the "Indoor Air Pollution Advisory Group" in the spring of 1985. Its members, all academics, have been flown around the country by the tobacco industry to speak about the weakness of the data on environmental tobacco smoke.

"We decided we should have a seminar on the science of environmental tobacco smoke," Schwartz says, and he arranged to hold it at Georgetown in June 1986. With the help of the Tobacco Institute, he secured funding from two tobacco companies and other sponsors. Included among the speakers were several authors of the National Academy of Sciences and U.S. Surgeon General's reports on passive smoking, then being written. Most of the moderators were members of Schwartz's industry consulting team.

Through inadvertence, Schwartz says, he failed to have an assistant notify speakers that the conference was sponsored in part by cigarette companies. For other technical reasons, he also failed to print this information in the program. To critics, it looked as though the industry was trying to undermine the upcoming scientific reports. As one person said, "I was worried about see-

ing my name in an R. J. Reynolds ad," printed under a summary written by an industry consultant. Another invitee found it "deceptive" that the invitation came from Georgetown University and not directly from the tobacco consulting group.

The American Lung Association protested vehemently and asked Georgetown to cancel the meeting. Donald R. Shopland, acting director of the surgeon general's office of smoking and health, told his authors about the event's sponsorship and warned them to be careful about what they said in public. Three speakers withdrew. F. Charles Hiller of the University of Arkansas Medical School wrote Schwartz a strong letter saying he would not have come had he known of the extent of tobacco company involvement. Another invitee, Anna H. T. Wu of the University of Southern California, withdrew because she had not been told about the sponsors. The third, A. Sonia Buist of the Oregon Health Sciences University in Portland, withdrew citing a scheduling conflict. All say they were not pressured.

Georgetown did not yield to the Lung Association, but Schwartz decided to cancel "on my own." He says, "I was dealing in an area I'd never dealt with before—solid emotion—and I didn't feel comfortable."

In its latest pamphlet, the Tobacco Institute describes all this as "a direct threat to scientific integrity" and an "attempt to stifle free speech and academic freedom." It gives other examples of harassment by the "forces dedicated to the prohibition of cigarette smoking." For example, the Institute says "a tenured professor at a major state university was threatened with the loss of research funds by the state's health commissioner, but had the strength to assert his right to speak the truth." The professor in question, Salvatore R. DiNardi of the University of Massachusetts at Amherst, is a consultant in Schwartz's industry group. According to his department chairman, Gary S. Moore, he drew fire from alumni and comment from the dean for his testimony on behalf of the tobacco industry. But Moore says he was never in danger of losing research support.

Meanwhile, according to Shopland, the Tobacco Institute has come after him. Two letters addressed to the Secretary of Health and Human Services, Otis Bowen, seek an investigation into the surgeon general's and Shopland's alleged misconduct. The president of the Tobacco Institute demands a personal meeting with Bowen.

It is hard to say whether tactics like this will help or hinder the tobacco industry's cause. But if Glantz is correct that the industry likes to sow controversy, then it is reaping a rich harvest. ■

ELIOT MARSHALL