Chapter 6

ETS AND THE PROSTITUTION OF SCIENCE

> *Why should I have to have someone kill me* [with cigarette smoke]*? What if someone came up with a gun and said, "Why don't you try this bullet?"*
>
> — Larry Hagman[1]

> *I smell the cigarette's smoke as it wafts through the air, and I freeze, consumed with as much fear as if the smoke were a man with a gun on a dark street . . . The smoker walks toward me. I am trapped by courtesy.*
>
> — Susan Gilbert McGuire[2]

CIVIL SOCIETY HAS come to a sorry pass when a person smoking a cigarette is likened to someone holding a gun in his hand, and is considered equally as menacing. Although it is not usually expressed in such melodramatic terms as in the two quotations above, the belief that a cigarette, or rather the smoke from it, is potentially lethal to everyone within its radius is fervently held by millions today. That millions do so believe is testimony to the most successful mass brainwashing campaign of modern times. It is the result of more than 30 years of unrelenting antismoking propaganda, the last 10 or 15 years of which have hammered on the dangers of "secondhand" smoke, otherwise known as "environmental tobacco smoke" (ETS). The alleged danger of ETS to innocent bystanders is also implicit in the loaded terms "passive smoking" and "involuntary smoking."

Sadder yet, this campaign could not have been successful without the collaboration of scientists who were willing to compromise the ethics of their profession, or turn a blind eye and remain silent when others did so, in the cause of a "smoke-free society."

Larry Hagman, a reformed smoker, would not allow smoking on the set of "Dallas," even as alcohol was destroying his liver. Yet drinking, or the simulation of it, was a constant in nearly episode of that television series. Hagman is alive today only thanks to modern medical science, which gave him a replacement liver. What is the damage that his former smoking, or somebody else's smoking, did to him? He's never said, as far as I know.

But it wasn't secondhand smoke that was killing Susan Gilbert McGuire's husband at the time she wrote an article that was reprinted in *Reader's Digest*, although she obviously believes in its lethality; it was his own smoking. She writes:

> My husband received a diagnosis of metastasized lung cancer. He had smoked heavily but quit five years ago. I'd hoped he would escape the disease that killed my grandfather when I was a teenager. My loathing of cigarettes began as I watched my 250-pound grandfather waste away to 136 pounds in one year . . .
>
> Since the diagnosis over a year and a half ago, my husband had: chemotherapy and radiation therapy; his right lung and nine cancerous lymph nodes surgically removed; more chemotherapy; hair loss; pneumonia; surgery to remove fluid from around his heart; and a 49-pound weight loss from his perfect, muscular body. I cry at the thought of what he endures . . .
>
> After eight months of treatment, my husband was scheduled for more tests. As we drove up to the hospital, three employees stood outside the entrance, smoking and laughing. So bad were their addictions, so effective was the tobacco industry's claim on their lives, that they stood in the cold, braving wind and rain, to smoke.

Notice the assumption underlying that last statement: anyone with half a brain knows that smoking will kill you; therefore anyone who persists in doing so, even under circumstances of semiexile and harsh physical discomfort that a wise and caring society has inflicted upon him, is obviously a slave to tobacco and those who sell it to him.

To digress a moment already (as readers who have stuck with me this far are aware that I am prone to do), the segregation of smokers from decent society may have benefits that go beyond the protection of innocent nonsmokers from disease, disability and premature death. For

example, in a posting to the alt.smokers "user group," "SipePL@po5.pl.unisys.com (Particle Man)" wrote:

> An observation: the more nonsmokers push for smoke free environments, the more smokers end up together. Smoking, talking, trading notes.
>
> When I started smoking there was very little, if any, community spirit among smokers. You smoked at your desk, or wherever, and never really felt any association with other smokers . . . But now, we have our own sections. Our own lounges. And our own user group . . .
>
> The really interesting thing about the outdoor smoking area where I work is how many problems get solved there. I work in an engineering organization. The smoking "lounge" attracts people from every discipline for one simple reason: they are addicted to nicotine. But hey, here are mechanical engineers, electrical engineers, device driver types, application types, Unix, MS Windows, OS/2, managers, janitors, net-hackers, physicists—and they are all there having a cigarette or cigar or pipe, and looking at each other. Guess what? A LOT of tough problems get solved there, more than I've ever seen in multi-functional meetings called by management.

From *NSA Voice*, the National Smokers Alliance newsletter:

> Workplace smoking prohibitions have created "unlikely friendships with co-workers whose paths they might never cross," reports the *Newark Star Ledger*. As a result, new lines of communication are being formed as these "smoke-break buddies" from various levels and different departments gather in the doorways and on loading docks of their companies to smoke.
>
> "Go out and smoke, and you'll learn lots of things," said Janet Saporito, a South Orange, N.J., smoker interviewed by the newspaper. "You do meet people you'd never know otherwise."
>
> Stanley Deetz, professor of communication at Rutgers University, commented on this social phenomenon. "A lot of companies have tried to invent these types of connections, yet here's one that has emerged spontaneously," said Deetz. "It has this uncontrolled, spontaneous quality which makes it creative and useful."
>
> Julie Wiegel of West Orange, N.J., for example, found her new buddies useful in her search for a new job. "You find out different jobs that are open," said Wiegel, whose position at her company was being eliminated. "You'll hear, 'My friend works here, and they're hiring.'"
>
> Others have benefited by meeting company executives. "I've

had some great conversations," said Frank Petrock of Belleville, N.J. "There are people who come out here at a higher level."[3]

More ironies from the overflowing files of the cockamamie antisecondhand smoke crusade:

According to *The Resistance*, another NSA publication, in Des Moines, Iowa, employees of Wellmark Blue Cross and Blue Shield are forbidden from smoking cigarettes within 100 feet of the Ruan Center. To make sure they don't, all outdoor ashtrays have been removed from the area. Across the street, employees of Norwest Financial are likewise forbidden from smoking in front of their building.

So on their smoke breaks, the Blue Cross/Blue Shield people cross over to the Norwest building and the Norwest people cross over to the Ruan Center. The two groups exchange greetings as they pass.[4]

In Seattle, Washington, smokers attending a game at the Kingdome, a large indoor stadium, are obliged to go outside to smoke, says the writer of a letter to *Philip Morris Magazine*. "On the other hand," he says, "when we watch our college team—which plays in an outdoor stadium—we are forced to go inside to enjoy a cigarette. Perhaps there is consistency here: Has someone decided that nobody can smoke while sitting down?"[5]

Makes a whole lot of sense, doesn't it?

Abigail Van Buren ran this letter in her column a few years ago:

> Dear Abby: My daughter, in her 20s, had terminal breast cancer and she never smoked. I am a smoker, and we smokers are such amicable and gracious people that we do not lambaste others.
>
> When my daughter was in the Shands Hospital in Gainesville, Fla., it was the smokers who came by her room asking if I needed anything from town. At Emory, where my daughter received her bone marrow transplant, the smokers found a place for me to stay—at no cost—and smokers were welcomed!
>
> Smokers have a special comradeship. Wherever you nonsmokers put us, we huddle together and share our experiences as "social outcasts." My friends who have quit smoking are now grossly overweight and miserable. When I get to heaven, I'll ask to be in the smoking section because that's where all the fun people will be.—Janice Wingard, Proud Smoker.[6]

Abby's comment, if she made any, was not included in the column I saw. But the perfect rejoinder would have been to tell the writer that if

she continued smoking she'd get to heaven long before the nonsmokers. Assuming, that is, that smokers are allowed into heaven.

Abby did comment on a follow-up letter from another reader, one Oren M. Spiegler of Pittsburgh, who took issue with Ms. Wingard's description of smokers "as 'amicable and gracious.' Don't make me laugh! How about selfish and inconsiderate? . . . Society owes no accommodation to those who choose an addiction."

"Dear Mr. Spiegler," Abby replied. "You must be a new reader or you would know that I have little patience and even less compassion for smokers."[7]

Glad Abby cleared that up. Fairness, however, compels me to acknowledge that there may be a downside to the forced comradeship of smokers. Aldrich Ames, the CIA employee who sold secrets to the Soviets, says that he was able to pass such a variety of information along to the KGB because he picked up the info while standing outside CIA headquarters shmoozing with other smoking agents.[8] Talk about selfish and inconsiderate!

Because I retired in 1985 I never had to put up with this kind of outcast treatment, though no doubt my former employer has long since banned smoking in the office. I did however have occasion to see one of these "smokers' ghettos" in January 1997 at Northside Hospital in Atlanta (as a visitor, not a patient). Smokers were allowed to indulge outside in a kind of well that was below the ground-level entrance and unroofed. It was pleasant enough because the weather was good, but if it had been cold or raining—tough luck. I don't know if any doctors or nurses frequented the ghetto but I did meet a couple nurse's aides. But doctors and nurses could be seen chowing down fat-filled hamburgers and french fries at a McDonald's restaurant inside the hospital. I heard a lot of jokes about that. I just hope that when they have their heart attacks it will be before they're eligible for Medicare. I don't want my tax dollars going to pay for their foolish lifestyle choices!

Kennestone Hospital in Marietta also has a smokers' ghetto in the form of a cute gazebo in one corner of the grounds. The problem is that it is entirely enclosed, except for the entrance. Doesn't the hospital care that by confining smokers this way it is forcing them to breathe in their own secondhand smoke in unnecessarily heavy quantities?

* * *

Returning to Mrs. McGuire, who concludes her sorrowful story:

> We are told that tobacco-related diseases kill one person every ten seconds. But there are even more victims. How many children weren't born because a smoker died early? How many can't afford college because a family's financial future was destroyed by cigarette-related cancer? How many widows and widowers have been left alone?
>
> How many young people around the world start smoking because Hollywood still portrays "cool" by showing stars with half-closed eyes and voluptuous lips pursed lazily around a cigarette? We should have learned something from Humphrey Bogart and Gary Cooper, who both died from smoking-related cancers.
>
> What would their deaths do to their families? As they inhale the smoke deep into their lungs, do they wonder if they'll die decades before old age? They would if they'd spent the past year and a half with my husband.

Oh dear and my, my. To address the first two of Mrs. McGuire's questions, most people who die from cancer (whatever caused it) are past their procreative years, so I doubt if there are a whole lot of children going unborn because of smoking. And since cancer is predominantly a disease of old age, the children of its victims should be long since out of college. Anyway, nonsmokers have to pay for smokers' illnesses (so we're told), so smokers aren't depleting their children's college funds.

As for her husband's lung cancer, I have no way of knowing what caused it (not to mention Humphrey Bogart's and Gary Cooper's). But there is reason to question that it was due to smoking, or smoking alone. A "metastasized" cancer is one that had its origin in some organ of the body and later moved through the blood vessel and lymphatic systems to another organ, very frequently to the lungs, as in his case.*

Cancer is a terrible, often seemingly random-occurring disease, and its treatment is almost as terrible (and, for lung cancer, usually futile). Thus victims and their loved ones desperately need an answer to *"Why?"* Even if it can't be conclusively proved that smoking was the

*"Metastases to the lungs are common from primary cancers of the breast, colon, prostate, kidney, thyroid, stomach, cervix, rectum, testis, and bone, and from melanoma."—*The Merck Manual of Diagnosis and Therapy*, Sixteenth Edition, page 732.

culprit in any given instance, study after study has shown that smoking is bad for the health. So it is an easy and obvious and all-too-human leap of logic to conclude that if cancer occurs in a smoker or former smoker . . . well, there's your answer.

When cancer strikes smokers or former smokers and they are convinced that it was caused by their smoking, they have only themselves —or the tobacco companies—to blame. But when the victim has never smoked at all, the belief that somebody else's smoking caused her death can be positively heartrending, as witnessed by the following letter to Ann Landers that was reprinted in *Breathers' Digest*, the newsletter of AIRSPACE Non-smokers' Rights Society in Vancouver, British Columbia:

> Dear Ann Landers: This is in response to the woman who was upset because her brother and his wife would not allow her to smoke in their home . . . Millions of people who consider themselves non-smokers should think again. If they allow smoking in their homes, they are smokers whether they like it or not.
>
> I have never smoked, but I have been exposed to second-hand smoke since early childhood. Last fall I was diagnosed with lung cancer. I had major surgery followed by five horrific months of chemotherapy. My weight dropped to 92 pounds. I lost all my hair, had hallucinations, nightmares and wanted to die. To have gone through all this hell when I've never smoked a cigarette has made me very bitter. I experienced no symptoms. My cancer was discovered during a routine medical examination. Several weeks ago I was told to get my life in order because there isn't much time left. I am the mother of two young children and I don't deserve to die this way because I have never smoked, at least that's what I thought—Lynn Van Horne, Edmonton.

Anne replied in part, "Dear L.V.H.: You have written a powerful letter, one that is sure to be clipped and sent to smokers who insist on lighting up in the presence of those who do not smoke. It is not unrealistic to say that you have probably saved some lives today."[9]

Equally as heartrending was a letter Lynn Van Horne's sister, Heather McDonald, sent to *The Edmonton Times*, which was also republished in *Breather's Digest*:

> Today was my sister's birthday. Year after year, I would call her up anonymously and play the "Happy Birthday" tune from a little toy music box . . . On April 27, 1992, I would call her for the last

time. She was in the hospital, dying of cancer. When I came by to see her that day, I brought along the little music box and stopped briefly in the lobby to place that important phone call. When I appeared moments later in the doorway of her room, she smiled and said to me softly, "I got the call. Whoever it is didn't forget and somehow knew where to find me." At that, we laughed and we cried as I shared the secret. Six weeks later she was gone.

Like the senseless murder of Edmontonian Barbara Danelesko, Lynn Van Horne's death almost two years ago was front-page news. Like Barb, my sister was married and had two young sons at home . . . And like Barb, she too was defenseless. But here the similarities of their tragic and untimely death end.

Arrests were made in Barb's death. There is mounting public outrage that innocent people are not even safe in their own homes any more.

Lynn was a lifelong non-smoker who developed smoker's irritant lung cancer from inhaling the tobacco smoke of others. In her case, those responsible for her death were not held accountable. There was no public outcry that non-smokers are not safe in the workplace and in public where they are forced to go, simply because smoking continues to be socially acceptable, albeit increasingly less so than in the past.

My sister knew that she didn't have long to live, and petitioned legislators for protection for workers from involuntary exposure to second-hand tobacco smoke. The ministers of health and safety and the environment, at the time, all acknowledged that second-hand smoke is a cause of preventable death among non-smokers. However, nothing was done.

It is absolutely reprehensible that our government leaders must be forced to care, but unless we intensify our demands for legislation to protect the innocent, nothing is going to change.

This reprehensible situation *has* changed; Canadians today are as frightened of, and have instituted the same repressive measures against, secondhand smoke as their southern neighbors.

Breathers' Digest appended this note to the letter:

"Heather McDonald . . . played a leadership role in getting smoke out of her workplace, McDonald's Restaurants. Now we know what motivated her and why she did not back down. On November 7th, 1994, Heather's legal claim with McDonald's Restaurants was settled. On November 22nd, 1994, Heather McDonald died of cancer."[10]

The *Digest* did not say that Heather also died of lung cancer, but presumably she did. However, the fact that cancers took both these

sisters suggests a possible genetic explanation that is at least as reasonable to suspect as their assumption—nay, their firm conviction—that their cancers were due solely to secondhand smoke. Be that as it may, Heather's frustration and anguish over the fact that no identifiable person or persons could be held responsible for her sister's death is particularly moving.

I hold the organized antismoking movement and its alarmist propaganda directly accountable for fostering such wholly unnecessary anguish. That propaganda, by the way, has not shrunk from revising history.

In my Introduction I wondered whether the constantly smoking character in the film "Jurassic Park" was supposed to convey a prosmoking or an antismoking message. Since then, after viewing another film by Steven Spielberg, I have to conclude it was the latter.

In one scene in "Schindler's List," as I recall it, Schindler and his chief accountant are going over the names of Jews they think they can save from the Nazi gas ovens. Schindler paces and puffs constantly. "How many cigarettes have you smoked this evening?" the accountant asks. "Too many," replies Schindler. Says the accountant, "Every time you smoke one, I smoke half."

I find it rather sad that in one of the most important movies ever made about one of the greatest tragedies in human history, someone felt it necessary to interject an antismoking message, an anachronistic one at that. In any case, secondhand smoke was the last thing Schindler's Jewish accountant had to fear.

Another example of historical revisionism was the James Dean commemorative stamp issued in 1996. In the original photograph used for the stamp, the actor's trademark symbol of rebellion, a cigarette, was dangling from his lips. This was deleted on the stamp. Commented *The Tampa Tribune*:

> When the U.S. Postal Service issued its James Dean stamp and promotion poster a month ago, it zapped Dean's ever-present cigarette.
>
> "We removed the cigarette . . . so we would not be in a position of promoting or being accused of promoting cigarettes," spokesman Mark Weinberg said Wednesday.
>
> "We're in an era of political correctness," said Lenny Prussack, who manages a gift shop at the James Dean Gallery in Fairmount, Ind., Dean's hometown. "It's kind of tampering with history."

The Postal Service had "censored" another stamp in 1994, eliciting this comment from Joe Urschel in *USA Today*:

> Each generation may indeed write its own history. But never before has a generation rewritten the past with such Orwellian glee.
>
> So when blues musician Robert Johnson was honored with a stamp last week, he was politically correctified by the U.S. Postal Service to comply with the new moral code of America. The cigarette was airbrushed out of the picture from which the stamp was taken.
>
> That such a brazen alteration of fact was not met with howls of protest from freedom-loving Americans is either a sad nod of acquiescence to puritanical censorship, or confirmation that we have in fact all turned into gumptionless Pollyannas who really do believe we can remake the world into the perfect setting we wish it would be.[11]

The Book-of-the-Month Club did the same thing to a photograph of writer and novelist Ayn Rand in a mailing to its members offering three of her books.[12] And Columbia Records altered the cover of a CD retrospective set called "Old Friends" by Simon and Garfunkel. In the original photo the two were sitting on a stage, with Paul Simon holding a cigarette to his lips. The evil weed was deleted for the new, politically correct, cover.[13]

I also understand that Franklin D. Roosevelt's famous cigarette holder (with cigarette) is nowhere to be seen in his memorial on the Mall in Washington. The Soviet Union may be dead, but Big Brother's "memory hole" is in full operation in the land of the smoke-free and home of the fearful.

The antismokers would not only bend history to their purposes but the laws of physics themselves, or at least severely strain plausibility. Consider "Esther's story," which I found at the World Wide Web page of Smokefree Air for Everyone (S.A.F.E.), "a network of individuals who have been injured or disabled by secondhand smoke," located in Newbury Park, California:

> I used to be a teacher until I was injured by secondhand smoke. It drifted into my classroom from an employee lounge *so distant.* [emphasis added] that I did not understand what was happening to me until it was too late. In April, 1992, I received a Workers' Compensation settlement of $29,999, but it is a sad story since my

> lung damage is too severe for me to teach anymore or hold a full time job.
>
> The smoke came from a small employee lounge that was set up in September, 1987. *The smoke traveled down a long hall and up a flight of stairs* propelled by air currents in the building. [Emphasis again added.] Other teachers smelled the smoke; they complained of headaches and eye irritation.
>
> I, however, was more vulnerable because I have asthma. It became difficult for me to breathe and project my voice. I would become so hoarse that by the end of the day, I could not produce sounds. My medicine did not help me. I did not believe what was happening to me. In my doctor's office and at home I did not have symptoms . . .
>
> By April of 1989, I could no longer force myself to get out of bed and go to work. In May, a lung specialist provided a diagnosis of severe, progressive and irreversible chronic obstructive airway disease in addition to asthma. According to my physicians, the condition had probably been developing for years. (My parents had both smoked when I was a child with asthma.) The secondhand smoke had aggravated the existing respiratory problems . . .
>
> Now I am worried about my children who also have asthma and allergies. My son has just had to quit two jobs in succession because exposure to tobacco smoke made him ill. How long will innocent people continue to be hurt?[14]

Not to make fun of this unfortunate woman's suffering (but I will), I can visualize those evil tendrils of death creeping along the long hallway and then, like vengeful ghosts in some English castle, floating up the stairs in search of their distant victim. *"Es . . . ther . . . we know where you are . . . We're com-ing-g-g for you . . ."*

(Strange, but just the opposite happens in my house. The smoke drifts out of my office when I'm puffing away at the computer, crawls along a hallway and then *down* the stairs in search of my wife, who is innocently reading or watching television in the family room.)

It's hard to beat "Esther's story" as an example of the amazing penetrating power of cigarette smoke but the following one comes close. It was posted on "Smoker's Home Page" on the Internet by one Tom Farrell in response to a challenge to produce an example of a smoker's rudeness and lack of consideration for a nonsmoker:

> I was in my apartment, in bed, reading. I smelled cigarette smoke strongly and started coughing. I realized that my next door neigh-

> bor was indulging his habit of standing around in the hallway outside my apartment door and chatting on his cordless phone (I think it was because there was a loud party going on in his apartment and he couldn't hear there) while smoking a cigarette. I put on a bathrobe, opened my door, found him standing right there, smiled, and said (just loud enough to be heard over the noise of the party), "excuse me, but would you be so kind as to extinguish your cigarette?" He then started screaming and yelling at me, and as I was backing into my apartment to make room for the door to close, he was raising his fists and moving in my direction. At that moment two people happened to be arriving (apparently to the party), saw him, grabbed him, and dragged him off to his apartment. I went into my apartment and locked the door.[15]

That was pretty rude and inconsiderate, all right (but on whose part?).

Consider this: people have been asphyxiated or burned to death in apartment house and hotel fires because they unwittingly and unsuspectingly opened their door to the hallway and found heavy, billowing, choking smoke or even a raging inferno *they didn't know was there.* But this guy is in his bedroom, presumably some distance from his door, and not only smells cigarette smoke coming through the door but the fumes thereof are strong enough to make him cough. *Pu-lease.*

Yet Esther's and Tom's stories must be true. For according to John Howard, M.D., chief of the California Division of Occupational Safety and Health, in testimony before a California Assembly committee on October 20, 1994, "Tobacco smoke travels from its point of generation in a building to all other areas of the building. It has been shown to move through light fixtures, through ceiling crawl spaces, and into and out of doorways."[16]

Let us all pray that Saddam Hussein doesn't hear about this. He could forget about stockpiling nerve gas or biological weapons and simply switch to tobacco-filled bombs that would ignite upon impact.

Fortunately for Mr. Farrell, though, his neighbor's smoke apparently doesn't penetrate his bedroom wall, just the door, unlike some other unfortunate victims of secondhand smoke whose stories I'll tell in the next chapter. (Loud party noises do, but that isn't what bothers him.) He also doesn't say whether his neighbor's smoke has harmed his health in any way. For some examples of that, here is a list of physical problems allegedly triggered by airport smoking as reported

by Action on Smoking and Health (ASH) in its January-February 1997 "Review" and reprinted by FORCES Canada:[17]

— Angina resulting in a temporary inability to walk, talk, or carry luggage
— Inability to breathe normally for about 3 days after exposure
— Throat constriction to the point of being unable to speak
— Eye irritation severe enough to cause near blindness
— Severe pain after deviated septum surgery
— Coughing up black or grey matter
— Illness that required 2-3 days for recovery
— Collapsed on the floor
— Burning of sinuses
— Weeks of suffering from upper respiratory problems and sinus coughing spells lasting many hours
— Heart pain which can result in heart damage
— Caused me to throw up several times
— Prostration virtually to the point of unconsciousness
— Bleeding from ear, nose, or throat
— Eyelids swollen shut

ASH also reported the following experiences of nonsmokers at specific airports:

Norfolk, VA: "Waiting at the gate the air was full of tobacco smoke, and my operated [on] eye was irritated. By the time I arrived in my home in Virginia Beach felt sick and I had excruciating pain in my eye. I gradually lost sight in the eye until it became completely blind. The diagnosis was optic neuritis. I believe this condition was caused by the tobacco smoke eliminating oxygen preventing blood flow to the nerve and killing it."

Detroit, MI: "The smoke completely stopped my air sacs."

Atlanta, GA: "Asthma attacks as well as severe breathing and allergy problems, had to use my inhalers."

Cincinnati, OH: "My allergy and asthma symptoms were so severe that the airline finally decided to allow me to pre-board while the aircraft was being serviced."

De Moines, IA: "Eye and mouth mucous membranes irritated by tobacco smoke."

Charlotte, NC: "My eyes and throat became irritated."
Philadelphia, PA: "Had an asthma attack."
Wyoming: "I started vomiting as soon as I took off and vomited all the way to [destination]. I was sick the whole time we were there, and that spoiled my husband's job interview."

Strange, comments FORCES Canada, how no one noticed these reactions to secondhand smoke for decades!

Obviously the people at FORCES are too young to remember the trouble we smokers used to have climbing over the prostrate bodies of nonsmokers when getting on and off airplanes.

Okay, ignore that as another poor attempt at humor. I've reserved serious discussion of other nonsmokers' brushes with death, disease, discomfort and disability because of secondhand smoke, as well as comment on the subject of asthma, for the next chapter.

HOW DID SUCH beliefs about secondhand tobacco smoke—which are unquestionably sincere—become implanted in people's minds? When and how did all this nonsense get its start?

At the beginning of the 1970s, cigarette packages had been carrying warning labels for four years. Cigarette commercials were soon to be banned from the airwaves. Six years after the "landmark" 1964 surgeon general's report (which hadn't mentioned secondhand smoke at all), polls showed that increasing majorities of people not only believed that smoking was bad for the smoker's health but thought it probably wasn't exactly good for people around them either. For the most part, though, nonsmokers were content to let smokers indulge their self-destructive habit in peace, and to the dismay and frustration of the anti-smoking activists, millions of smokers continued to do just that. Cigarette company profits were soaring. Clearly, people were not "getting it."

It was about this time that the antis realized that there was at hand a lever by which they could move the world of public opinion: *Environmental tobacco smoke! Secondhand smoke! Passive smoking! Involuntary smoking! My God, why didn't we think of that before?* All they needed was a fulcrum, some kind of (pseudo)scientific justification, upon which to rest the lever.

What this lever could, and did, accomplish is summarized by Richard Kluger in his encyclopedic book, *Ashes to Ashes*:

> Besides stigmatizing smokers, the ETS issue brought with it a fresh rationale for interventionist programs. If smokers were now viewed as violators of the social contract by imposing the unhealthful consequences of their pleasure-taking on others, then it might be quite acceptable to quarantine or even punish them as part of the broader social movement to cleanse the environment. Smoking near someone else was no more excusable than poisoning streams with industrial runoff or fouling the air with toxic smokestack emissions.[18]

Kluger, to say the least, is not favorably inclined toward smoking, either firsthand or secondhand, although he does criticize the antis for their overemphasis on the latter. Another observer takes a more far-reaching view. John Luik, a senior associate of the Niagara Institute, wrote in Boston University's *Bostonia* magazine:

> For most of the twentieth century the campaign to delegitimize smoking has employed two major weapons: science, particularly epidemiology, and morality, within the general conceptual framework of what can be called health paternalism . . . [Once] it was established that smoking increased the risks of ill health in smokers, the groundwork was laid for a series of moral arguments that purported to show that subjecting oneself to these risks was both so irrational and immoral as to justify government efforts to prevent one from assuming the risks . . .
>
> But, however closely aligned to science, the ability of health paternalism to secure all of the public-policy objectives of the anti-smoking movement was always constrained by the fact that, at least within democratic societies, the justifications for government intervention to protect adults from themselves—to coerce "healthy" lifestyles—would continue to have a totalitarian flavor about them that would ensure significant and widespread opposition. It is only by demonstrating the dangers from smoking transcend the smoker and extend to innocent bystanders that the anti-smoking movement could move beyond obvious health paternalism and enlist unambiguous support for public-policy measures designed to restrict, ban, and criminalize public smoking.[19]

But this much-desired and eventually achieved goal of the antis was a long time coming, for there was little science, not even much "junk science," to back up claims about the dangers of ETS. Nevertheless, in the surgeon general's 1972 report, "The Health Consequences of Smoking," the sixth in the series, Surgeon General Jesse B. Steinfeld

officially raised the specter for the first time. It was, however, purely his own opinion, based upon his reasoning that since smoking causes lung cancer and 10 to 20 percent of lung cancer deaths occur among nonsmokers, many of the latter undoubtedly must have been caused by exposure to someone else's smoke at some time or another.

More years passed, and still no scientific evidence was forthcoming. It didn't matter; the ETS seed had been planted and was beginning to flourish. Thanks to petitioning by that people's guardian, good old Ralph Nader, the Civil Aeronautics Board in 1972 decreed separate smoking and nonsmoking sections in airliner seating. The following year the Interstate Commerce Commission did the same for interstate buses. In 1975, Minnesota enacted a Clean Indoor Act prohibiting smoking in confined public places, with few exceptions. Public opinion was being moved, big time.

The Minnesota ordinance was considered a model of its kind that other jurisdictions began copying. I saw it in action when my wife and I visited the Mall of America in Bloomfield, near Minneapolis, in 1996. Signs informed that smoking was prohibited except in designated spaces, but I could find no such space anywhere in the huge complex. How pathetic, I thought, that in this vast and cavernous and anything but confined public place there was not even a little corner set aside where smokers could smoke. There was, however, a bar called the Alamo on, I think, the third level, where smoking was evidently permitted. Peeking through the windows, I saw ashtrays on every table.

The Seventies also saw the litigation-minded beginning to gear up on the ETS issue. The earliest reference I have seen for someone claiming injury from secondhand smoke, a tiny harbinger of the deluge that was to come, is an item in the chronological "Capsule History of Tobacco" on Gene Borio's Tobacco Bulletin Board on the World Wide Web:

> 1976: Donna Shimp sues New Jersey Bell Telephone for not protecting her from secondhand smoke. Ruling in her favor, the judge said, *"if such rules are established for machines, I see no reason why they should not be held in force for humans."*[20] [Emphasis in original.]

The Bulletin Board doesn't say what kind of protection from secondhand smoke, or reparation for the previous absence of such protection, Ms. Shimp received from New Jersey Bell.

Fast forward to 1978. In that year physicist and antismoking activist James L. Repace—who later joined the Indoor Air Division of the Environmental Protection Agency and became a driving force, if not *the* driving force, behind the anti-ETS crusade—conducted studies of "respirable suspended particles" in various smoky settings, such as restaurants, cocktail lounges, a bowling alley, etc., and compared them with levels in nonsmoky settings. "Respirable suspended particles" (RSP) are thingies in the air that are small enough to reach the deepest recesses of the lungs. Researchers disagree about the size limit for an RSP but do agree that tobacco smoke is one. Repace computed the risk of exposure to lung cancer from the ETS levels he obtained to be 250 to 1,000 times above the acceptable level as set down by federal guidelines for carcinogens in air, water and food.[21]

At last, something solid, or seemingly so, on which to rest the lever. Or was it? Other scientists were to severely criticize Repace's methodology and findings. In any event, whatever the levels of ETS he claimed to have found, there was still no evidence that anyone was being harmed.

Along with a chemist named Alfred Lowrey, Repace published his study in *Science*, claiming that "indoor air pollution from tobacco smoke presents a serious risk to the health of nonsmokers . . . [that] deserves as much attention as outdoor air pollution."[22] In 1985 both men published another article in *Environment International* which went so far as to assert that exposure to ETS was a greater risk than "all regulated industrial emissions combined."[23]

Regarding this article, the following year the *American Review of. Respiratory Diseases* editorialized that "Despite the simplifying assumptions of the risk estimates and the flaws in the epidemiological data from which they are derived, Repace and Lowrey's figures remain the best current estimates of lung cancer deaths and passive smoking."[24]

Talk about praising with faint damns. Yet this is also in keeping with the "Lalonde Doctrine": the need to educate the public about the dangers of smoking is so urgent that we have to ignore the fact that the studies may be scientifically questionable.

About this time, antismoking leaders, most notably John Banzhaf of ASH, began petitioning the Occupational Safety and Health Administration (OSHA) to ban smoking in all workplaces in the nation. In an unusual display of common-sense caution for a regulatory agency,

OSHA resisted the demand, citing the lack of evidence about the dangers of secondhand smoke.

Rewind to 1980. In that year the grandfatherly pediatrician C. Everett Koop, whose antismoking mischief-making was to cause more shredding of the social contract than any amount of environmental tobacco smoke, was appointed surgeon general. Over the next seven years, each annual report issued under his aegis told Americans more about the terrible toll of disease and death caused by smoking, but essentially hashing and rehashing previous reports. In 1984 Koop announced the goal of making America "smoke-free" by the year 2000.

Then at long last, in 1986, came his report entitled "The Health Consequences of Involuntary Smoking," in which it was flatly and unequivocally stated that "Involuntary smoking* is a cause of disease, including lung cancer, in healthy nonsmokers."[25] Well, not entirely unequivocally. Koop acknowledged that nobody knew how many people actually fell victim to ETS but he was sure we would eventually find out from future studies. The National Academy of Science (NAS) also issued a report in 1986 implicating ETS as a cause of lung cancer.

(Four paragraphs later, however, Koop noted that "Several studies have reported small decrements in the average level of lung function in nonsmoking adults exposed to ETS . . . but it seems unlikely that ETS exposure, by itself, is responsible for a substantial number of cases of clinically significant chronic obstructive lung disease."

(This puzzles me. I would think that lung cancer, which is almost always fatal, is a somewhat more serious disease than what is usually termed chronic obstructive pulmonary disease, or COPD. It seems a little strange that secondhand smoke would cause the former but would be "unlikely" to cause the latter.)

Koop's pronouncement regarding ETS, like that of his predecessor, Dr. Steinfeld, was largely his own opinion and went well beyond the findings of his own scientific advisors or the NAS. According to Richard Kluger, when asked about it by "one prominent investigator on

*Dr. Koop explained that "Nonsmokers' exposure to environmental tobacco smoke is termed involuntary smoking in this report because the exposure generally occurs as an unavoidable consequence of being in proximity to smokers, particularly in enclosed indoor environments."[26] This cynical writer suspects it could also be because the term "involuntary smoking" conveys a lot more punch than the blander "environmental tobacco smoke."

the dangers of smoking," Koop replied that "as the nation's ranking public-health advocate, he had to be forceful in warning of the ETS threat in order to win the public's attention."[27]

Here was the Lalonde Doctrine again in its naked purity: the end—the elimination of smoking—justifies the means, even if it involves bad science or, at best, only tentative science. Health messages must be "loud, clear and unequivocal" even if the scientific evidence doesn't support them. Here was a pious falsehood par excellence.

Even Kluger is critical:

> [W]ithout a doubt Koop was *on the side of the angels*, but without much doubt, either, he was in this instance using dubious means—shaky science—to justify the worthy end of achieving a healthier society."[28] [Emphasis added.]

And later:

> Only one or two nonsmokers per thousand died of lung cancer, while fifty to one hundred smokers per thousand succumbed to it: by stressing the risk of ETS exposure, the smoking control moving was effectively trivializing the risk from direct smoking, which was thirty to forty times greater. It was an incendiary, effective, but questionable tactic for those *on the side of the angels*.[29] [Emphasis added.]

Would that we had been spared the "touch" of such angel-helpers.

The 1986 report, and its conclusions, were based on 13 epidemiological studies, 11 of which showed "a positive association" between lung cancer and involuntary smoking and six of which reached "statistical significance."

I have only seen a summary of the 1986 report, so I don't know what the actual "statistically significant" relative risks reported in the six studies were. But a "positive association" is merely any fraction of a percentage point higher than unity. A relative risk at unity, or 1.0, means no risk at all. In epidemiological practice, for a risk to achieve a level of "statistical significance" that is not due merely to chance it must at least approach 2.0. (A relative risk of 2.0 would mean that nonsmokers exposed to ETS had twice the risk of developing lung cancer than nonsmokers not so exposed—statistically, that is, not necessarily actually—and the risk would still be barely "significant.") Since only six of the 13 studies apparently reached, or exceeded, that level, the other 11 could be dismissed.

But again it doesn't matter because it was not the 1986 surgeon general's report that really set the ETS panic in motion. What did it was a report which, although even more suspect and controversial than Koop's, carried far more impact and was to have profound social consequences that have not yet run their sorry course.

For the background, Richard Kluger again:

> What the antismoking movement most needed was a finding by the Environmental Protection Agency that ETS qualified as what the EPA termed a Group A [also called Class A—D.O.] carcinogen, meaning that it was found to cause at least 1 death per 100,000, the measure by which asbestos, radon, and a dozen other substances were branded human killers and thus subject to government regulation. By such a finding, ETS would be elevated to an official public menace, given the all but universal exposure to it by the American public, *and it would hardly matter how relatively slight the risk from it might be for any healthy individual*; in the process, the industry's chief defense—that ETS had not been shown to be a legitimate health risk but was, for some, a source of annoyance, readily mitigated by courtesy on both sides—would be destroyed.[30] [Emphasis added.]

What the antismoking movement wanted, the antismoking movement got. And the story of how it got it forms the next part of this chapter.

On January 7, 1993—29 years almost to the day after the surgeon general's famous 1964 report (long since transfigured into Holy Writ) and with repercussions second only to that report—the Environmental Protection Agency released at a much-publicized press conference a long-awaited 510-page report on environmental tobacco smoke: "Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders." In it the EPA officially announced that it had classified ETS as a Group A or "known" human carcinogen that, from lung cancer alone, was killing 3,000 Americans a year. ETS also wasn't good for little kids, to the tune of 150,000 to 300,000 annual cases of lower respiratory tract infections in infants up to 18 months of age.*

*"For 10 years the EPA, following the lead of the International Agency for Research on Cancer, has classified chemicals in an alphanumeric scheme that range from A—substances known to cause cancer in humans—to E—

The announcement set off a new wave of hysterical smoking bans around the country on federal, state and local levels—in offices, in restaurants and bars, in shopping malls, in airports, even in open-air sports stadiums and public parks, even private homes where nonsmoking spouse
confronted smoking spouse. As far as the public knew from what the media reported, environmental tobacco smoke was now a proven killer.

(It also resulted six months later in a suit filed in federal court by a group of tobacco growers and tobacco manufacturers challenging the scientific basis of the EPA report and demanding that the agency be required to recall it. I'll discuss the court's decision later.)

Typical of the media's absolute faith and trust in the EPA and their enmity toward the tobacco industry was an editorial in the *Atlanta Journal-Constitution*:

> EPA for the first time has declared secondhand smoke a cause of cancer in humans, putting it in the same class with such dangerous substances as asbestos, benzene and radon . . .
>
> Tobacco industry lobbyists have attacked the "flawed science" used by the panel that wrote the report. Hmmmm. Who can be trusted on this one? A group of scientific experts, or the cigarette makers whose multibillion-dollar market shrinks with each confirmation of the dire health consequences of using their product?[32]

Never mind that EPA-engineered scares over asbestos, benzene and radon are also based on dubious science (see Chapter 11). Never mind that antismokers may also have their own agendas. What the AJC, and probably the rest of the media in the country, didn't report, at least not prominently or in any detail, was the follow-up reaction from numerous independent scientists who disputed the EPA's finding and pointed out its serious shortcomings. But why confuse people? Nor did

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substances for which there was evidence of noncarcinogenicity in humans. In practice, the important substances were those classified as A, B1, or B2. Substances classed as A were known human carcinogens; substances classed as B1 were known animal carcinogens with some evidence of carcinogenicity in humans; and substances classed as B2 were known animal carcinogens with no evidence of carcinogenicity in humans. The EPA calculated a carcinogenic potency factor for each A, B1, or B2 substance, and the potencies were used to set limits on human exposures. Substances rated C and below essentially dropped from view." [31]

many reporters feel it necessary to confuse people with too many details about what the EPA based its conclusion on.

It was based on a combination ("meta-analysis") of 30 independently conducted epidemiological studies that compared disease rates of nonsmoking wives married to smoking husbands with the disease rates of nonsmoking wives married to husbands who didn't smoke. *No studies* on second-hand smoke in the workplace were included nor did the EPA do any original research of its own. Eleven of the studies were conducted in the United States and 19 in other countries. Most of them found "positive associations" between lung cancer and women exposed to ETS, but only six studies were "statistically significant." Nine studies actually found a *reduced* rate of lung cancer, but these were not "statistically significant."*

The bottom line was that the EPA estimated that a woman who lives with a smoker has a relative risk of 1.19 of developing lung cancer. That is, a woman married to a smoker has a 19 percent greater chance of developing lung cancer than a woman living with a nonsmoker.

Sounds like a lot, doesn't it? Especially when you extrapolate it to the entire U.S. population, which is what the EPA did to come up with the "estimate" of 3,000 annual lung cancer deaths due to ETS. Yet that relative risk (RR) of 1.19 is lower than the EPA-alleged 50 percent greater chance (RR=1.50) of getting cancer from the chlorine in drinking water, over which the agency has not (yet) launched a national scare campaign. (Unfortunately, it inspired such a campaign in Peru, to the great harm of that country's health. See Chapter 11). It is below the 2.6 relative risk the EPA calculated for diesel emissions, which it classed as only a Group B or "probable" human carcinogen. It is far below the 4.45 relative risk that Canadian researchers estimated in a study linking high occupational exposure to electric fields with cancer—which translates into a 445 percent chance![34]†

*"'The studies EPA looked at were all surveys of women married to smokers, many of them conducted over the phone. They asked the women to give a very rough estimate of their exposure. Often, the women weren't available, and an acquaintance answered the questions. Unfortunately, most of the surveys didn't gather adequate data about other factors that might bias the results ('confounding factors'), like the diet, or income of the women."[33]

†According to the American Smokers Alliance, some studies have put

In an article in *Forbes MediaCritic*, Jacob Sullum, an editor of *Reason* magazine, quoted James Enstrom, a professor of epidemiology at the University of California-Los Angeles: "You're talking about ratios so close to 1.0 that it's really beyond the realm of epidemiology . . . You're basically down in a noise-level situation, and whether you can really see a true signal above the noise is doubtful."[35]

(Sullum's article was widely reprinted in newspaper advertisements by the tobacco industry, for the reprint rights of which he was paid $5,000 by R. J. Reynolds. Sullum's employer, the Reason Foundation, also received a $10,000 donation from Philip Morris. Thus in some eyes everything he said will be disregarded, no matter how true it was. But see other comments about the EPA report untainted by a whiff of tobacco money under this note in the Notes section.)

The EPA's official release of its report on January 7, 1993 was not really news because draft versions had been circulating since 1990. Most of what follows in this chapter is based on a statement that Rep. Joseph Bliley Jr. (R-VA) presented to the Health and Environment Subcommittee of the House Committee on Energy and Commerce, dated July 21, 1993.[36] Bliley was then ranking minority member of the Energy and Commerce Committee and when the Republicans swept into control of Congress after the 1994 elections became its chairman.

In his statement Bliley takes us back to our friend, James Repace. In 1989, he says, Mr. Repace "prompted" the EPA to publish a "Fact Sheet" on environmental tobacco smoke, which "[D]espite its name, 'Indoor Air Facts Number 5,' made extravagant claims about ETS going far beyond the conclusions of the 1986 reports of the National Academy of Science (NAS) and the Surgeon General" and "took certain statements in the 1986 Surgeon General's report out of context to claim a consensus that 'passive smoking significantly increases the risk of lung cancer.'"

To Bliley, the Fact Sheet, plus other documents the EPA subsequently published, plus statements by EPA officials, made it clear that the agency had already reached a conclusion regarding ETS—that it

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the relative risk of developing a disease from eating pork chops once a week at 2.12; that of drinking three glasses of whole milk a day at 2.14; that of eating pork sausage once a week at 2.42, and that of a nonsmoker keeping pet birds at 6.70.

had "started with the restrictive policy it wanted to promote" and was working "backward to 'develop' the scientific conclusions necessary to justify that policy."

In June 1990, the first draft of an ETS "risk assessment" was released by the EPA for public comment. The drafts were also transmitted to the agency's Scientific Advisory Board (SAB), which by statute is intended to be an independent review body composed of experts from outside the agency serving as a check on the agency's use of science to formulate regulatory policies.

Early in 1991 the SAB sent the risk assessment back to the EPA "with directions that it be revised extensively," records Bliley. "After major rewriting, a second draft was released in June 1992 and a second SAB hearing was held." Eventually, the much transmogrified final risk assessment was released to the public on January 7, 1993.

FOR A LITTLE INSIGHT into the revising and rewriting process, another digression may be in order here. In March 1992 the EPA sent its draft report to its Office of Research and Development-Environmental Criteria and Assessment Office in Cincinnati (ECAO-CIN), where a team of epidemiologists gave it a look-see. Their reports back to EPA headquarters in Washington were not intended for publication, but San Francisco-based FORCES somehow obtained a copy of two of them and put them on its Website.[37] In the first, dated March 23, 1992, Patricia A. Murphy commented:

> Although we were asked to review specific proportions [*sic*] of this document, it is our collective opinion that this is a scientifically inadvisable means of approaching the issue. We found that we were repeatedly forced to either accept certain statements and assumptions at face value or go back to the previous chapters to seek out the information needed for a thorough assessment of the validity of some of the analytical approaches which were taken.
>
> . . . If, however, commonly used formulae have been adusted or manipulated in any way, it becomes impossible to evaluate their validity if they are presented without supporting documentation and references for the various assumptions implicit in their use. . .
>
> Some parts of this chapter [Chapter 3] bear a rather striking resemblance to an article by Brian Leaderer (1990). Risk Analysis, Vol 10, pp. 19-26. In some cases, the wording is identical. It may be that this person also authored this chapter. If not, this could be

a source of embarrassment, as there are surely many people familiar with this article who will also be reading this EPA document in some capacity. This should be looked into by the authors.

. . . Appendix A: . . . What is lacking is a clear statement of why these particular studies were selected for review. Was any attempt made to include non-published studies (which are likely to have non-positive findings) in this review? Chapter 5 uses these studies as the basis of a meta-analysis, but it is not really clear to me how the process of data abstraction took place, i.e., the specific pieces of information which were being sought from each study to form the data set for re-analysis.

. . . Chapter 5. This might be better titled REintepretation of studies based on REanalysis of published data. Meta-analysis is repeatedly alluded to but it is never clearly stated what the purpose and form of this data analysis really is.

. . . [T]here is no discussion or mention of the "file drawer problem,"* i.e., the existence of unpublished studies showing no positive effects, which may bias the results of the data pooling in the direction of finding a positive effect.

. . . The discussion of bias and confounding in the individual studies is pretty thorough, but there is no mention of the potential for residual confounding in or misclassification of erroneously measured variables used for the purpose of confounding adjustment. It is known (see Greenland, 1987 for citations) that this type of error can result in a variety of types and directions of misclassification bias of unknown magnitude. This might seem to be an overly picky comment but I believe it should be discussed because I'm sure some outside critic will cite this source of potential error as possibility for the positive findings in these studies.

In the last part of Chapter 5, I feel that the case for a clear causal relationship between lung cancer and ETS is somewhat overstated . . . It is alluded to that adenocarcinoma seems the most strongly related to ETS exposure—is it not curious that among active smokers squamous cell carcinoma is usually found in abundance and the relative risks for adenocarcinoma among active smokers are dwarfed in comparison . . ? . . . I recall 7 or 8 years ago when it was first noted that adenocarcinoma seemed to occur with greater frequency in women compared to men. At that time, the theory was that these adenocarcinomas were likely due to domestic radon exposure; now they are being attributed to ETS. This

*This is also known as "publication bias." Only studies that come up with the results the researchers are looking for tend to be published in peer-reviewed journals; studies that turn out negative are "filed."

issue should be better addressed before a causal relationship is "confirmed."

Appendix D: Incomplete as received. Sections D.2 and D.3 are missing, which makes it impossible to review the methods for calculation of the attributable risk estimates which form the basis of Chapter 6.

The second document, dated March 24, 1992, was written by Terry Harvey and reads:

As you will note from the comments, no one liked the 11 day time allotted for review and thus a very quick product is attached as best we could accomplish in the time available. I suggest the document manager(s) consider more time for evaluation to balance the seriousness of this document as applied to the public health and the intrinsic value of doing it right on this key health topic.

I have personally reviewed only the "Summary and Conclusions" and have these comments:

1. I am concerned with the extrapolation of data from females to males in the married never smokers (p. 1-3). There are sex differences for both cancer and non-cancer health effects. I suggest clarification of this variable to affirm inadequate male data and reinforcing the EPA cancer guideline proviso where inadequate data exists.

2. It is confusing to the reader to skip back and forth from "ETS" to "passive smoking" (pg. 1-1). I suggest an improved scientific description is "PETS" or "Passive Exposure To Tobacco Smoke." In any case, use one set of terms and define it upon first usage.

3. To be technically accurate and avoid confusion, the document summary (pg. 1-1) should not use the generic term "cancer" unmodified as to the type . . , e.g., squamous cell carcinoma vs. adenocarcinoma. Great confounders will emerge if this is not carefully articulated (see Pat Murphy, Pg. 5). If you can technically show causal association, do; where you can't, don't infer it.

4. The non-cancer asthma effect must be clarified medically to show effects primarily in [the] sensitive asthmatic subpopulation having pre-disposition component-like genetic risks and not displayed as public health risk to the general non-predisposed population.

5. I suggest a full discussion of category A vs. B, based on the absence of definitive data on PETS in humans. Like it or not, EPA should live within its own categorization framework or clearly explain why we chose not to do so . . .

> ECAO-CIN will be most happy to spend further time improving the quality of this document. Let us know how we can be of further help.

"Once again," says FORCES, "one can see evidence of the disagreement within the EPA's own organization about classifying second-hand smoke as a Class A carcinogen. Once again, the comments of the reviewer are about sloppiness, inaccuracy, data spin doctoring, and the great rush to push it through."

As far as the general public knew, however, or at least the readers of the *Atlanta Journal-Constitution*, the EPA's delay in releasing the report was because of "a massive tobacco industry lobbying campaign."[38]

According to Jacob Sullum, between May 1990 and February 1994, *The New York Times, The Los Angeles Times, The Wall Street Journal* and *The Washington Post* ran more than 100 news stories about ETS, of which about 45 focused on the EPA report in its various versions.[39] Most of those stories no doubt were duplicates. But from my own file of newspaper clippings for those years, 1990 through 1994, I count no fewer than 129 articles, editorials, columns and letters dealing with ETS, all but a handful from one newspaper alone, *The Atlanta Journal-Constitution*. Adding 1995 through May 1997, the total comes to 160. (This is not counting "general" antismoking articles, columns, etc.)

Two of the clippings dealt with the makeup of the EPA's Scientific Advisory Board and both cast doubt on its "neutrality."

The first one, from 1990, reported that:

> Six of the 16 members of a newly appointed Environmental Protection Agency panel considering the health risks of second-hand cigarette smoke have ties to a tobacco industry research organizations . . .
>
> "They've stacked the deck with people who have close ties to the tobacco industry." said Dr. Alan Blum, a founder of the anti-smoking group Doctors Ought to Care. "It's pathetic."
>
> "We were concerned about the appearance of conflict of interest," said Donald Barnes, staff director of the EPA's scientific advisory board. But he said the link between the panel members and the tobacco industry "does not cause any question to be raised about their technical capabilities."
>
> The panel's task is to review the scientific accuracy and objectivity of two forthcoming EPA reports on the health effects of passive smoking.

> Six members are connected with the Center for Indoor Air Research of Linthicum, Md. . . . The center is financed by Philip Morris, R. J. Reynolds Tobacco Co. and Lorillard Corp., three of the nation's largest tobacco companies.
>
> The chairman of the EPA's passive-smoking panel, Morton Lippmann of New York University, is on the science advisory board of the tobacco industry center.[40]

The second clipping, two years later, reported that:

> A draft Environmental Protection Agency report linking cigarette smoke to lung cancer in non-smokers and respiratory infections in children faces review today by a panel of scientists that includes some with financial ties to the tobacco industry . . . The panel was assembled by the EPA to provide an unbiased critique of the EPA report on second-hand smoke. Since the panel last met in December 1990, one of its members has accepted a $1.2 million grant from the Philip Morris tobacco company.
>
> The researcher, James E. Woods of Virginia Polytechnic Institute in Blacksburg, Va., also recently became the second member of the EPA smoking panel to join the board of a tobacco industry research organization. The first was Morton Lippmann of the New York Medical Center, who is chairman of the EPA panel . . .
>
> The EPA report found that second-hand cigarette smoke is a proven cause of lung cancer in non-smokers, leading to about 3,000 deaths annually . . .
>
> The Tobacco Institute, the industry's lobbying arm, held a news conference Monday to denounce the EPA report, saying it "has employed questionable scientific standards, selectively used data and has ignored the agency's own guidelines."
>
> Robert Axelrad, director of the EPA's indoor air program, said the report has been extensively rewritten during the past year and a half and has been substantially strengthened. "I think the report is both stronger, as well as more solid scientifically," Mr. Axelrad said. "The one thing that has not occurred is foot-dragging because of industry pressure."[41]

The complaints to the press by Dr. Blum and other antismoking spokesmen about the makeup of the SAB panel can be seen as a kind of insurance policy that put them in a couldn't-lose position. If an EPA review panel that was allegedly "stacked" in favor of the tobacco industry, and whose chairman himself, Morton Lippmann, had "ties" to the industry, were to uphold the draft report condemning secondhand smoke, that would mean that the panel found the evidence overwhelming and

indisputable and the industry would be left simply "blowing smoke" (forgive me). But if the unthinkable happened and the panel returned a Scotch verdict of "not proven," it would obviously be because of pressure from the industry, Mr. Alexrad's having averred the contrary notwithstanding.*

Actually, however, if the SAB panel was "stacked," it was hardly in the industry's favor. Three of its members were selected by EPA staff member Dr. Steven Bayard, with input from James Repace and Axelrad. The first two were well-known antismoking activists. None of the candidates suggested by the tobacco industry was appointed to the panel, while three out of six candidates suggested by antismoking organizations were.

Before the first review hearing in 1990, EPA administrator William Reilly had promised Rep. Bliley that antismoking activists on the SAB would be "balanced" by individuals "who could represent the opposing point of view." That ain't what happened.

Says Bliley:

> Despite Mr. Reilly's promises, the SAB panel meeting on December 4-5, 1990, was conducted in a manner that effectively prevented scientific viewpoints critical of the two draft ETS documents from being given anything resembling a full and fair hearing. Less than two hours were allowed for presentations by scientists critical of the report. Certain attendees who had personally requested time from the Chairman were foreclosed from speaking under the agenda that had been formulated. The input of several critical points of view was lost, as well as the opportunity for the panel to ask questions and to conduct a dialogue with other scientists. In contrast, twice as much time was given to antismoking organizations . . .
>
> No presentations were permitted on the risk assessment chapter dealing with the respiratory health of children. Without providing any opportunity for public comment, EPA had transmitted to the SAB a new "draft report with a detailed description and analysis of 26 studies" on childhood exposure to ETS. Not surprisingly, the document failed to discuss any studies that did not support the EPA's preferred conclusion. By inserting it at the

*"[I]t's not that I'm a tool of industry," Dr. Lippmann told *The Los Angeles Times*. "I'm a bigger tool of government. I've been working for the EPA longer. I have more to lose by offending the EPA than industry."[42]

> last moment and preventing public discussion of the topic at the hearing, meaningful scrutiny of the Agency's conclusion was excluded.

Dr. Lippmann, chairman of the SAB panel, presented the panel's report to the SAB's Executive Committee in April 1991. Curiously, says Bliley, the SAB concluded that the worldwide epidemiology data on ETS were too weak and inconclusive to support the draft risk assessment's conclusion that ETS is a cause of lung cancer in nonsmokers. He continues:

> [H]owever, the SAB could not bring itself to take the logical, if politically unpalatable, next step and reject the EPA's conclusions regarding ETS and lung cancer among nonsmokers. Instead, the SAB endorsed the conclusion that ETS is a "Group A" carcinogen while taking the extraordinary step of urging the EPA staff to attempt to "make the case" against ETS by extrapolating from data concerning active smoking. In essence, the Agency was being encouraged to do the science backwards—to maintain its conclusion while going about the task of finding support for it . . .
>
> The SAB's report feebly suggested that the panel "had some difficulty in applying the 'Guidelines for Carcinogen Risk Assessment,' as they are currently formulated," to the ETS data. Particular attention was given to the report's statement that "[I]f the guidelines for Carcinogen Risk Assessment can be used to cast doubt on a finding that inhalation of tobacco smoke by humans causes an increased risk of lung cancer, the situation suggests a need to revise the guidelines" (SAB Rep. 28).
>
> This prompted one member of the SAB Executive Committee to note that it sounded a little like saying "if the data doesn't fit the guidelines, the guidelines should be changed." Nevertheless, the Committee adopted the panel's Group A designation despite the clear failure of the data to satisfy the Agency's own guidelines.

Also curiously, following the Executive Committee's meeting, Dr. Lippmann again candidly told reporters that in his view the risk due to ETS exposure is "probably much less than you took to get here through Washington traffic."[43]

For next year and a half, the EPA labored to "make the case" against ETS and finally, on June 18, 1992, issued a revised risk assessment of over 600 pages. Incredibly, says Bliley, the EPA gave the public just nine days to comment on it, even though the report had doubled in

length "and a whole new set of flaws had been introduced." The second draft was even more curious than the first, he says:

> As an EPA health scientist who contributed to the draft admitted, the Agency staff had engaged in some "fancy statistical footwork" . . . to "fashion [an] indictment" of ETS.[44] In the prior draft, EPA's calculations had showed that the epidemiological studies based on U.S. populations showed no statistically significant association between ETS and lung cancer among nonsmokers. In order to reach a statistically significant result in the first draft, EPA therefore had included in its calculations all of the studies of ETS conducted worldwide to tilt the balance in the favored direction. Both the EPA and the SAB rejected out of hand arguments by critics that the risk assessment should have considered only U.S. studies.
>
> When EPA staff was revising the risk assessment, however, it was confronted by the Wu-Williams/Blot study, which had been conducted in China and reported a statistically significant negative association* between marriage to a smoker and lung cancer among nonsmokers—the exposure scenario relied upon in the initial risk assessment draft. Inclusion of the Wu-Williams/Blot study in EPA's analysis would have forced EPA to reverse its conclusions about ETS and lung cancer. At the same time, however, EPA had obtained preliminary data from a large U.S. study that, with some massaging, could be used to support its calculations of risk based exclusively on the U.S. studies.
>
> Accordingly, the EPA entirely reversed course and decided in the second draft to disregard the non-U.S. studies. Instead, EPA used the U.S. studies only . . .

That "massaging" Bliley refers to was to lump all the U.S. studies into a "meta-analysis," a procedure that is meaningful only when a number of different studies are closely similar in structure—which was not the case in this case. Writer Michael Fumento, who is no friend of smoking, explains that "meta-analysis [is] the pooling of results of numerous studies which by themselves are too small to be definitive. Meta-analysis is controversial because inevitably it mixes studies done by different researchers under different conditions. Like oil and water, they can be thrown together but not really combined. Further, good epide-

*Which—if it had any application to the real world—would mean that secondhand smoke actually protected nonsmokers from lung cancer!

miology builds on studies that have gone before. Meta-analysis wipes this out, because it weighs the first study as heavily as the last."[45]

This time the SAB allowed only a mere two days of public hearings on the revised risk assessment in July 1992 and in October submitted its report approving it. Bliley again:

> The panel's conclusions make absolutely clear that it was unconcerned with the scientific soundness of the report's underlying rationale. A brief comparison of the SAB's actions following its first and second review of the risk assessment confirms that the SAB actually disregarded its earlier findings in order to embrace the desired conclusion.

To summarize Bliley's comparison:

In its first review the SAB had concluded that the epidemiological data were too weak to support the inference that exposure to ETS causes lung cancer in nonsmokers and recommended that the EPA use data extrapolated from active smoking studies. But in its second review the SAB decided that active smoking data didn't help either.

Again, in its first review, the SAB concluded that all studies of ETS and lung cancer conducted worldwide should be included. But in its second review the SAB decided that the EPA need only include the U.S. studies because, had the EPA and SAB stuck with their original decision to use all the ETS studies, the meta-analysis would not have shown a statistically significant risk.

Despite all this, says Bliley, "the SAB decided that the total 'weight of evidence' supported a Group A classification."

Following the SAB's October 1992 report, the EPA rushed to revise and release the absolutely final risk assessment, that of January 7, 1993. (Again curiously, during that revision, the rejected foreign studies somehow crept back in.) The reason for the EPA's haste—at least according to critics—was the release in November 1992 of the Brownson study,[46] the largest case-control study of ETS ever conducted up to that time, which found *no* association between ETS and lung cancer. Inclusion of that study would have completely invalidated the EPA's conclusion. "Rather than face this embarrassment," says Bliley, "EPA rushed to release the report without considering the Brownson study on the pretext that 'it had to stop somewhere.'"

Unfortunately, Mr. Bliley also apparently decided it was time to stop. Despite his knowledge of the statistical and other shenanigans the

Environmental Protection Agency had employed in order to brand secondhand smoke a menace, despite the powerful position he later obtained as chairman of the Energy and Commerce Committee, he did nothing I am aware of about this most egregious example in modern U.S. history of the prostitution of science for a political end except submit a blistering statement to a House subcommittee, where it was buried from public view.

Perhaps it was because he was already dubbed "R-Phillip Morris" since his district encompasses Richmond, the home of the nation's largest tobacco company. To have called the EPA on the congressional carpet to expose its fraudulent behavior in public hearings before his committee could have solidified the perception that he was a "tool of Big Tobacco." Maybe I wrong him. But whatever the reason for it, Bliley's silence after the release of the EPA's secondhand smoke report would seem to qualify as something less than a profile in courage.

THE EPA'S DUBIOUS use of a meta-analysis was only one pirouette in its "fancy statistical footwork." In order to arrive at the relative risk of 1.19 mentioned above, the EPA had to change the "confidence interval" of its calculations.

As explained in Chapter 1, a confidence interval, or CI, is a convention of statistics which gives epidemiologists, well, confidence that whatever relative risk they come up with in a given study is reasonably reflective of actuality and is not due to mere chance. It's a range of relative risks, the lower end of which usually must be above 1.0 (no risk) in order to be "statistically significant." Traditionally, the accepted confidence interval in the field of epidemiology is 95 percent, meaning that there is only a five percent possibility that a result occurred by chance. But in a virtually unheard of departure from accepted practice, the EPA lowered its confidence interval to 90 percent, in effect doubling the possibility that its conclusion regarding the danger of environmental tobacco smoke was purely due to chance.*

Even using the lower standard, the confidence interval the EPA came up with for spousal ETS risk was 1.04-1.35. (The much-publicized relative risk of 1.19 is in the middle of that range.) The lower end of the confidence interval was just barely within "statistical significance."

"The gold standard in epidemiology has always been a 95 percent confidence interval," says Fumento. "Curiously, the Agency rejected that,

in what appeared to be a rigging of the results. It was like moving the goal post to the three yard line because the football had fallen two yards short of a touchdown."[47]

I don't think it's curious at all, seeing that the EPA already knew what verdict it wanted. And to say that it "appeared" to be a rigging of the results is putting it all too mildly. To state it plainly, the Environmental Protection Agency committed what scientists consider the cardinal sin (or used to, before the antismoking crusade began): it *cheated*.

It is one thing for antismokers to make extravagant claims based on personal prejudices and flimsy scientific evidence. It is even forgivable if scientists, who are, believe it or not, only human, tend to emphasize the data that supports whatever they are trying to prove and ignore the data that questions it. But it is quite something else to prostitute science itself by distorting the evidence, if not falsifying it outright, to forward a cause, no matter how noble one may believe the cause to be.

Pshaw, or words to that effect, says Stanton Glantz. To criticize the EPA for changing the confidence interval is a kind of "hairsplitting that only professors care about . . . There is nothing magical about [the 95 percent CI]. I know that scientifically it's widely used, but there is a strong body of thought that people are too slavishly tied to 95 percent."[48]*

To which Fumento responds with his football analogy again: "[C]ritics say[ing] that noting the original selection of 95 percent was arbitrary misses the point. It was arbitrary to make a football field 100 yards long, but once that's the standard, you can't change the length in the middle of the game."[50]

What we're dealing with here is a little more serious than a ballgame, however. Writes Matthew C. Hoffman, a policy analyst with the Competitive Enterprise Institute:

*Possibly because of all the flack it has been subjected to on this issue, the EPA is thinking of dropping the requirement for "statistical significance" entirely in future studies. At least that is the reading by two critics of new "Guidelines for Cancer Risk Assessment" the agency proposed in 1996.[49] If the requirement were to be dropped, it would mean that a risk would simply be whatever the EPA says it is—which, come to think of it, would not be all that great a change from the present situation!

> Those who see smoking as a social evil may be apt to dismiss the relaxation of scientific standards at EPA as a little white lie, a well-intentioned measure to eliminate a nasty and unhealthy habit. But if the EPA succeeds, nonsmokers may find to their chagrin that its new license extends beyond the confines of benign nannyism. Already, the EPA is rummaging through a plethora of potential domestic health hazards, including substances in the steam emitted during hot showers, and the electromagnetic fields generated by common household appliances. Allowing EPA bureaucrats into the private lives of smokers may open new vistas for "environmental protection," at the expense of individual rights.[51]

Mr. Hoffman doesn't seem to appreciate that the EPA bureaucrats are also "on the side of the angels" and if they sometimes go off the deep end, it is only out of concern for "our own good."

Ironically, the EPA's attempt to make a case against ETS by hook or by crook was actually somewhat of an embarrassment to the tobacco companies. For 29 years they had been claiming that the evidence against direct smoking was purely statistical; now they were claiming that the evidence against secondhand smoke was *not* statistical. As Fumento puts it in another analogy, "In a sense, it was the boy who didn't cry wolf—the guy who year after year saw a wolf and claimed there was no wolf there. When he says, 'Look, there's no wolf there,' the media are not going to be quick to believe that."[52]

Of course, the tobacco industry's historic "inability" to acknowledge any direct-smoking wolf does not mean that the reported ETS wolf is real or that it has any fangs. Anyway, if antismokers can get away with "spin-doctoring" every study about smoking to their advantage, I think the industry can be cut a bit of slack once in a while.

AS MENTIONED, a few scientists spoke out, directly or indirectly (but not too loudly), against the EPA's misuse of epidemiology (see again Note 35 to this chapter in Notes section). But perhaps the most authoritative voice was that of Alvan Feinstein, M.D., professor of medicine and epidemiology at Yale University and editor of the *Journal of. Clinical Epidemiology*, who in a journal called *Toxicologic Pathology*[53] wrote scathingly of the studies that formed the basis of the EPA report:

> In the investigations of [ETS] . . . the various studies are contradictory, some going in positive directions and others not. The

> inconvenient failure of the evidence to comply with a prime requisite of scientific reasoning for causality, however, has not inhibited the causal accusations. The "prosecution" has simply ignored the inconvenient results and emphasized those that are (in a memorable term) "helpful."

As for the implications this had for the future of research on smoking, Feinstein wrote:

> [I]n the current fervor of anti-smoking evangelism, what young scientists would want to risk their career and what older scientists would want to risk their reputation by doing anything that might be construed as support for the "bad guys" of the tobacco industry? What governmental agency would fund research in which the established "accepted" anti-smoking doctrines were threatened by a study proposed by someone—an obviously deranged skeptic—who wanted to do an unbiased, objective investigation?
>
> [T]he "bad guys" . . . are not always right, but if they are denied a fair and proper scientific hearing, neither society nor science will benefit. Society is entitled to make decisions based on advocacy. The scientific basis for those decisions, however, should depend not on political advocacy, but on scholarship—no matter how it is produced or by whom.

In the same article, Feinstein reported that he had "recently heard an authoritative leader in the world of public health epidemiology make the following statement [regarding the EPA report]: 'Yes, it's rotten science, but it's in a worthy cause. It will help us get rid of cigarettes and become a smoke-free society.'"

Elsewhere, at a toxicology forum in which the subject of environmental tobacco smoke came up, Feinstein characterized the EPA's manipulation of data in even stronger language, calling it "a perversion of science."

Jennifer Jinot, one of the authors of the EPA report, was present and was understandably rather offended by that remark. Dr. Feinstein "apologized" to her in these words:

> I certainly meant no personal slights in my term "perversion of science". . . I have no doubt that you and your colleagues probably devoutly believe in what you have done, and that, alas, has been true of all of the great blunders throughout the history of medical science. They have been devoutly believed in. It is not

> that people were committing fraud. It is not that they were doing misconduct. It is not that they were trying to sell delusions to the public. They, themselves, honestly believed their own delusions, and you and I would have to spend a lot more time talking with one another to go over some of the details that we disagree upon.[54]

Another important critique of the EPA's report was released in November 1995 by the Congressional Research Service (CRS),[55] an investigative agency that conducts research and analysis at the request of Congress. Its report was produced in response to a proposed Occupational Safety and Health Administration ruling, based on the EPA's findings about environmental tobacco smoke, that would ban smoking in federal workplaces. Because the conclusions of the CRS are expressed in the tentative language of good science—unlike the practice at the EPA—both prosmoking and antismoking groups have been able to claim that it supports their positions.

Probably the best authority the antismokers have on their side is the primary author of the report, C. Stephen Redhead, who surely ought to know what the report tried to say. Upset by tobacco industry "misrepresentations" that the report discredits the EPA's finding that secondhand smoke is a Group A carcinogen, Redhead maintains that the report in fact supports the finding.[56]

On the other hand, another CRS analyst, Jane G. Gravelle, principal author of another CRS report[57] on the use of cigarette taxes to fund health care, released in March 1994, told a congressional committee that "Our evaluation was that the statistical evidence does not appear to support a conclusion that there were substantial health effects of passive smoking."[58]

Well, No. 1, does the Congressional Research Service support the EPA or doesn't it? And, No. 2, does it really matter?

1. Does it or doesn't it?

Everyone has biases, and given the cautious—I would even say, timid—language of the Redhead/CRS report, it's easy to pick and choose excerpts to prove whatever one wants to prove. But my own (admittedly biased) reading of it is that while it hardly brands the EPA's secondhand smoke report as the fraud that it is, it certainly does not validate it. A few of my favorite excerpts (with all emphases added):

"[A]bout one-third of the studies reviewed by EPA for dose re-

sponse* behavior show a statistically significant (at the 95 percent level) upward trend. While there is evidence of an upward dose response trend, the results are not definitive. And even at the greatest integrated exposure levels, the measured risks are still *subject to uncertainty*." (Page 2)

"T]he amount of nicotine inhaled by a nonsmoker working in a relatively smoky restaurant for eight hours is equivalent to smoking one-eighth of a cigarette." (Page 17)

"Even when overall risk is considered, it is a *very small risk* and is *not* statistically significant at a conventional 95 percent level." (Page 25)

"[T]he two largest U.S. studies [released since the EPA report]—Fontham and Brownson—found in one case a positive risk that was *barely significant* and the other *no risk at all*." (Page 25)

"[S]moker misclassification could explain all the measured risk even at high exposure levels even for studies such as Fontham and Brownson." (Page 41)

"It is clear that misclassification and recall bias plague ETS epidemiology studies . . . It is possible that more research on the general question of misclassification will reduce the *uncertainty* now present in these ETS results, but such research will be difficult to perform because its methods, too, appear to be subject to *considerable uncertainty*." (Page 45)

"In general, smokers are less health conscious than nonsmokers. They tend to drink more alcohol, eat less healthy diets, exercise less, and have a lower socioeconomic status. The degree to which non-smoking spouses of smokers share their partner's unhealthy lifestyles has not been studied extensively, but it is likely that some of the risks are shared." (Page 68)

And the best one of all:

"[I]t is possible that *very few or even no deaths* can be attributed to ETS." (Page 55)

*That is, the more exposure to secondhand smoke (the "dose") and the longer the exposure (measured in pack/years), the more cases of lung cancer.

I may be guilty of doing a little cheating myself: (1) my liberal sprinkling of italics above, although no words were changed; (2) the passage from page 17 is not really germane because the EPA did not use any studies dealing with secondhand smoke outside the home, mainly because such studies are extremely difficult to conduct and fraught with even greater "uncertainties," and (3) the statement from page 55 was part of a highly technical discussion of the Fontham and Brownson studies which were not included in the EPA's meta-analysis, though I believe the statement also applies to the EPA's official finding.

But at least I'm trying to be honest. Before you sue me, listen to Rep. Henry Waxman's "spin" on the same report:

"The new [CRS] *report vindicates the conclusions of the Environmental Protection Agency. It shows that secondhand tobacco smoke is a dangerous human lung carcinogen."*[59] [Emphasis mine.]

Unfortunately, Mr. Waxman, the man who dragged seven tobacco company CEOs before his committee in 1994 for a kangaroo-court-style inquisition (see Chapter 12) didn't tell us where in the CRS report (which he obviously didn't read) such vindication can be found. He couldn't, because there wasn't any.

Even one member of the SAB's review panel, Dr. Geoffrey Kabat, says that "the EPA is making a stretch when they call ETS a Class A carcinogen." Kabat, an epidemiologist with the Albert Einstein College of Medicine, conducted his own study on ETS, with funding from the National Cancer Institute, and reported in the July 15, 1995 issue of the *Journal of Epidemiology* that he found little association between ETS and the risk of lung cancer from women living with smoking spouses.[60]

Of the EPA report he said, "If these were data on something else—risk factors for ingrown toenails or something like that—people would look at it and say, 'Well, it's really not too impressive . . .'"[61]

But the EPA report didn't deal with toenails, unfortunately; it dealt with secondhand smoke, and I'm quite convinced that many people, for various reasons, desperately *wanted* to be told that secondhand smoke was dangerous.

If the Redhead/CRS report can, by a similar "stretch," be construed to support the EPA, the earlier Gravelle/CRS report mentioned above does not lend itself so easily to that procedure—which may be why, in several years of surfing the many antismoking sites on the World Wide Web, I have never seen it referred to. Although the Gravelle re-

port was concerned with the question of whether an increase in cigarette taxes to fund health care was justified on the basis that smokers' illnesses are a burden on society (see Chapter 12 for a fuller discussion of that issue), it also examined the EPA's secondhand smoke report. Again operating from my own bias, I have selected the following passages from pages 47-49 and have again supplied all emphases:

> [I]t is unusual to return to a study after the fact, lower the required significance level and declare its results to be supportive rather than unsupportive of the effect one's theory suggests should be present.
>
> However, this characterization masks the critical issue raised by the change in the statistical significance standard. The test of statistical significance used in these [EPA] studies answers the following question: *How large a chance, statistically speaking, are we willing to take that we accept existence of a passive-smoking effect when in fact a passive smoking effect does not exist?* In effect, EPA changed the standard from accepting a chance of two-and-a-half percent to accepting a chance of five percent.
>
> These studies do not have (and indeed *cannot* have) very precise estimates of exposure from environmental tobacco smoke. The data are based on interviews of the subjects or their relatives. If errors in measurement occur in a systematic way that is correlated with development of the disease, the effect would be to bias the results. An example would be if those individuals who developed lung cancer (or relatives of those individuals) remembered or perceived their exposure differently from those who did not develop the disease.
>
> Another concern is the possibility that some nonsmokers are actually current or former smokers and that such current or former smokers are more likely to be married to husbands that smoke. While EPA made some adjustment for this effect, it is not possible to correct precisely for this problem. That is, it remains possible that a relationship observed might reflect the effects of active rather than passive smoking.
>
> In addition, while EPA considered the presence of confounding factors in its evaluation of the studies, this issue is not laid to rest. If wives of smokers share in poor health habits or other factors that could contribute to illness that are not or cannot be controlled for, statistical associations found between disease and passive smoking could be incidental or *misleading*. This effect could presumably be correlated with exposure levels.
>
> These limitations of studies are often inevitable, but they impart *some degree of uncertainty* to the results, especially when relatively small risks are estimated.

Finally, there is the question of smoker misclassification due to the possibility that some women reporting themselves to be nonsmokers were actually current or former smokers. (Two reasons may be because of guilt about smoking or because they lied to their life insurance companies in order to get a lower rate.) As Gravelle notes, the EPA "adjusted" its mathematics to allow for this effect. But between the release of its first draft report in 1990 and the final 1993 report, the agency adopted a different formula recommended by A. Judson Wells, a consultant to the Occupational Safety and Health Administration, which lowered the adjustment for smoker misclassification and resulted in a higher relative risk for passive smoking.[62] Without this change, together with the lowering of the confidence interval, the EPA would have been unable to come up with the famous risk estimate of 1.19 (which even so, remains barely "significant").

2. Does It Really Matter?

No. Not a bit. Not in the slightest.

For one thing, most people have probably never heard of either of the two CRS reports, and even if they have heard of them are unlikely to have the technical knowledge needed to make much sense of them, much less the desire to try to.

But most important, and overriding everything else, is the fact that the belief that secondhand smoke is "a dangerous human lung carcinogen," as Waxman said, and a cause of all kinds of other human afflictions as well, has become firmly ingrained in popular thinking. That "secondhand smoke kills" is now "common knowledge." It has become so much a part of the accepted wisdom that I don't know what could change that perception, except maybe the passage of time and the emergence of a medical/scientific establishment more concerned with scientific integrity than obsessed with chasing the bogeyman of smoking.

THIS CHAPTER TO this point was written before the long-awaited decision in the tobacco industry's suit against the EPA was finally handed down. Yet even though that decision held in favor of the industry and embodied every criticism Rep. Bliley had made (but not too loudly) against the agency's secondhand smoke report and the devious means by which it had been arrived at, everything I said in the immediately preceding paragraph still holds. The decision won't change a thing.

On July 17, 1998, five years—*five years*—after the suit was filed, during which time the belief that secondhand smoke killed innocent bystanders became ever more firmly entrenched in the popular mind, Judge William Osteen of the U.S. District Court for the Middle of North Carolina vacated virtually all of the EPA's report.[63]

In a scathingly worded memorandum opinion, Osteen found that:

"EPA publicly committed to a conclusion before research had begun; excluded [the tobacco] industry by violating the [Radon] Act's procedural requirements; adjusted established procedure and scientific norms [by lowering the confidence interval—D.O] to validate the Agency's public conclusion, and aggressively utilized the Act's authority to disseminate findings to establish a de facto regulatory scheme intended to restrict Plaintiff's products and influence public opinion."

(The Radon Act, passed by Congress in 1986, established guidelines the EPA is supposed to follow in making health risk assessments for radon, asbestos and other potentially harmful environmental pollutants.)

Further, said Osteen:

"In conducting the ETS Risk Assessment, EPA disregarded information and made findings on selective information ["cherry picking" among studies—D.O.]; did not disseminate significant epidemiologic information; deviated from its Risk Assessment Guidelines; failed to disclose important findings and reasoning and left significant questions without answers . . . Gathering all relevant information, researching and disseminating findings were subordinate to EPA's demonstrating ETS a Group [A] carcinogen."

It was just as Bliley and other critics had claimed all along. The EPA established its conclusion first, then bent the rules and the evidence to try to validate it.

Again media reaction was predictable. *The Atlanta Journal-Constitution* did indeed report the decision on its front page of July 20, 1998 under the subheading: "Judge rejects secondhand cancer link." However, its headline, in type so large that it took up fully one-third the space of the entire story, was: "EPA says smoking bans stay." By so doing, in one stroke it minimized the importance of the decision and reassured readers that nothing was going to change. Not on that day or on any following day did the AJC print an editorial commenting on the decision. It was simply ignored.

It takes no imagination to guess what the reaction would have been—in this newspaper, in every other newspaper in America, on every television news broadcast, by every organ of the media—had Judge Osteen ruled the other way.

I found a few comments from other newspapers and from antismoking spokesmen like ASH's John Banzaf on the Web, and they all generally agreed—approvingly—that the decision changed nothing. And they're right, of course.

Businesses and city councils are not going to reverse their bans against smoking. Smoke-free restaurants are not going to permit smoking once again. Nonsmokers are not going to welcome smokers into their homes. Nonsmoking spouses are not going to stop nagging smoking spouses. Not in what remains of *my* generation's lifetime.

Wouldn't you think that antismoking groups would be glad that the evidence against second-hand smoke is far from conclusive? asks Bruce Herschensohn, a distinguished fellow at the Claremont Institute in Claremont, California, and a member of the board of advisors of the National Smokers Alliance. Wouldn't you think that if the health of others, including their own health, is really their concern, that they would hope "secondary smoke" is not harmful?

"Not at all," he writes. They want it to be a killer. That gives righteousness to their cause that, without such justification, is nothing more than dictating the choices of others. And they know it."[64]

That goes to the heart of the ETS issue and the whole antismoking movement itself. It is *control* over the behavior of others the antismokers want, and if it requires the perversion of science to accomplish that end, well, so much the worse for science.

I'LL CLOSE THIS chapter with another quote from John Luik's *Bostonia* article:

> The debate about Environmental Tobacco Smoke, though ostensibly a debate about smoking, is really a debate about much more than smoking. It is a debate about the legitimacy of perverting science and public policy on science in the interests of a particular ideology. It is a debate at bottom about the worth of a health paternalism that guarantees to leave all of us substantially less free but not less ill.

To which I will add two comments: Mr. Luik is a nonsmoker, and you'll never see his article reprinted in *Reader's Digest*.

Notes

1. Interview of the actor in the *Dallas Morning News*, August 17, 1986, Section E.

2. Susan Gilbert McGuire, "A Smoker's Wife." *Reader's Digest*, November 1995, p.35. From *The Chicago Tribune*.

3. National Smokers Alliance newsletter *NSA Voice*, November/December, 1996, p.3

4. "Absurdity Meets Resistance." Nation Smokers Alliance newsletter *The Resistance*, October 1997, p. 5.

5. *Philip Morris Magazine*, Fall 1991, p. 22.

6. "Dear Abby."'Happy smokers have no plans to kick the habit." *The Atlanta Journal-Constitution*, April 7, 1993, p. B2.

7. "Dear Abby." *The Atlanta Journal-Constitution*, August 9, 1993, p. B2.

8. Molly Ivins, "Blowing smoke over 'oppression.'" *The Atlanta Journal-Constitution*, August 6, 1994, p A14.

9. "Second-hand smoke becomes death sentence." *Breather's Digest*, February 1995. At www. seercom.com/airspace/bd295.

10. Ibid.

11. "Making a photograph lie." *The Tampa Tribune*, August 10, 1996; Joe Urschel, "Post office blows away history in a puff of smoke." *USA Today*, September 30, 1994. Both sources cited in personal communication from Martha Perske.

12. "NSA Takes on Book-of-the-Month Club; Charges Censorship." *The NSA Voice*, April 1995, p. 2.

13. "Paul Simon's cigarette airbrushed off cover of Old Friends box set." FORCES Georgia, at www.forces.georgia.org/national/oldfriends.html.

14. "Esther's Story: A Little Bit of Secondhand Smoke Can Go A Long Way." Posted on the World Wide Web by S.A.F.E. (Smokefree Air For Everyone) at www.pacificnet.net/~safe/story.html.

15. From Smoker's Home Page at www.tezcat.com/~smokers/alt_smokers.html#farrell.

16. Quoted by S.A.F.E. at www.pacific.net/~safe/news.html.

17. From FORCES Canada at www.forces-cdn.com/trash.htm.

18. Richard Kluger, *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris* (New York: Alfred A Knopf, 1996), p. 506.

19. John C. Luik, "Pandora's Box: the Dangers of Politically Corrupted Science for Democratic Public Policy." *Bostonia* magazine. No date given. Posted on the World Wide Web at www.forces.com/pages/pandora.htm. An associate of the Niagara Institute, Luik is a professor of philosophy and politics.

20. From www.tobacco.org/History/Tobacco—History.html.

21. Kluger, p. 495.

22. A.H. Lowrey and J. L. Repace, "Indoor Air Pollution, Tobacco Smoke and Public Health." *Science*, vol. 208 (1980), pp. 464-472. Cited in Bliley, Note 36 infra.

23. J. L. Repace and A. H. Lowrey, "A Quantitative Estimate on Nonsmokers' Lung Cancer Risk from Passive Smoking." *Environment International*, vol. 11 (1985), pp. 3-22. Also cited in Bliley.

24. *American Review of Respiratory Diseases* vol. l33 (1986), pp. 1-3. Quoted in Kluger, p. 498.

25. "The Health Consequences of Involuntary Smoking." A Report of the Surgeon General, U.S. Department of Health and Human Services, 1986, p. 13.

26. Ibid, page 10.

27. Kluger, p. 503.

28. Loc. cit.

29. Ibid, pp. 690, 691.

30. Ibid, p. 691.

31. Michael Gough and Steven Milloy, "EPA's Cancer Risk Guidelines: Guidance to Nowhere." Cato Institute Policy Analysis No. 263, November 12, 1996.

32. Editorial. "EPA shows need for smoking bans." *The Atlanta Journal-Constitution*, January 11, 1993, p. A10.

33. Matthew C. Hoffman, "Smoking Signals**,** Secondhand doubts." *The Washington Times*, April 5, 1994. Hoffman is a policy analyst for the Competitive Enterprise Institute.

34. Steven Milloy, "More on the Importance of Statistical Significance." At www.junkscience.com/news/emf/data-dredging.html.

35. Jacob Sullum, "Passive Reporting on Passive Smoke." *Forbes MediaCritic*, March 1994.

FORCES Canada has published a raft of similar comments from other scientists at www.forces-cdn.com/index.htm. A few of them (can they all be "tools" of the tobacco industry?):

"In epidemiologic research, relative risks of less than 2 are considered small and are usually difficult to interpret. Such increases may be due to chance, statistical bias, or the effects of confounding factors that are sometimes not evident." (Press release, U.S. National Cancer Institute, October 1994.)

"Small associations below 2.0 may be beyond the limits of reliable epidemiological inference." (J. Peto, 1992, International Agency for Research on Cancer [IARC], part of the World Health Organization.)

"In general, I think it's a general opinion, and my opinion, that if a relative risk figure goes below about three, then the significance of that result

becomes open to question. The relative risks we are talking about with ETS are well below three, and most of them well below two. If it was anything else but ETS I think people wouldn't bother with it at all. They wouldn't discuss it. The relative risks are far too low." (Professor John Robert Ashford, Managing Director of Exeter Health Information Services, commenting on a proposed Occupational Safety and Health Administration [OSHA] rule on Indoor Air Quality, 1995.)

"Differences in risk of 50% (relative risk of 1.5) are small in epidemiological terms and severely challenge our ability to distinguish whether it reflects cause and effect or whether it simply reflects bias." (Lynn Rosenberg, Boston University School of Medicine quoted in a press release from the U.S. National Cancer Institute, October 26, 1994.)

"Epidemiological studies in general are probably not able, realistically, to identify with any confidence any relative risks lower than 1.3 . . . " (Dr. Eugenia Calle, Director of Analytic Epidemiology, American Cancer Society, *Washington Post*, October 27,1994.)

"The statistical evidence does not appear to support a conclusion that there are substantial health effects of passive smoking." (Dr. Jane Gravelle et al., Senior Specialist in Economic Policy, Congressional Research Service, in testimony before the Subcommittee on Clean Air and Nuclear Regulation, Committee on Environment and Public Works, U.S. Senate, May 11, 1994.)

"The totality of data on ETS and lung cancer does not support the claim made in the draft EPA report that ETS is responsible for an increased incidence of lung cancer in the United States. There is no scientifically valid basis for conducting a risk assessment on ETS or classifying ETS as a known carcinogen or even probable human carcinogen." (Dr. W. Gary Flamm, Science Regulatory Services International, former director of the Office of Toxicological Sciences, U.S. Food and Drug Administration.)

" . . . It seems that the epidemiological database as it stands today does not support an association between ETS exposure and lung cancer. The workplace data reports no elevation in risk and the spousal exposure data reports either no increase in risk or an increase that is so small that it can be entirely accounted for by bias and confounding factors that have not been properly addressed in the studies." (Dr. Hitoshi Kasaga, Tokai University School of Medicine, Japan, in *Environmental Tobacco Smoke*, H. Kasuga, ed., Springer-Verlag, 1993, p. 84.)

"The ETS lung cancer epidemiological data provide no scientific basis for government regulation of smoking in the workplace." (Le Vois, M.E. et al., "Inconsistency Between Workplace and Spousal Studies of Environmental Tobacco Smoke and Lung Cancer." *Regulatory Toxicology and Pharmacology*, 1994.)

"The EPA has manipulated selected portions of the existing literature until it produced the desired result." (Kent Jeffreys, "Science, Economics, and

Environmental Policy: A Critical Examination," a research report by the Alexis de Tocqueville Institution, August 11, 1994.)

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41. "Smoking report goes to EPA panel with tobacco ties." *The Atlanta Journal-Constitution*, July 21, 1992, p.A5 . From the Associated Press.

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43. *Washington Times*, April 18, 1991, p. A3. Cited in Bliley.

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"[D]rawing conclusions from meta-analytic studies is like having your cake and eating it too." Ray Hyman, "Psychic Functioning: Claims vs. Reality." *Skeptical Inquirer*, March/April 1996, p. 24.

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57. Jane G. Gravelle and Dennis Zimmerman, "Cigarette Taxes to Fund Health Care Reform: An Economic Analysis." CRS Report for Congress No. 94214E, March 8, 1994.

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61. Quoted in *The Resistance*, a newsletter of the National Smokers Alliance, January 1998, p. 3.

62. Letter from A. Judson Wells to Steven Bayard, project officer for the EPA's environmental tobacco smoke study, September 28, 1990. Copy in possession of Martha Perske.

63. Order and Judgment in the United States District Court for the Middle District of North Carolina, Winston-Salem Division, re Flue-Cured Tobacco Cooperative Stabilization Corporation, the Council for Burley Tobacco, Inc., Universal Leaf Tobacco Company, Inc., Philip Morris Inc., R.J. Reynolds Tobacco Company and Gallins Vending Company, plainiffs, *v.* United States Environmental Protection Agency and Carol Browner, Administrator, defendants, 17 July 1998.

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