Cancer Institute or the American Cancer Society are no less suspect than the conclusions of scientists who are funded by the industry. Some researchers have received money from both sides. Whom do they try to please? The reality is that researchers whose results are useful to the tobacco companies will tend to receive industry grants and consulting fees, while researchers whose results are useful to the anti-smoking movement will tend to receive money from government agencies and voluntary health organizations. In this sense, the funding reflects the findings, rather than the other way around. It should be noted, too, that research funding from the tobacco industry generally comes without strings attached, and the studies are published in peer-reviewed journals. While such grants are increasingly controversial, the critics do not claim that the research itself is compromised. Rather, they worry that the industry is buying "innocence by association" or trying to distract attention from smoking as a cause of cancer by paying for studies of other factors.[8]

Nevertheless, I realize that some readers will want to know about funding sources, especially if a study's results seem congenial to the cigarette companies. I have taken an evenhanded approach to research funding in this book: When a paper notes a grant, whether it's from the industry or from an anti-smoking source, I include that information in the reference. But when I quote people, whatever their views on a given issue, I simply note their position, specialty, or affiliation; I do not provide a history of the grants they've received.

Following the money will always be easier than following a line of reasoning or examining a body of data, but this approach is completely antithetical to rational discourse. If (real or imagined) personal motives invalidate evidence and argument, then none of us has anything worthwhile to say, because we all have personal motives. I state mine plainly in the introduction: I oppose paternalistic policies on philosophical grounds. Activists, scientists, and bureaucrats may be driven by ideology; by a reluctance to admit error; by a hunger for power, publicity, or funding; or simply by a desire to reduce smoking and thereby improve "the public health." If we have independent reasons to believe that someone is shading the truth, these agendas can help explain why. But the motives themselves do not discredit the conclusions.

Sullum

Introduction

WITHOUT A DOUBT

If President Roosevelt knew what we know now about the dangers of tobacco, he would have quit smoking.

—Joseph W. Cherner, SmokeFree Educational Services, 1995

HOW DARE YOU?

When I was about ten years old, my father brought an old sign machine home from his furniture store. It was a big, heavy contraption with movable wooden and metal type. After setting the type and applying some gooey ink out of a tube, you would put a piece of cardboard on top of the letters and run a roller over it. One of the first signs I made with the machine was THANK YOU FOR NOT SMOKING. I produced several copies and distributed them around the house. I also hid all the ashtrays, which were there mainly for company. My father, who smoked cigars, rarely did so at home. Neither of my parents smoked cigarettes, but sometimes their visitors did. Not anymore, I had decided. About the same time, I began waging a passive-aggressive campaign against my father's cigars. When he dared light up in my presence, I would glare at him and cough. If we were in the car, I would ostentatiously roll down a window.

I was born in 1965, the year after the Surgeon General's Advisory Committee on Smoking and Health issued its landmark report concluding that "cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action."[1] I had never read the report, of course, but I grew up with its consequences. From

TV and school I learned that smoking was bad. So here I was, engaging in a little remedial action of my own. I'd like to say that I did it because I was genuinely concerned about my father's health or because I was especially sensitive to tobacco smoke. But the truth is, I was on a power kick. By condemning tobacco, I could demonstrate my moral superiority to adults, and they had no effective way to respond. What were they going to say? That my teachers and the government were lying? That smoking was OK?

Since adults are constantly setting limits for them, children jump at the chance to turn the tables. Try throwing out a bottle in front of a kid who's been taught that recycling is the key to saving the planet, and see what happens. During the same period when I was irritating my parents with my anti-smoking signs, I was also collecting signatures to save baby harp seals. Self-righteousness comes naturally to children (or so I like to think, when I reflect upon my obnoxious behavior).

The punishment for my early intolerance came twenty years later, when I was castigated by an anti-smoking activist during a tobacco policy debate on a Ft. Lauderdale radio talk show. Alan Landers, a former model for Winston cigarettes, was suing several tobacco companies for manufacturing the product he used to promote. Then in his fifties, Landers had tried his first cigarette when he was nine and had begun smoking heavily as an adult. He was diagnosed with lung cancer in 1988. "At what point did you realize that smoking was bad for you?" the talk show's host asked him. "I got lung cancer," Landers replied, "and heard the truth about how the tobacco industry, the cigarette companies, lie to you." He said the first surgeon general's warning, which began appearing on cigarette packages in 1966, did not impress him: "That label said, 'Cigarette smoking may be hazardous to your health.' Well, I lived in New York at the time. So is walking across the street. That meant nothing. From 1970 to 1984, the next label was, 'Warning: The surgeon general has determined that cigarette smoking is hazardous to your health.' Well, that doesn't say the truth, either. Now, 1984 to present, they finally came out and said, 'Surgeon General's Warning: Smoking causes lung cancer, heart disease, and emphysema.' . . . By the time I found out that it causes lung cancer, it was in 1984. I got my cancer in '88. It was too late."[2]

The host asked Landers about the many statements by scientists and government officials regarding the hazards of smoking. "That means nothing," he said. "That's announced like one time, or put in a newspaper. I didn't happen to see that. What means something is what they're putting on their labeling. . . . If I saw a pack of cigarettes and it said 'Addictive Poison,' I never would have smoked."[3] Landers's claim that he did not know about the link between smoking and lung cancer until 1984 is hard to believe; the hazards of smoking, especially the risk of lung cancer, had been widely publicized since the early 1950s. Thousands of scientific studies on smoking had been published, the most important of which were covered in the general press; the surgeon general had issued seventeen reports on the health consequences of smoking, beginning in 1964; and voluntary health organizations had been urging smokers to quit for decades through posters, pamphlets, and ads. In the late 1960s and early '70s, when Landers was hawking Winstons in magazine ads and billboards, anti-smoking public service announcements were aired frequently on radio and TV. Little kids like me got the message. It's hard to see how anyone could have missed it.

Since the hazards of cigarettes have long been common knowledge, I argued, smokers cannot reasonably blame the tobacco companies if they get sick as a result of their habit. Not surprisingly, Landers did not like this argument. "You know," he said, "you ought to be ashamed of yourself. Do you smoke? . . . Do you have any children? . . . What I'm trying to tell you is, we're not talking about the common cold. We're talking about lung cancer. Smoking-related illness kills half a million a year. . . . In the world, three million a year are dying. So how you could defend the cigarette companies is beyond me. It's killing people. We're murdering our children." A little later, after the host asked me who was publishing this book, Landers interjected, "Make money off the pain and suffering of others. That's really something. I don't know how you can live with yourself." I asked him what he meant. "You're defending the tobacco companies," he said. "They're merchants of death. Do you know what it's like to have lung cancer? . . . How dare you defend them!"[4]

How, indeed. Between the time of my precocious anti-smoking activism and my encounter with Landers, a couple of things happened that help explain why I no longer identify with the crusade for a smoke-

free society. As I grew up, I realized that something can be bad for you, raising your chance of disease or injury, yet also good for you, providing pleasure or relieving stress. I also realized that people have different tastes and preferences. For me, the rewards of smoking cigarettes have never justified the risks involved, but I'm sure a lot of smokers would have a hard time understanding why I like bungee jumping, a considerably safer activity. When I started giving serious thought to this sort of thing, it seemed to me that people should be allowed to decide for themselves which risks to take, as long as they don't pose a danger to others. This basic notion, I discovered, was part of a venerable tradition in political philosophy, one with which I felt an immediate rapport.

As John Stuart Mill famously put it, "The sole end for which mankind are warranted, individually or collectively, in interfering with the liberty of action of any of their number is self-protection. . . . The only purpose for which power can rightfully be exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant."[5] This principle rules out the use of coercion, which includes taxes and regulations as well as the criminal law, to discourage people from engaging in risky habits. With the freedom to make such choices, however, comes the obligation to accept responsibility for the consequences. And that Alan Landers seemed unwilling to do.

Under the circumstances, Landers's emotional response was understandable. He had recently suffered a grave illness, he did not know how long his cancer would be in remission, and he was intent on atoning for his work as a cigarette model. But if Landers got carried away, that does not explain why so many anti-smokers approach debates in a similar way. Indeed, the rhetorical techniques he used—the decontextualized death tolls; the gross exaggeration ("We're murdering our children"); the red herring questions ("Do you smoke? Do you have children? Do you know what it's like to have lung cancer?"); and, above all, the substitution of personal attacks for logical argument—are typical of the anti-smoking movement. This is not to say that every opponent of smoking is a raving fanatic. During the course of my research, I have encountered reasonable, fair-minded critics of the tobacco industry who understand that people who disagree with them are not necessarily in league with

the "merchants of death." Unfortunately, these are not the people who set the tone for the movement.

TO BE SURE

Among tobacco's opponents, citing "financial ties" to the industry is by far the most popular form of *ad hominem* attack, as I have learned from personal experience (see Author's Note). Such attacks reflect the unshakable certainty that many anti-smokers feel about the rightness of their cause. For some, the moral imperative to eliminate smoking is so clear that they assume anyone who opposes them must be collaborating with the tobacco companies. Others may not really believe this but are willing to pretend they do if it will help overcome obstacles to a smoke-free society. Either way, anti-smoking activists and public health officials rarely concede that there is any legitimate opposition to their agenda.

Alan Blum, a physician who has been an anti-smoking activist for twenty years, worries that the movement might be perceived as "a bunch of jerks . . . morally outraged, Carry Nation types. I think it's more sophisticated than that." At the same time, having indulged in some extreme rhetoric of his own over the years, he recognizes that the perception has some basis in fact: "Folks see evil, and you know how evil is—you want to go after it and slay it. But they don't see the people who are looking at evil and not objecting as much as they are. It's a very elite, liberal argument. . . . They're so absolutely certain of how right they are, and everybody else is wrong. Eventually, they wind up turning you off."[6]

Joseph W. Cherner, a successful bond trader who left Wall Street in 1989 to found SmokeFree Educational Services, nicely illustrated that attitude in an interview with the *New York Times*. "It's the only issue I know of where there aren't two sides—two intelligent sides," he said. "I have a comic-book mentality—I grew up with comic books—and I see this as good versus evil."[7] Cherner, who said he identifies with Spider Man in particular, has lobbied for smoking restrictions in New York City businesses, campaigned against a Marlboro billboard in Shea Stadium, and sponsored anti-smoking poster contests for children. He has dark, earnest eyes and a friendly but intense manner. Soon after meeting me at a radio studio where we debated tobacco policy, he asked me the

three big questions: Do you smoke? Do you have children? Have you ever seen someone die of emphysema? He seemed to be looking for an explanation of my puzzling failure to agree with him.

A similar sort of dismay was apparent in a 1994 editorial in the *Journal of the American Medical Association* (*JAMA*), coauthored by David Satcher, director of the U.S. Centers for Disease Control and Prevention, and Michael Eriksen, head of the CDC's Office on Smoking and Health. Despite all the evidence that smoking is dangerous, Satcher and Eriksen wrote, "we are still plagued by an entirely preventable problem, and this is the paradox of tobacco control."[8] Yet there is nothing paradoxical about the fact that people continue to smoke, unless you assume that there are no benefits to balance against the hazards. This does seem to be a governing assumption of the anti-smoking movement. As chairman of the Coalition on Smoking or Health, a joint project of the American Cancer Society, the American Heart Association, and the American Lung Association, Scott Ballin claimed, "There is no positive aspect to [smoking]. The product has no potential benefits."[9]

Many smokers, of course, would disagree. Journalist Christopher Hitchens says, "Cigarettes improve my short-term concentration, aid my digestion, make me a finer writer and a better dinner companion, and, in several other ways, prolong my life. So when you tread, tread softly—for you tread on my dreams."[10] *National Review* columnist Florence King writes, "I believe life should be savored rather than lengthened, and I am ready to fight the misanthropes among us who are trying to make me switch."[11] Similarly, Nader Mousavizadeh writes in the *New Republic,* "The issue, to put it perhaps a bit grandly, is the freedom of adult men and women to live and die as they choose. And who are these health-zealots anyway with their clinical sensibilities who presume such omniscience about the means and ends of the good life? What ever made them think that they are models for anything, except perhaps for the choice of a life bought at the cost of living?"[12]

Julie DeFalco, a policy analyst at a Washington think tank, notes that tobacco's opponents "are making a personal judgment—that a long life without cigarettes is better than a shorter life with cigarettes—and attempting to turn it into a law applicable to everybody. I and many other people like to smoke. We get unquantifiable, but real, benefits from

smoking. I like the entire ritual of lighting a cigarette, and I enjoy the first drag. Cigarettes are really nice when you feel stressed out. So this is to be a crime?"[13]

Tobacco's opponents typically dismiss such statements out of hand. "The argument is, 'They don't enjoy it; they just do it because they have to,' " says David Brenton, founder of the Smokers' Rights Alliance. "This assumes that people don't derive any pleasure at all from smoking."[14] As Ballin put it, "It's addictive, so people don't have the choice to smoke or not to smoke."[15] Hence, smokers who acknowledge the risks of their habit but cite countervailing rewards are dishonest or deluded, displaying the classic defense mechanisms of rationalization and denial. Sociologist Anne Wortham, herself a smoker, says tobacco's opponents believe that if you smoke, "you are in a state of false consciousness, because you are not aware of what is in your interests. It's the refusal to acknowledge people's capacity to make choices. You just define them out of the discourse. 'Addiction' says they can't even talk about their own likes and dislikes. We can decide for them."[16]

Participating in a discussion on CNN a few years ago, Christopher Buckley, author of the satirical novel *Thank You for Smoking*, suggested that "hectoring smokers to death" might backfire. NPR correspondent and fellow guest Susan Stamberg replied: "I say hector them to death is better than their dying of lung cancer. . . . And what's a government for if it doesn't step in and say, 'You can't commit suicide'?"[17] The late Oklahoma representative Mike Synar, who was one of the tobacco industry's leading critics in Congress, once lamented that "millions of smokers haven't accepted the fact that they should give it up."[18] If the need to stop smoking is a *fact,* there is no room for disagreement. A faith that can leap the is/ought gap so readily is a powerful force to contend with.

The U.S. Postal Service chose to avoid a confrontation with the faithful in 1994 when it released a twenty-nine-cent stamp featuring the early blues guitarist Robert Johnson. In the photograph on which the engraving is based (one of the few extant images of the enigmatic bluesman), Johnson has a cigarette dangling from his lips; in the stamp, the cigarette is gone. According to a postal service spokeswoman, an advisory committee recommended the modification "because they didn't want the stamps to be perceived as promoting cigarettes."[19] The inci-

dent might have been dismissed as an example of excessive caution by silly bureaucrats, but the postal service had good reason to worry that a stamp accurately depicting Johnson, cigarette and all, might prompt complaints from tobacco's opponents. The year before, Joe Cherner's SmokeFree Educational Services had taken out ads in *Daily Variety* criticizing Ron Howard, director of *Backdraft,* and Robert Redford, director of *A River Runs Through It,* for daring to depict important characters in their films as smokers. Never mind that some firefighters really do smoke or that Redford's movie was a period piece. Giving smokers such a prominent place in a major motion picture was just *irresponsible.* "We're not trying to restrict artistic freedom," Cherner said. "We're just saying, if it's not important to the role of the character, why help the tobacco industry kill people?"[20]

In 1995 similar protests greeted a proposal to adopt a silhouette of Franklin D. Roosevelt, with a cigarette in a holder protruding from his mouth, as the official symbol of Hyde Park, New York. "I wouldn't want Hyde Park to be seen as promoting a deadly habit," said Dutchess County health commissioner Michael C. Caldwell. "If President Roosevelt knew what we know now about the dangers of tobacco," Cherner asserted, "he would have quit smoking." Kevin Bergin, the town councilman who proposed the symbol, was bemused by the complaints. "Roosevelt with a cigarette was Roosevelt to a generation of people," he noted. "Do we try to be so politically correct that we end up rewriting history?"[21]

A good question. This business of falsifying historical images so they jibe with contemporary sensibilities has a totalitarian flavor to it. Writing in the *Washington Post* about the smoke-free Robert Johnson stamp, Charles Paul Freund noted that the governments of Albania and China retouched old pictures of Enver Hoxha and Mao Tse-tung, respectively, to eliminate cigarettes that were deemed undignified, while Adolf Hitler, a rabid anti-smoker, ordered Joseph Stalin's cigarette obliterated from an official photograph taken after the signing of the nonaggression pact between Germany and the Soviet Union.[22] Cherner's notion that art should conform to a political agenda—that filmmakers should be doing their part to help achieve a smoke-free society—also has disturbing precedents.

TERMS OF ENGAGEMENT

The vigilance against deviation from the correct portrayal of smoking is accompanied by absurd rhetorical excesses, even in supposedly sober scientific journals. *JAMA's* vociferousness on the issue of smoking, like Alan Landers's, may be an attempt to make up for past sins: The journal carried cigarette ads until 1953, and the AMA accepted research money from the tobacco industry in the '60s and '70s, during which decades activists accused the organization of inexcusable timidness on an important public health issue. Since the 1980s, however, *JAMA* has been second to none in its denunciations of tobacco. A 1986 editorial compared smoking-related deaths to Nazi genocide, calling for "a declaration of all-out war" to save "the victims of the tobaccoism holocaust."[23] A 1990 editorial, this one by a former CDC director, said tobacco executives and the advertising firms that work for them "daily make the decision to kill for money, to become 'hit men' on a colossal scale."[24] Picking up on the same theme in yet another *JAMA* editorial, then-secretary of health and human services Louis Sullivan called revenue from tobacco advertising accounts "blood money."[25]

Longtime anti-smoking activist Stanton Glantz, a professor at the University of California at San Francisco, has compared the tobacco companies to Timothy McVeigh, convicted of murdering 168 people in Oklahoma City. "The tobacco industry has killed 10 million Americans since 1964," he wrote in a 1997 *Los Angeles Times* op-ed piece. "No attorney general or politician even considered letting McVeigh cop a plea; the same should be true for the tobacco industry."[26] *New York Times* reporter Philip J. Hilts, who portrays himself as a moderate on smoking issues, nevertheless likens tobacco industry employees to "the guards and doctors in the Nazi death camps."[27] According to Texas Attorney General Daniel Morales, "History will record the modern-day tobacco industry alongside the worst of civilization's evil empires."[28]

Facing such an enemy, tobacco's opponents feel justified in using any weapon that comes to hand. "From my point of view," former surgeon general C. Everett Koop told the *Philadelphia Inquirer* in 1996, "anything that stops smoking is good."[29] Former AMA president Lonnie Bristow, who serves on the board of the National Center for Tobacco-

Free Kids, has called the fight against smoking a "black flag" battle, explaining, "During the Civil War, when some Union troops with black soldiers went into combat against Confederate troops, both sides would wave a black flag. This meant the opposite of a white flag—a fight to the death, with no surrenders, no prisoners. Mercy was neither expected nor given. That's what it's like fighting against tobacco interests."[30]

In reality, however, the anti-smoking movement is not fighting "tobacco interests" so much as smokers themselves, without whom the cigarette companies would not exist. The fraction of American adults who smoke has dropped from more than two-fifths in the 1960s to about one-quarter today, but the trend has been gradual and seems to have leveled off in recent years.[31] Meanwhile, tobacco's opponents, who initially emphasized education and persuasion, have turned to increasingly coercive measures, including punitive taxes, censorship, and government-imposed smoking bans on private property. The Food and Drug Administration is poised to take charge of tobacco regulation, and the authority it claims would allow a wide range of restrictions, including a partial or complete ban on cigarettes. Prohibition would be disastrous for the tobacco companies, of course, but the results would not be very pleasant for smokers, either (or for the rest of us, given the nasty side effects of creating a black market). Even private and state-sponsored lawsuits against cigarette companies have been aimed, in part, at their customers, who would have to pay higher prices—which tobacco's opponents hope will deter smoking—to cover the cost of damage awards or settlements.

The point, in short, is to make life harder for smokers so they will stop misbehaving. The pressure works at a practical level, making smoking more expensive and less convenient, and at a symbolic level, transforming what was once a mainstream habit into a shameful addiction. Bans on smoking in public places (meaning any building other than a private residence) operate at both levels, literally and figuratively pushing smokers out into the cold—a phenomenon satirized in those Benson & Hedges ads that show smokers congregating on airplane wings and the tops of trains.

One of my colleagues, Charles Paul Freund, works at home in Washington rather than put up with the inconvenience of a smoke-free office.

Back when smoking was still permitted in local restaurants, he would nevertheless refrain when he sensed that fellow diners might be disturbed. As complaints about secondhand smoke became more common, he also stopped smoking in other people's homes; recognizing that a guest might object even if the host did not, Freund would just step outside for a cigarette. "I don't have any problem not smoking around people who don't like it," he says. "I never have. What I object to are the idiotic things like smoking bans in open-air places such as stadiums. People who never used to care when I smoked now think that I'm shortening their lives, that it's a form of assault. It's simply not rational."[32]

Freund, who smokes between one and two packs a day, finds that certain kinds of smoking bans are easier to tolerate than others. The first time he took a long smoke-free flight, he expected an ordeal. Instead, the flight was just more boring than usual, without cigarettes to mark the passage of time. When he visits an office or someone's home, he will usually go without a cigarette for an hour or two. But in bars or other contexts involving drinking and conversation, he tends to smoke more frequently. During a dinner with the rest of *Reason*'s editorial staff in Los Angeles, where smoking in restaurants is forbidden, he left the table repeatedly to consume a quick cigarette on the sidewalk. He would make a joke each time he went out: "I think I'll go check the weather again." The ban did not change the reality of what he was doing—ingesting a psychoactive substance—but it changed its social significance. We could alter our consciousness with alcohol and remain inside, but Freund had to go outside to alter his consciousness with nicotine. Had he been allowed to light up at the table, he would have been just a guy smoking while talking to his friends over drinks. The ban made him seem more like an addict in need of a fix.

The cigar boom of the 1990s can be seen as a rebellion against this attempt to redefine smoking. Sales of premium cigars (costing more than a dollar each) rose 42 percent from 1989 to 1994, and overall cigar sales, which had been declining since 1970, rose 45 percent from 1993 to 1996.[33] The demand for some premium cigars outstripped supplies, with customers waiting months for delivery. Launched in 1992, the glossy magazine *Cigar Aficionado,* fat with ads and featuring celebrity smokers on the cover, has been a big success, inspiring imitators. In in-

creasingly smoke-free cities such as Los Angeles and New York, cigar banquets and cigar bars offer havens for smokers who can afford them. Rejecting the attempt to stigmatize smoking as low-class and anti-social, the new cigar smokers see it as sophisticated and convivial. Their mood is summed up by an ad campaign for Johnnie Walker Red Label scotch that shows a man sitting in a chair with a glass in one hand and a cigar in the other. The copy reads: "Big fat cigar. Glass of Red Label. Back whether they like it or not."

The Johnnie Walker slogan calls attention to the true nature of the crusade for a smoke-free society. It is an attempt by one group of people to impose their tastes and preferences on another—a point that is often obscured by focusing on the misdeeds of the tobacco industry. As I write, Congress is considering a nationwide settlement proposal under which the tobacco companies would cough up a ton of money and swallow a mass of humiliating requirements in exchange for protection against the vicissitudes of regulation and litigation. Among other things, the companies have agreed to pay what amounts to a huge fine ($368.5 billion) for the crime of selling cigarettes; have conceded the authority of the Food and Drug Administration (FDA) over tobacco products; have accepted sweeping restrictions on advertising and promotion; have endorsed a federal ban on smoking in most nonresidential buildings; have promised to finance a $500-million-a-year national media campaign aimed at discouraging consumption of their products; and have committed themselves, under the threat of further fines, to utterly unrealistic goals for reducing smoking by teenagers. Tobacco's opponents are complaining that the agreement does not go far enough.

Whatever Congress decides, the crusade for a smoke-free society will continue, because it is aimed at the behavior of individuals, not the behavior of corporations. Long before Philip Morris and R. J. Reynolds existed, the tobacco habit had plenty of detractors (see chapter 1). Initially condemned as an unsavory practice of savages, smoking quickly caught on in Europe and throughout the world, but attempts to suppress tobacco use, including cigarette bans in nineteen U.S. states early in this century, have been a recurring theme. The emergence of definitive scientific evidence that smoking is hazardous, discussed in chapter 2, has given a new impetus to anti-tobacco forces. According to contemporary

public health doctrine, the government has a right and a duty to discourage behavior that might lead to disease or injury, a principle that gives the anti-smoking movement a rationale for enlisting the state's assistance.

Given this country's tradition of limited government, however, most Americans are not prepared to accept "public health" as an adequate reason for joining the march toward a smoke-free society. Hence, tobacco's opponents have offered additional rationales, all designed to overcome suspicions of paternalism. They have argued that tobacco advertising is an insidious force that seduces people into acting against their interests (see chapter 3). They have said that smoking imposes costs on society that need to be recouped through special taxes (chapter 4). They have claimed that secondhand smoke poses a grave threat to bystanders and that smoking should therefore be confined to private residences (chapter 5). They have accused the tobacco companies of hiding the truth about smoking, thereby preventing their customers from making informed decisions (chapter 6). They have described nicotine addiction as a compulsive and possibly contagious illness, a portrayal that fits nicely with the public health mission to control disease (chapter 7). Often these arguments are combined with appeals to protect children, who are said to be especially vulnerable to advertising, secondhand smoke, and addiction. The best-funded anti-smoking group in Washington these days is the National Center for Tobacco-Free Kids, which played a key role in the negotiations that led to the nationwide settlement proposal. Former FDA commissioner David A. Kessler calls smoking a "pediatric disease," and who could be in favor of that?[34]

Since, as this book tries to show, none of these claims is very convincing, we are left with the argument that I understood and fervently adopted as a ten-year-old: You shouldn't smoke because it's bad for you. In the realm of public policy, the impulse behind this injunction takes the form of two complementary beliefs: that the government should suppress the use of hazardous drugs and that it should deter activities that impair "the public health." As I argue in the final chapter, the dangerous implications of these ideas extend far beyond tobacco.

Chapter 2

APPROPRIATE REMEDIAL ACTION

Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action.

—The Surgeon General's Advisory Committee on Smoking and Health, 1964

THE SURGEON GENERAL'S WARNING

As if working on a Saturday morning were not bad enough, the two hundred or so reporters who showed up at a State Department auditorium on January 11, 1964, for a press conference called by Surgeon General Luther L. Terry were held under guard and handed a 387-page government report. They had ninety minutes to digest *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service* before asking a bunch of scientists questions about it. If the pressure of the situation brought on the urge for a cigarette, the reporters had to seek refuge in the hallway or lobby; as newly posted signs made clear, smoking was forbidden in the auditorium.

The timing and tight security were intended to prevent a Wall Street panic and the spread of misinformation. Both concerns had been expressed by President John F. Kennedy during a press conference two years before in the same room. Asked about the hazards of smoking in May 1962, he had replied, "That matter is sensitive enough and the stock market is in sufficient difficulty without my giving you an answer which is not based on complete information, which I don't have."[1] A few weeks later, after examining material gathered by the Public Health

Service, Kennedy instructed Terry to go ahead with a plan he had proposed in April to appoint an Advisory Committee on Smoking and Health. After consulting with the tobacco industry, private health organizations, and several federal agencies, Terry picked ten distinguished scientists, none of whom had taken a public position on the health effects of smoking. The group held nine meetings between November 1962 and December 1963, reviewed more than seven thousand articles, and reported its findings two months after Kennedy's assassination.

"In view of the continuing and mounting evidence from many sources," the report said, "it is the judgment of the Committee that cigarette smoking contributes substantially to mortality from certain specific diseases and to the overall death rate." The committee found that "cigarette smoking is causally related to lung cancer in men" and that "the magnitude of the effect of cigarette smoking far outweighs all other factors." It noted that "the data for women, though less extensive, point in the same direction." Furthermore, "the risk of developing lung cancer increases with duration of smoking and the number of cigarettes smoked per day, and is diminished by discontinuing smoking." The panel also reported that cigarette smoking was the most important cause of chronic bronchitis and could lead to laryngeal cancer. It noted statistically significant, possibly causal, associations between smoking and esophageal cancer, bladder cancer, coronary artery disease, emphysema, peptic ulcers, and low birth weight. It said that men who smoked were, on average, about ten times as likely to die of lung cancer as men who didn't and that their overall death rate in a given year was 70 percent higher. Studies had also found higher mortality for female smokers, though the magnitude of the difference was unclear. The Surgeon General's Advisory Committee on Smoking and Health concluded, "Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action."[2]

Three decades later, almost everyone concedes that cigarette smoking is a serious health hazard. Indeed, even before the 1964 surgeon general's report, surveys found that most Americans associated cigarettes with cancer. Beginning in the 1930s and intensifying in the '50s, a stream of scientific reports had implicated smoking in lung cancer. The function of the surgeon general's advisory committee was not to discover any-

thing new but to ratify a growing scientific consensus. "They met in secret," Terry later wrote, "but there was no doubt about the conclusion they would reach because the scientific evidence against cigarettes was by that time overwhelming."[3] The accumulation of evidence through systematic research—especially large-scale epidemiological studies that examined the relationship between smoking and diseases that take decades to develop—elevated warnings about tobacco above anecdote, folklore, and superstition. It gave tobacco's opponents new credibility and added to their ranks. But it did not, by itself, indicate what the *government* should do about smoking, if anything. That is why Americans are still arguing about what, exactly, "appropriate remedial action" is.

Physicians had been suggesting a link between tobacco and cancer for centuries. Likewise, tobacco's opponents had been warning about the impact of smoking on the lungs at least since the time of James I. Yet it appears that no one put these two concerns together, suggesting a connection between smoking and lung cancer, prior to the twentieth century. That is mainly because lung cancer was hardly seen during the first four hundred years of tobacco use in the Western world. In 1912 the American pathologist Isaac Adler said, "Primary malignant neoplasms of the lung are among the rarest forms of disease." His search of the world medical literature turned up just 374 confirmed cases.[4] One reason lung cancer was so unusual is that it generally appears late in life. In 1900 life expectancy at birth in the United States was about forty-seven, compared to about seventy-six today.[5] Until relatively recently, people who might have developed lung cancer tended to die of something else first, often a viral or bacterial infection. When it did occur, lung cancer was probably often confused with tuberculosis. Thus, the control of infectious diseases increased both the likelihood that people would live to get lung cancer and the likelihood that it would be detected.

The most important development affecting lung cancer rates, however, was the increasing popularity of the cigarette. Other forms of tobacco involved either no inhalation of smoke (snuff, chewing tobacco) or relatively little (pipes, cigars). Cigarette smokers, on the other hand, typically inhale, regularly exposing their lungs to the products of tobacco combustion. Turn-of-the-century critics such as Charles Hubbell argued that inhalation made cigarettes more dangerous, and as early as

1912 Adler speculated that cigarettes might cause lung cancer. But the evidence for this hypothesis did not appear for several decades. The rise in U.S. cigarette consumption was paralleled by a dramatic increase in the lung cancer death rate, from about 1 per 100,000 in 1920 to 13 in 1950 (by 1990 it was more than 50).[6] Although longer life spans and better diagnosis accounted for some of this increase, it seemed clear that another factor was at work.

During the 1930s several researchers suggested that the factor was cigarette smoking. In a 1932 *American Journal of Cancer* article, William D. McNally, assistant professor of medicine at Rush Medical College in Chicago, said the tar (dark gunk) in cigarette smoke might account for the recent increase in the incidence of lung cancer. McNally failed, however, to induce cancer by applying tar to the backs of mice. Alton Ochsner, a lung cancer expert at the Tulane University School of Medicine, published papers in 1939 and 1941 that noted what he would later call "a distinct parallelism between the sale of cigarettes and the incidence of bronchogenic carcinoma."[7] In 1939 the German researcher F. H. Müller, who had also noted a rise in lung cancer, reported that of eighty-six patients with the disease, all but three smoked. Raymond Pearl, professor of biology at Johns Hopkins Medical School, took a broader approach in a 1938 *Science* article. In a sample of 6,813 subjects, Pearl found that 67 percent of the nonsmokers lived past sixty, compared to 61 percent of the moderate smokers and 46 percent of the heavy smokers.[8] A report in *Time* said Pearl's findings "should make tobacco users' flesh creep."[9]

SMOKING MORE, IN MODERATION

The research reports of the 1930s and '40s were not conclusive. It was still unclear whether smoking caused lung cancer and, if it did, what level of consumption posed a substantial risk. Raymond Pearl's results suggested that smokers had little to worry about if they didn't smoke *too much,* which corresponded neatly with the conventional wisdom of the time. As one physician put it in the *American Mercury* in 1943, "If you are in good health, and use tobacco moderately, you needn't worry much about your smoking."[10] Since people tend to define moderation by their

own behavior, the scattered warnings of the 1930s and '40s did not have a noticeable impact on smoking. After a three-year dip at the beginning of the Great Depression, per capita cigarette consumption rose from 1,245 in 1932 to 3,886 in 1952.[11]

As in the past, the war years were a period of dramatic growth in tobacco use, with double-digit percentage increases in 1941, 1942, 1943, and 1945. Like John J. Pershing before him, General Douglas McArthur emphasized the need to keep U.S. troops supplied with tobacco. Cigarette ads during World War II, like those during World War I, linked the product with patriotism and the boys in uniform.

In the hands and mouths of movie stars like Humphrey Bogart and Bette Davis, the cigarette became a pop culture icon, an all-purpose prop that could signify glamor, fun, seductiveness, power, courage, confidence, toughness, determination, thoughtfulness. This multiplicity of meanings reflects the versatility of tobacco, a drug that, depending upon dosage and context, can relieve boredom or lull anxiety, keep you alert or help you relax. Unlike many other psychoactive substances, nicotine does not cloud judgment or impair coordination; indeed, contrary to the claims of early cigarette opponents, it enhances performance at tasks that require concentration. Like coffee, cigarettes were affordable, combined mild psychoactive effects with taste and other sensations, and could be enjoyed in many different settings. It is hardly surprising that they became so pervasive. By the mid-1950s more than a quarter of American women and more than half of American men smoked cigarettes.[12]

Until 1950, Evarts A. Graham, a pioneering chest surgeon at Barnes Hospital in St. Louis, was one of them. That was the year that Graham and Ernst L. Wynder, a student at Washington University School of Medicine, published "Tobacco Smoking as a Possible Etiologic Factor in Bronchiogenic Carcinoma" in the *Journal of the American Medical Association.* Breaking their subjects into five groups, ranging from nonsmokers to chain smokers, Graham and Wynder found that 97 percent of 605 patients with lung cancer were at least moderately heavy smokers, compared to 74 percent of 780 patients without lung cancer. "The temptation is strong to incriminate excessive smoking, and in particular cigaret smoking, over a long period as at least one important factor in the striking increase of bronchiogenic carcinoma," they wrote. "In general it appears that the less a person smokes the less are the chances of cancer of the lung developing and, conversely, the more heavily a person smokes the greater are his chances of becoming affected with this disease."[13] Graham, who quit smoking after completing the study, died of lung cancer in 1957.

Other studies lent support to Graham and Wynder's hypothesis. The same issue of *JAMA* included a study of 1,650 patients admitted to Roswell Park Memorial Institute in Buffalo. A team of researchers led by Morton L. Levin of the New York State Department of Health found that lung cancer was more than twice as common among those who had smoked for twenty-five years or more than among other smokers or nonsmokers. At the Fifth International Cancer Congress in Paris later that year, both research teams, along with a third led by Alton Ochsner, emphasized the link between smoking and lung cancer.

Ochsner, an early proponent of the hypothesis, was by now convinced that cigarette smoking caused lung cancer. But he did not have an easy time persuading his colleagues. "Physicians are not of one mind on the reported link between smoking and lung cancer," the *New York Times* noted in an October 1951 story about an address that Ochsner gave to a group of cancer specialists in Detroit. "This was demonstrated here today in a smoke-filled auditorium." The *Times* reported that "cancer specialists in the audience continued to puff at their cigars and cigarettes" even as Ochsner blamed cigarettes for the recent sharp increase in lung cancer. As he recommended periodic chest X rays for smokers, "the doctors smoked relentlessly."[14]

A series of reports during the next few years made the link between smoking and chronic disease harder to ignore. In December 1952 two British researchers, Richard Doll and A. Bradford Hill, reported the results of a large-scale, four-year study in which they compared 1,465 lung cancer patients to an equal number of patients with other diseases, matched for age, sex, and region. Doll and Hill—who had reported preliminary results in 1950, several months after Graham and Wynder's article appeared in *JAMA*—found that the lung cancer patients were considerably more likely to be smokers and much more likely to be heavy smokers. They suggested that "the mortality from carcinoma of the lung

may increase in approximately simple proportion with the amount smoked."[15] In November 1953 Graham and Wynder reported that they had succeeded where William McNally had failed in 1932, producing skin cancer in laboratory mice by painting tar on their backs. Said Graham, "This shows conclusively that there is something in cigarette smoke which can produce cancer."[16]

At the Greater New York Dental Meeting in December 1953, researchers presented four reports implicating smoking as a cause of lung cancer and cardiovascular disease. Ochsner said he was "extremely concerned about the possibility that the male population of the United States will be decimated by cancer of the lung in another fifty years if cigarette smoking increases as it has in the past, unless some steps are taken to remove the cancer-producing factor in tobacco." Summarizing the findings of thirteen studies in various countries, Ernst Wynder concluded that "the prolonged and heavy use of cigarettes increases up to twenty times the risk of developing cancer of the lung." Two other researchers, one from the Mayo Clinic and one from Cornell, warned people with heart disease to abstain from smoking.[17]

In June 1954 the American Cancer Society announced preliminary results from a study that had tracked 187,766 men between the ages of fifty and seventy for two and a half years. The ACS had originally planned to present its findings in 1955, but according to the lead researcher, E. Cuyler Hammond, "We found cigarette smokers had so much higher death rates that we didn't think we could withhold the information another year." Hammond and his associate, Daniel Horn, reported that lung cancer deaths were three to nine times as common among smokers as among nonsmokers, while heart disease deaths were one and a half times as common. Death rates for other forms of cancer were higher as well, and mortality increased with the amount of smoking (a result confirmed in a study of forty thousand British doctors that Doll and Hill published about the same time in the *British Medical Journal*). Hammond and Horn concluded that "the associations found between regular cigarette smoking and diseases of the coronary arteries and between smoking and cancer reflect cause-and-effect relationships."[18] In a follow-up report the next year, they said the lung cancer death rate was much lower for ex-smokers than for current smokers.

This stream of well-publicized reports—the work of Ochsner, Wynder, and Graham was reported in a *Reader's Digest* article entitled "Cancer by the Carton," and the ACS study made the front page of the *New York Times*—had the sort of impact you might expect. The day after the December 1953 Greater New York Dental Meeting, at which Ochsner and Wynder had confidently asserted that smoking causes lung cancer, tobacco stocks, which had been declining for several weeks, took a sharp dip. Total cigarette consumption dropped for two consecutive years, 1953 and 1954. The only other time that had happened since the turn of the century was during the Great Depression.

SOOTHING SMOKERS' NERVES

The tobacco companies tried to reassure smokers in several ways. First, they questioned the evidence on the health effects of smoking. Early on, this was not so hard to do, nor was it unreasonable. The researchers themselves often used cautious language, described their findings as inconclusive, or noted the possibility of alternative explanations for the statistical association between smoking and lung cancer. In April 1953 John R. Heller, director of the National Cancer Institute, told a House of Representatives subcommittee that a causal link between smoking and lung cancer had not been established "to our satisfaction." Although "there is a very high correlation between heavy cigarette smoking and the occurrence of lung cancer," he said, "our . . . scientists seem to feel that there are some additional factors which we have not yet discovered or studied sufficiently which may have a bearing on this particular problem."[19] The American Cancer Society, which commissioned the Hammond and Horn study precisely because it considered the evidence inadequate, did not take a position on the issue until 1954. Even after the ACS report, some physicians and statisticians remained skeptical. A May 1955 edition of Edward R. Murrow's *See It Now* that focused on the topic was described as "almost mathematically divided between scientists who believe cigarette smoking is responsible for lung cancer and those who believe no cause and effect relationship has been established."[20]

In November 1953 Paul M. Hahn, president of the American Tobacco Company, condemned what he called "loose talk" in the press

about the health effects of cigarettes. He noted that "authorities themselves differ widely"; that correlation is not causation; that some scientists had suggested the rise in lung cancer might be due to other causes, such as air pollution; that researchers had not been able to induce lung cancer in laboratory animals by exposing them to normal concentrations of tobacco smoke; and that "no one has yet proved that lung cancer in any human being is directly traceable to tobacco."[21] He recalled that tobacco had been blamed, with little or no evidence, for almost every malady under the sun at one time or another. Thus, scientists who were concerned about the health effects of smoking had to contend with the suspicion engendered by the reckless claims of tobacco's previous opponents, from James I to Henry Ford. In April 1954 the industry released "A Scientific Perspective on the Cigarette Controversy," a collection of statements by thirty-six cancer experts who agreed that the case against cigarettes was not yet conclusive.

This defensive posture was a striking change from the blithe reassurances that tobacco companies had been offering their customers for decades. In 1926 Lorillard introduced its Old Gold brand with the slogan "Not a cough in a carload." In 1935 R. J. Reynolds ads for Camels claimed, "They don't get your wind," and called them "so mild . . . you can smoke all you want." A 1949 ad announced, "Not one single case of throat irritation due to smoking Camels!" The claim was based on a "test" in which smokers were examined once a week while smoking "Camels—and *only* Camels—for 30 consecutive days." The impression of healthfulness was reinforced by the familiar slogan "More doctors smoke Camels than any other cigarette."[22] A 1952 Liggett & Myers ad offered a broader guarantee: NOSE, THROAT, AND ACCESSORY ORGANS NOT ADVERSELY AFFECTED BY SMOKING CHESTERFIELDS.[23] The claim was based on a similarly rigorous six-month study. But from the mid-1950s on, the tobacco companies generally avoided such sweeping claims—which, in light of the emerging evidence, would have invited breach-of-warranty lawsuits. Instead of asserting that their product was innocent, they insisted that it had not been proven guilty—a position that became increasingly untenable over the years.

In addition to criticizing the existing evidence, the tobacco companies said they were sponsoring independent research to help settle the

issue. "We are confident that long-range, impartial investigation and other objective research will confirm the view that neither tobacco nor its products contribute to the incidence of lung cancer," American Tobacco president Paul M. Hahn said in November 1953.[24] In January 1954 nine tobacco companies, together with groups representing growers and distributors, announced the formation of the Tobacco Industry Research Committee—later renamed the Council for Tobacco Research (CTR)—in newspaper ads throughout the country. Under the headline A FRANK STATEMENT TO CIGARETTE SMOKERS, they said, "We believe the products we make are not injurious to health." Still, "We accept an interest in people's health as a basic responsibility, paramount to every other consideration of our business." Guided by a panel of independent scientists, TIRC would allocate industry funding to researchers looking into "all phases of tobacco use and health."[25]

From the beginning, TIRC was viewed with suspicion. As *Christian Century* commented shortly after the announcement, "It is impossible for any research which they set up and ultimately control, whatever the eminence of its staff and advisory committee, to convince the public that it is telling the truth, the whole truth and nothing but the truth."[26] Litigation would later reveal that some of the CTR's funding, reportedly less than 10 percent, went to "special projects" chosen by industry executives and lawyers.[27] These projects, which included literature reviews and research on other causes of the diseases associated with smoking, were intended to bolster the industry's position in product liability suits and regulatory controversies. But most of the CTR grantees were selected by a panel of prominent scientists, and they were free to publish their research regardless of the results.

Contrary to the popular notion that industry-sponsored research is inevitably self-serving, the results were not always congenial to the cigarette companies. A 1958 study found that "cigarette smoke condensate is a weak mouse skin carcinogen." A 1961 autopsy study concluded that "a history of cigarette smoking is significantly related to the incidence of carcinoma." A 1963 study found that smokers suffered coronary artery disease earlier and coronary occlusion more often than nonsmokers. A 1965 study said women who smoked during pregnancy had lighter babies and were more likely to give birth prematurely.[28] The most dra-

matic example of industry-funded research that did not turn out the way the tobacco companies might have liked was a fourteen-year project managed by a committee of the American Medical Association. Completed in 1978, it cost the industry $15 million, and it confirmed the role of cigarette smoking in lung cancer and heart disease.[29] The findings of such studies should give pause to anyone who believes that tobacco money automatically taints research.

Still, the tobacco companies hoped that their ongoing funding of research would help create the impression that the connection between smoking and disease remained controversial. As Ernest Pepples, vice president and general counsel at Brown & Williamson, privately put it in 1976, "The significant expenditures on the question of smoking and health have allowed the industry to take a respectable stand along the following lines—'After millions of dollars and over twenty years of research, the question about smoking and health is still open.'"[30]

The third prong of the industry's response to the cancer scare was to push filter-tipped and king-size brands as safer alternatives to standard cigarettes. (The longer brands were supposed to be healthier because the extra tobacco served as a filter.) This was a tricky matter, since the tobacco companies were not conceding that there was anything unsafe about regular cigarettes. A 1951 Brown & Williamson ad simply reported that Viceroy king-size filtered cigarettes yielded less tar and nicotine than other brands. "When a filter tip cigarette is desired," it said, "Viceroy's double-filtering action can be counted upon for a significant reduction in nicotine and tars. At the same time, however, the comforts of full smoking satisfaction can still be enjoyed." Except for a reference to "a report to doctors—published in leading medical journals," there was no indication of *why* a filter tip might be desired.[31] But sales of Viceroys, then the only major brand with a filter, jumped by more than 50 percent between 1950 and 1951.[32]

Lorillard introduced a filter-tipped brand (Kent) in 1952 and was followed by R. J. Reynolds (Winston) and Liggett & Myers (L&M) in 1953 and Philip Morris (Marlboro) in 1954. Filtered brands accounted for 1 percent or less of the market in 1950, but their share rose to 42 percent by the end of the decade. By the early '60s most of the cigarettes sold in the United States were filtered, and by the '80s their share was

more than 90 percent.[33] Ads for Kent, the fifth largest cigarette brand in the country by 1958, were relatively candid about the intended function of its amazing "Micronite" filter. Among the twenty-seven leading brands, a 1957 ad claimed, "One gives sensitive smokers far greater health protection than any other. This cigarette is Kent with the Micronite Filter—and the only question is whether *you* need Kent's extra health protection."[34] (Ironically, the original Micronite filter contained asbestos.) Although this pitch was ostensibly aimed only at "sensitive" consumers ("at least one third of this country's smokers"), it implicitly acknowledged that cigarettes can be harmful, something the cigarette companies were loath to admit explicitly.

Despite the internal inconsistencies, the industry's three-prong strategy apparently worked. Total and per capita cigarette consumption rebounded after 1954 and continued to rise for another decade. But the strategy locked the cigarette companies into a defensive, wait-and-see position that ultimately destroyed their credibility and, along with it, the public's good will. Probably more than anything else, this refusal to concede the well-established hazards of smoking has made the cigarette business the most reviled and distrusted industry in America.

In 1954 Philip Morris vice president George Weissman declared, "If we had any thought or knowledge that in any way we were selling a product harmful to consumers, we would stop business tomorrow."[35] In 1986—after more than three decades and thousands of studies, including animal and autopsy research that confirmed the findings of epidemiologists—R. J. Reynolds President Gerald H. Long said: "If I saw or thought that there were any evidence whatsoever that conclusively proved that, in some way, tobacco was harmful to people, and I believed it in my heart and my soul, then I would get out of the business and I wouldn't be involved in it. Honestly, I have not seen one piece of medical evidence that has been presented by anybody, anywhere that absolutely, totally said that smoking caused the disease or created it."[36] What began as an understandable reluctance to accept the early evidence hardened into a demand for 100 percent proof, a demand that can never be satisfied in a world of uncertainty.

MAKING IT OFFICIAL

Between 1950 and 1963 researchers published more than three thousand articles on the health effects of smoking. In 1957 Surgeon General Leroy Burney said, "The Public Health Service feels the weight of the evidence is increasingly pointing in one direction: that excessive smoking is one of the causative factors in lung cancer." Two years later, he said, "The weight of evidence at present implicates smoking as the principal factor in the increased incidence of lung cancer." In 1962 Britain's Royal College of Physicians issued a report that said, "Cigarette smoking is the most likely cause of the recent world-wide increase in deaths from lung cancer." The report also concluded that smoking contributes to bronchitis; aggravates ulcers; probably raises the risk of dying from heart disease; and may be a factor in cancer of the mouth, pharynx, esophagus, and bladder. Luther L. Terry, Burney's successor, cited the British report later that year when, at the urging of several private health organizations, he proposed the appointment of an advisory committee to study the issue.[37]

The committee's report, released on January 11, 1964, made front-page headlines throughout the country and was featured prominently on news broadcasts. Although its conclusions came as no surprise to Terry or to others familiar with the research, they had a noticeable impact on the country's smokers. Cigarette sales fell immediately. In New York State, cigarette tax revenue for January was about 5 percent less than in January 1963, and February's total was down 18 percent from the year before.[38] Nationwide, per capita cigarette consumption fell 3.5 percent between 1963 and 1964. (By comparison, consumption dropped 2.8 percent and 6.1 percent, respectively, in the cancer scare years of 1953 and 1954.) Per capita consumption rose a bit in 1965 and 1966, dropped for four consecutive years, and rebounded slightly in the early 1970s. But it never returned to the 1963 peak of 4,345, and in 1974 it began a steady decline that continued for two decades. In 1966, about 43 percent of American adults regularly smoked cigarettes; today about 25 percent do.[39]

The report alone did not accomplish all of this. But it marked the beginning of the most concerted, sustained, and successful effort in history

to discourage the use of tobacco. The first step was to publicize the findings of the surgeon general's advisory committee. One week after Terry's press conference, the Federal Trade Commission announced that it planned to require health warnings on every cigarette package and advertisement. Congress superseded FTC action with the Cigarette Labeling and Advertising Act of 1965, which required the warning "Caution: Cigarette Smoking May Be Hazardous to Your Health" on all cigarettes packages (but not ads) as of January 1, 1966. The wording, milder than what the FTC had proposed, resulted from industry lobbying and the influence of legislators from tobacco states. To protect manufacturers from a multiplicity of state and federal regulations, the law prohibited any other health warning. The Public Health Cigarette Smoking Act of 1969 (actually passed in 1970) required a new, more confident, message: "Warning: The Surgeon General Has Determined that Cigarette Smoking Is Dangerous to Your Health." After the expiration in June 1971 of the moratorium imposed by the law on FTC action, the agency threatened to file complaints against cigarette companies for failing to include health warnings in their ads. In March 1972 the industry agreed to use the standard surgeon general's warning in advertisements as well as on packages.

By 1981 the FTC had decided that the familiar warning was no longer having any impact, and it recommended a series of specific, rotating labels. Congress adopted this basic idea in the Comprehensive Smoking Education Act of 1984, which took effect in October 1985 and established the four messages now in use, each preceded by the phrase "SURGEON GENERAL'S WARNING": (1) "Smoking Causes Lung Cancer, Heart Disease, Emphysema, and May Complicate Pregnancy"; (2) "Quitting Smoking Now Greatly Reduces Serious Risks to Your Health"; (3) "Smoking by Pregnant Women May Result in Fetal Injury, Premature Birth, and Low Birth Weight"; (4) "Cigarette Smoke Contains Carbon Monoxide."

Paradoxically, these ubiquitous messages about the hazards of smoking encouraged the tobacco companies to continue questioning those hazards. No one buying cigarettes after January 1, 1966, could reasonably claim to be unaware that smoking is a risky practice, regardless of what tobacco company executives might say. Furthermore, the courts

have generally held that awarding damages for smoking-related diseases to plaintiffs who claim cigarette warnings are inadequate would, in effect, impose additional labeling requirements, which are forbidden by federal law. Hence, the cigarette companies decided there was little risk of liability in continuing to dispute the health hazards of smoking. On the other hand, a sudden reversal of their position would make it easier for plaintiffs to prevail and would invite charges that the industry had been lying to the public for years. As it turned out, however, sticking to Plan A did not stop plaintiffs from accusing the tobacco companies of a conspiracy to deceive consumers. Quite the contrary. (See chapter 6.)

In August 1964 the Council for Tobacco Research released a seventy-one-page booklet summarizing the findings of 350 reports on research it had funded during the previous decade. Clarence Cook Little, the former managing director of the American Cancer Society who served as the council's scientific director, said the studies had found little evidence to support a causal link between smoking and lung cancer, heart disease, or peptic ulcers. But he expressed the hope that continued research funded by the CTR, private health organizations, and the federal government would eventually resolve such issues. Testifying before the House Subcommittee on Health and the Environment thirty years later, the chief executives of the major tobacco companies were still reserving judgment. Asked whether smoking causes lung cancer, heart disease, emphysema, bladder cancer, stroke, or low birth weight, R. J. Reynolds CEO James W. Johnston answered "It may" to each question. Philip Morris CEO William Campbell agreed that a causal connection between smoking and lung cancer remained unproven. Lorillard CEO Andrew H. Tisch went further, saying he did not believe smoking causes lung cancer.[40]

Lately cracks have developed in this stonewall. In March 1997, as part of a settlement with the attorneys general and plaintiffs' lawyers suing the industry, the Liggett Group became the first tobacco company to concede publicly that cigarettes can cause cancer, heart disease, emphysema, and other illnesses. The other companies, in a deal announced three months later, did not offer a Liggett-style confession. But they did acknowledge "a consensus within the scientific and medical communities that tobacco products are inherently dangerous and cause cancer,

heart disease and other serious adverse health effects." They also agreed to stronger warning labels, including "Smoking can kill you."[41] In pretrial testimony later that summer, Philip Morris Companies chairman Geoffrey Bible speculated that over several decades perhaps one hundred thousand Americans "might have" died from smoking. The next day, RJR-Nabisco chairman Steven F. Goldstone said, "I have always believed that smoking plays a part in causing lung cancer. What the role is, I don't know, but I do believe it."[42] Even before the settlement agreement, Philip Morris and R. J. Reynolds were tacitly acknowledging what Liggett said explicitly. In a 1995 interview, Philip Morris attorney Michael York told me it's "totally false" to say that "cigarette companies deny that smoking [poses] a risk of disease." He later told *Time,* "You'd have to be living under a rock not to know there are risks associated with smoking."[43] In May 1997, RJR senior vice president Daniel Donahue, commenting on an industry victory in court, referred to the "well-known risks of the use of this product."[44]

THE BODY COUNT

Based on data from a large prospective study conducted by the American Cancer Society from 1982 to 1988, the 1989 surgeon general's report offered estimates of the risks facing cigarette smokers. Over all, smokers in the ACS study were roughly twice as likely to die during the study as nonsmokers. Among men over the age of thirty-five, smokers were about 22 times as likely to die of lung cancer as nonsmokers; 27 times as likely to die of lip, oral, or pharyngeal cancer; 10 times as likely to die of chronic obstructive lung disease and cancer of the larynx; 8 times as likely to die of esophageal cancer; and twice as likely to die of coronary heart disease and stroke. The risk ratios for women were in the same ballpark, except for most of the cancers, where their rates lagged behind the men's. These disparities probably reflect historical differences in smoking behavior.[45]

By combining the risk ratios from the ACS study with information about smoking prevalence and mortality from specific causes in the general population, the surgeon general's 1989 report estimated smoking-attributable deaths for 1985. According to those figures, smoking ac-

counted for 87 percent of lung cancer deaths (106,000), 82 percent of deaths from chronic obstructive lung disease (57,000), 21 percent of deaths from coronary heart disease (114,000), and 18 percent of stroke deaths (27,500). After adding in several other smoking-related causes of death, the total was 390,000.[46] In 1993, using similar methods, the Centers for Disease Control and Prevention estimated that smoking-attributable deaths in 1990 totaled 419,000, about 20 percent of all deaths.[47]

Tobacco's opponents, some of whom use higher numbers than the federal government, like to quantify the impact of smoking because it helps dramatize the issue. In her 1984 book *Smoking Gun: How the Tobacco Industry Gets Away with Murder,* Elizabeth Whelan, president of the American Council on Science and Health, writes, "If every single day two filled-to-capacity jumbo jets crashed—killing all on board—the death toll (about 212,000) would not approach that accounted for each year by cigarette smoking."[48] Journalist Larry C. White, in his 1988 book *Merchants of Death,* says, "Smoking has killed more Americans than have died in all the wars against our enemies from the British to the Japanese."[49] In a 1990 editorial in the *Journal of the American Medical Association,* Louis Sullivan, then secretary of Health and Human Services, offered a different war comparison: "The number of Americans who die each year of diseases caused by smoking exceeds the number of Americans who died in World War II."[50] In the same issue of *JAMA,* former CDC Director William H. Foege said, "It is quite predictable that in the coming years the annual global death toll of tobacco will equal the total death toll of the Holocaust in Nazi Germany."[51] The epidemiologist R. T. Ravenholt, in a 1985 paper offering his own estimate of the deaths caused by tobacco use, declared that "only the unquantifiable threat of nuclear annihilation poses a greater threat to health and life."[52]

Despite their rhetorical usefulness, smoking mortality estimates should be approached with caution. They are based on epidemiological research with samples that are not representative of the general population, and they do not take account of confounding variables—differences between smokers and nonsmokers (aside from tobacco use) that might affect disease rates. For example, smokers tend to drink more, eat poorer diets, exercise less, earn lower incomes, and engage in more hazardous occupations than nonsmokers. A 1992 Royal Society study estimated that "possibly between 10% and 20%" of the deaths attributed to smoking are in fact due to confounding variables.[53] Other researchers have put the percentage higher.[54]

However accurate the numbers, the emphasis on total deaths is misleading. The rhetoric of tobacco's opponents implies a rough equivalence between a sixty-five-year-old smoker who dies of lung cancer and a forty-year-old businessman killed in a plane crash, a nineteen-year-old soldier shot in the trenches of World War I, or a child murdered by the Nazis at Auschwitz. But there is a big difference between someone who dies suddenly at the hands of another person or in an accident and someone who dies as a result of a long-term, voluntarily assumed risk. Aside from the clear moral distinctions—which tobacco's opponents too often ignore—there is the issue of timing. On average, the people who die from smoking-related diseases lose far fewer years than people who die in plane crashes, wars, or acts of genocide. These points tend to be lost in discussions of smoking, where the body count is all that matters.

Joe Califano, Jimmy Carter's secretary of health, education, and welfare, had the body count in mind on January 11, 1978, when he declared smoking "Public Health Enemy Number One." Harking back to Jesuit priest Jakob Balde's admonition in 1658, Califano said, "People who smoke are committing slow-motion suicide."[55] Or as he later put it in his memoirs, "The cigarette industry sells a product that has killed more Americans more painfully—through heart disease, lung cancer and choking to death from emphysema—than have all our wars and all our traffic accidents combined."[56] A former three-pack-a-day smoker who liked to tell the story of how he kicked the habit as a birthday present to his eleven-year-old son, Califano recommended an increase in the federal cigarette tax, a ban on smoking aboard airplanes, more funding for anti-smoking research and education, restrictions on smoking in federal buildings, and stronger warning labels.

Most of the points in Califano's list were not under his control, but he did testify before Congress about the hazards of smoking; restrict smoking in his department's buildings; and obtain more money for the National Clearinghouse for Smoking and Health, which he moved from Atlanta (home of the Centers for Disease Control) to Washington and

renamed the Office on Smoking and Health. He held press conferences to highlight the dangers of smoking, wrote letters to every school superintendent in the country to emphasize the importance of teaching children about smoking and health, and arranged prominent press coverage for the release in January 1979 of the fifteenth-anniversary surgeon general's report.

Anti-smoking activists thought Califano's campaign was mostly flash. One critic called it "a very weak program, since most of its elements are merely suggestions."[57] Another, writing in the *Washington Monthly,* accused Califano of "presenting nearly nothing as if it were a bombshell." He speculated that the HEW secretary was hungry for attention: "Califano is one of the press-happiest fellows in a town where the philosophy is, 'I'm in the papers, therefore, I exist.'"[58]

Still, Califano's preaching aroused considerable hostility. In a letter to the *New York Times,* a Boston physician recommended that the portly bureaucrat set an example for the country by going on a diet. "Let us not forget that heart disease is a major killer of Americans," he wrote, "and obesity is a risk factor in the genesis of heart disease."[59] After North Carolina Governor Jim Hunt invited Califano for a visit so he could see how important tobacco was to the state, Representative Charlie Rose, a North Carolina Democrat, said, "We're going to have to educate Mr. Califano with a two-by-four, not a trip." When Califano criticized cigarette advertising, saying it was aimed at convincing young people that "smoking is glamorous, adult, and sexually attractive," a tobacco company executive called him "a silly ass." Anti-Califano bumper stickers ("Califano Is Dangerous to My Health") and billboards ("Califano Blows Smoke") started appearing, courtesy of the tobacco companies.[60]

In July 1979, when President Carter fired Califano along with two other Cabinet members, the HEW secretary cited "friction" with the White House staff and Carter's need "to get the Cabinet ready for the 1980 election."[61] Some observers took this to mean that the president was concerned about political problems in the South caused by Califano's anti-smoking efforts and his push to desegregate state universities. During an August 1978 visit to North Carolina, Carter had joked: "I had planned today to bring Joe Califano with me. But he decided not to come. He discovered that not only is North Carolina the No. 1 tobacco-producing state, but that you produce more bricks than anyone in the nation as well."[62] The South was not the only place where Califano made enemies. *Newsweek* said he had "perhaps the biggest ego in Jimmy Carter's Cabinet," while *Science* noted, "He made enemies because he carried out his duties in an aggressive way that nearly always cast his adversaries as moral inferiors."[63] It's not clear how important a role Califano's vocal opposition to smoking played in his dismissal, but it certainly didn't help.

Five years later, when Surgeon General C. Everett Koop called for "a smoke-free society by the year 2000," the reaction was much more subdued, perhaps because he had considerably less power than Califano and offered no specific policy proposals. Koop announced the goal at a meeting of the American Lung Association (ALA) in May 1984, and he did not say exactly what he meant by "a smoke-free society."[64] In December 1985 he told the *New York Times* that "what I mean is not the complete absence of smoking, but a society in which you will not find people smoking in the presence of people who don't want it."[65] He repeated this explanation in *Reader's Digest* two years later and in his memoirs, published in 1991.[66]

Yet "a smoke-free society" was almost universally understood, naturally enough, to mean a society without smoking. In his speech to the ALA, Koop did discuss private and government bans on smoking in certain locations, and he urged nonsmokers to demand more such restrictions. His main focus, however, was reducing cigarette consumption, primarily through educational efforts by physicians, the media, civic groups, and professional organizations. It was implausible, of course, to suggest that more than fifty million Americans could be persuaded to stop smoking in a decade and a half. (The *New York Times,* in a favorable editorial, called it "Surgeon General C. Everett Koop's impossible dream."[67]) But that is what most people took Koop to be saying.

This interpretation of the surgeon general's speech was adopted not only by newspapers and general interest magazines but by specialized publications such as *Alcoholism and Drug Abuse Week* and the CDC's *Morbidity and Mortality Weekly Report.*[68] Koop himself frequently used *smoke-free society* in the broader sense, as in his foreword to a 1988 book on the tobacco industry. Noting that "approximately fifty-three million

Americans still smoke," he wrote, "There's still a very big job left to do. I assure you that the U.S. Public Health Service and its surgeon general—I and whoever comes after me—will do whatever we can to make the dream of a smoke-free society come true."[69]

Koop's inconsistent use of the slogan reflects an ambiguity in the drive for bans on smoking in stores, offices, restaurants, bars, theaters, stadiums, parks, taxis, and other "public places." Promoted in the name of "nonsmokers' rights," such restrictions also serve to reduce cigarette consumption by making it less convenient and less socially acceptable. As chapter 5 shows, tobacco's opponents seek bans on smoking to discourage the habit, not just to shield bystanders from secondhand smoke. Hence, achieving a smoke-free society in the narrow sense (no smoking in public) is part of the strategy to achieve a smoke-free society in the broad sense (no smoking at all).

Koop's millenarian vision was consistent with his style as surgeon general. A distinguished pediatric surgeon who attracted Ronald Reagan's attention through his conspicuous anti-abortion efforts, Koop was frequently compared to an Old Testament prophet. Noting that friends described him as "a man with missionary zeal and a hefty ego to match," a glowing 1986 *People* profile said, "Koop has always lived as if he were on a mission from God."[70] A tall, hefty fellow with an authoritative voice, metal-framed glasses, and a silver Mennonite-style beard, Koop attracted attention (and a fair amount of ridicule) by wearing the gold-braided uniform that goes with the surgeon general's honorary rank of vice admiral. "I put it on immediately," he explains in his memoirs, "because I felt it would help to reestablish the languishing authority of the Surgeon General and revive the morale of the Commissioned Corps of the United States Public Health Service. There is something about a uniform."[71]

An evangelical Christian who emphasized the importance of faith in his career, Koop brought a quasi-religious certainty to what he called "the anti-smoking crusade."[72] So far as he was concerned, smoking was an unmitigated evil. In a dispute with Defense Secretary Caspar Weinberger over the sale of discounted cigarettes at military bases, Koop asked, "How could the removal of cigarettes be viewed as a reduction of benefits, when the only benefit would be a lifetime of illness or early

death?"[73] During his eight years as surgeon general, Koop oversaw an impressive series of reports on tobacco-related topics: cancer, cardiovascular disease, chronic obstructive lung disease, smoking in the workplace, secondhand smoke, smokeless tobacco, nicotine addiction, and the impact of anti-smoking efforts. Like Califano, he condemned tobacco advertising for seducing children, and he testified before Congress in favor of a ban. He also supported the switch from the old surgeon general's warning for cigarettes to the current system of four rotating messages. At Koop's urging, the Coalition on Smoking or Health developed a twelve-year anti-smoking curriculum designed to ensure that the high school class of 2000 would be "smoke-free." Like George Trask and Lucy Page Gaston, Koop toured the country, giving anti-smoking speeches and leading schoolchildren in a no-smoking pledge. To adults he gave buttons that announced, THE SURGEON GENERAL *PERSONALLY* ASKED ME TO QUIT SMOKING. A companion button declared, AND I DID.

SMOKING AS A DISEASE

Califano and Koop, like most contemporary opponents of tobacco use, considered smoking a public health issue, a matter of life and death requiring government attention. From a public health perspective, smoking is not an activity or even a habit. It is "Public Health Enemy Number One," "the greatest community health hazard,"[74] "the single most important preventable cause of death,"[75] "the manmade plague,"[76] "the global tobacco epidemic."[77] It is something to be stamped out, like smallpox or yellow fever. This view of smoking is part of a public health vision that encompasses all sorts of risky behavior, including not just smoking but drinking, using illegal drugs, overeating, failing to exercise, owning a gun, speeding, riding a motorcycle without a helmet—in short, anything that can be said to increase the incidence of disease or injury.

Although this sweeping approach is a relatively recent development, we can find intimations of it in the public health rhetoric of the nineteenth century. In the introduction to the first major American book on public health, U.S. Army surgeon John S. Billings explained the field's concerns: "Whatever can cause, or help to cause, discomfort, pain, sick-

ness, death, vice, or crime—and whatever has a tendency to avert, destroy, or diminish such causes—are matters of interest to the sanitarian."[78] Despite this ambitious mandate, and despite the book's impressive length (nearly 1,500 pages in two volumes), *A Treatise on Hygiene and Public Health* had little to say about the issues that occupy today's public health professionals. There were no sections on smoking, alcoholism, drug abuse, obesity, vehicular accidents, mental illness, suicide, homicide, domestic violence, or unwanted pregnancy. Published in 1879, the book was instead concerned with things like compiling vital statistics; preventing the spread of disease; abating public nuisances; and assuring wholesome food, clean drinking water, and sanitary living conditions.

A century later, public health textbooks discuss the control of communicable diseases mainly as history. The field's present and future lie elsewhere. "The entire spectrum of 'social ailments,' such as drug abuse, venereal disease, mental illness, suicide, and accidents, includes problems appropriate to public health activity," explains *Principles of Community Health.* "The greatest potential for improving the health of the American people is to be found in what they do and don't do to and for themselves. Individual decisions about diet, exercise, stress, and smoking are of critical importance."[79] Similarly, *Introduction to Public Health* notes that the field, which once "had much narrower interests," now "includes the *social and behavioral aspects of life*—endangered by contemporary stresses, addictive diseases, and emotional instability."[80]

The extent of the shift can be sensed by perusing a few issues of the American Public Health Association's journal. In 1911, when the journal was first published, typical articles included "Modern Methods of Controlling the Spread of Asiatic Cholera," "Sanitation of Bakeries and Restaurant Kitchens," "Water Purification Plant Notes," and "The Need of Exact Accounting for Still-Births."[81] Issues published in 1995 offered articles like "Menthol vs. Nonmenthol Cigarettes: Effects on Smoking Behavior," "Compliance with the 1992 California Motorcycle Helmet Use Law," "Correlates of College Student Binge Drinking," and "The Association Between Leisure-Time Physical Activity and Dietary Fat in American Adults."[82]

In a sense, the change in focus is understandable. After all, Americans

are not dying the way they once did. The chapter on infant mortality in *A Treatise on Hygiene and Public Health* reports that during the late 1860s and early 1870s two-fifths to one-half of children in major American cities died before reaching the age of five.[83] The major killers included measles, scarlet fever, smallpox, diphtheria, whooping cough, bronchitis, pneumonia, tuberculosis, and "diarrheal diseases." Beginning in the 1870s, the discovery that infectious diseases were caused by specific microorganisms made it possible to control them through vaccination, antibiotics, better sanitation, water purification, and elimination of carriers such as rats and mosquitoes. At the same time, improvements in nutrition and living conditions increased resistance to infection.

Americans no longer live in terror of smallpox or cholera. Despite occasional outbreaks of infectious diseases such as rabies and tuberculosis, the fear of epidemics that was once an accepted part of life is virtually unknown. The one exception is AIDS, which is not readily transmitted and remains largely confined to a few high-risk groups. For the most part, Americans are dying of things you can't catch: cancer, heart disease, trauma. Accordingly, the public health establishment is focusing on those causes and the factors underlying them. Having vanquished most true epidemics, it has turned its attention to metaphorical epidemics of unhealthy behavior.

In 1979 Surgeon General Julius Richmond released *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention,* which broke new ground by setting specific goals for reductions in mortality. "We are killing ourselves by our own careless habits," Joe Califano wrote in the introduction, calling for "a second public health revolution" (the first being the triumph over infectious diseases).[84] *Healthy People,* which estimated that "perhaps as much as half of U.S. mortality in 1976 was due to unhealthy behavior or lifestyle," advised Americans to quit smoking, drink less, exercise more, fasten their seat belts, stop driving so fast, and cut down on fat, salt, and sugar. It also recommended motorcycle helmet laws and gun control to improve public health.[85]

Healthy People drew on a "national prevention strategy" developed by what is now the U.S. Centers for Disease Control and Prevention. Established during World War II as a unit of the U.S. Public Health Service charged with fighting malaria in the South, the CDC today in-

cludes seven different centers, only one of which deals with its original mission, the control of infectious disease. The Office on Smoking and Health, now back in Atlanta, is part of the National Center for Chronic Disease Prevention and Health Promotion.

The CDC's growth can be seen as a classic example of bureaucratic empire building. More generally, it is easy to dismiss public health's ever-expanding agenda as a bid for funding, power, and status. Yet the field's practitioners argue, with evident sincerity, that they are simply adapting to changing patterns of morbidity and mortality. In doing so, however, they are treating behavior as if it were a communicable disease, which obscures some important distinctions. Behavior cannot be transmitted to other people against their will. People do not choose to be sick, but they do choose to engage in risky behavior. The choice implies that the behavior, unlike a viral or bacterial infection, has value. It also implies that attempts to control the behavior will be resisted.

FORMIDABLE OBSTACLES

Healthy People noted that "formidable obstacles" stand in the way of improved public health. "Prominent among them are individual attitudes toward the changes necessary for better health," it said. "Though opinion polls note greater interest in healthier lifestyles, many people remain apathetic and unmotivated. . . . Some consider activities to promote health moralistic rather than scientific; still others are wary of measures which they feel may infringe on personal liberties. However, the scientific basis for suggested measures has grown so compelling, it is likely that such biases will begin to shift."[86] In other words, people engage in risky behavior because they don't know any better. Once they realize the risks they are taking, they will change their ways.

Accordingly, the anti-smoking movement that emerged in the 1960s initially emphasized information and exhortation. "We believe in the freedom of the individual in the matter of cigarette smoking," the president of the American Cancer Society told a congressional committee in 1964. "We are opposed to legislation that would prohibit the smoking of cigarettes. . . . To achieve our goal we rely on persuasion and public and professional education."[87] After the first surgeon general's report,

writes public health historian Allan M. Brandt, "the presumption was widely held that smokers—now apprised of the risks—would quickly quit."[88] Observing the immediate drop in cigarette sales, Luther Terry recalled, "We were jubilant! As sensible physicians, public health officers, educators and scientists, we imagined for a moment that we had 'conquered' cigarette smoking."[89]

But while the prevalence of smoking started to drop, the decline was more gradual than expected. In 1971 Daniel Horn, coauthor of the 1954 American Cancer Society study and director of the National Clearinghouse for Smoking and Health, predicted that in four years only a quarter of the adult population would be smoking, a goal that was not reached until the 1990s.[90] Many Americans continued to smoke, despite a pervasive public education campaign that included not only warning labels and surgeon general's reports but also press coverage, radio and TV spots, print ads, posters, buttons, bumper stickers, pamphlets, books, and curricula for primary and secondary schools.

Survey data reviewed in the 1989 surgeon general's report show that the message came through loud and clear. As early as 1964, 81 percent of adults agreed that smoking is harmful to one's health. That figure rose to 90 percent by 1975. The share of adults who believed smoking causes lung cancer rose from 66 percent in 1964 to 95 percent in 1985. For heart disease (where the evidence was not as strong), acceptance rose from 40 percent in 1964 to 90 percent in 1985. The share agreeing that smoking is a cause of emphysema or chronic bronchitis increased from 50 percent in 1964 to 86 percent in 1985. The percentages were somewhat lower for current smokers than for nonsmokers, but in all cases a large majority of smokers had accepted these health claims by the 1980s. Even those who did not agree that smoking causes these diseases must surely have been aware of the warnings. As the 1989 report concluded, "A vast majority of adults agree that smoking is hazardous to health and correctly recognize the conditions that are associated with smoking."[91]

Nevertheless, critics of the tobacco industry often argue that the average American is not adequately informed about the health consequences of smoking. Says Kenneth E. Warner, a health economist at the University of Michigan, "Once you get beyond the simple basics—it causes

lung cancer, heart disease, and emphysema—knowledge is strikingly superficial, often wrong."[92] Elizabeth Whelan, president of the American Council on Science and Health, writes, "If cigarette manufacturers were to supply, up front, a complete and detailed list of the risks assumed by smokers and describe how those risks relate to the numbers of cigarettes smoked (information that would fill a volume the size of the Manhattan phone book), we might argue more legitimately that smokers were 'informed'—or at least had the opportunity to become so."[93] This standard hardly seems realistic. It's true that most Americans do not know all the details about the hazards associated with smoking. But the same could be said of many potentially hazardous activities, including drinking, driving, skiing, and swimming. The voluntary assumption of risk does not require expert knowledge.

Furthermore, Harvard University economist W. Kip Viscusi has found that, if anything, Americans tend to *overestimate* the risks associated with smoking. Viscusi used data from a survey that asked people to estimate how many smokers in a group of one hundred could be expected to die (1) as a result of smoking and (2) from lung cancer specifically. He compared their responses to risk estimates based on epidemiological data available at the time of the survey. On average, the respondents put the risk of dying from smoking at 54 percent, compared to a "true" risk between 18 and 36 percent. They estimated that a smoker has a 38 percent chance of dying from lung cancer, while the "true" risk was between 6 and 13 percent. Smokers' estimates were lower than nonsmokers' but still higher than the risks indicated by the epidemiological data.[94]

In a second survey, Viscusi told respondents the average life expectancy for a twenty-one-year-old nonsmoker and asked them to estimate the life expectancy for a smoker of the same age and sex. For a benchmark he used an estimate from the 1989 surgeon general's report, which said that each death postponed by anti-smoking efforts represented an average gain in life expectancy of about 20 years.[95] Multiplying 20 years by an overall mortality risk of 18 to 36 percent, Viscusi came up with an average life expectancy loss per smoker of 3.6 to 7.2 years. By contrast, the average response to his survey indicated a life expectancy loss of 11.5 years. Again, the smokers' average estimate (9

years), though lower than the nonsmokers' (12.3 years), was beyond the benchmark range.[96]

Given the widespread knowledge of the hazards posed by smoking, the notion that people smoke out of ignorance is no longer tenable. An alternative explanation is that people smoke because they are addicted. As I will argue in chapter 7, addiction is, at best, a description, not an explanation. There is nothing about nicotine (or any drug, for that matter) that compels the user to continue taking it. As Koop noted in his "smoke-free society" speech, smoking is "a voluntary act: one does not have to smoke if one does not want to."[97] In practical terms, all of the talk about nicotine addiction boils down to a point that has been widely recognized for hundreds of years: It's hard to quit smoking. Hard, but not impossible, as forty-four million former American smokers could tell you.[98] The 1988 surgeon general's report estimates that 90 percent of quitters give up the habit on their own, without formal treatment or smoking cessation devices.[99] As Richard Klein observes in *Cigarettes Are Sublime,* "The fact of addiction in itself explains nothing; after all, millions choose to stop, or never start. Becoming addicted and continuing to smoke implies a persistent disposition to find some benefit or pleasure in the drug."[100]

But anti-smoking activists do not seem to understand this "benefit or pleasure," to which enthusiasts over the centuries have devoted treatises, novels, and poetry. Like Fernandez de Oveido y Valdes in the sixteenth century, tobacco's current opponents look at smokers and "cannot imagine what pleasure they derive from this practice."[101] Elizabeth Whelan maintains that the decision to smoke is fundamentally irrational. "To engage in a behavior that is going to put your life and health in jeopardy, and have you assume all kinds of risks of disease and premature death—you can't rationally decide that," she says. "That would be an aberrant decision."[102]

It may be especially hard for a nonsmoker to imagine what benefits the habit could offer to outweigh the substantial risks associated with it. According to the 1989 surgeon general's report, "research has shown that one-fourth or more of all regular cigarette smokers die of smoking-related diseases."[103] Some researchers believe the fraction is closer to one-half.[104] Everyone dies of something, of course, so the timing of

these deaths is important. According to CDC data, the 419,000 deaths attributed to smoking in 1990 represented about 5 million years of potential life lost, or about 12 years per death.[105] It is worth emphasizing that this figure is both an estimate (some of the life-expectancy loss attributed to smoking may in fact be due to other causes) and an average (heavier smokers tend to die earlier, lighter smokers later). Furthermore, given the dramatic reduction in cigarette tar levels that has occurred during the last few decades, calculations based on mortality figures for people who started smoking in the '50s or '60s probably exaggerate the risks facing people who started smoking more recently. But the official estimate is useful for the sake of illustration. If one-fourth to one-half of all smokers die from the habit and die twelve years early on average, cigarettes reduce the life expectancy of the average smoker by three to six years.[106]

For millions of Americans, smoking is a source of daily comfort and gratification. Could it be worth three to six years of life? To answer that question, it may be helpful to reflect on your own pleasures. Would you give up three to six years for red meat? (I would.) How about chocolate? (My wife says she would.) Sex? TV? Music? Most people could probably think of *something* that would be worth three to six years.

But the public health perspective, which seeks collective prescriptions to reduce morbidity and mortality, does not take individual tastes and preferences into account. Having noted that smoking can lead to illness, public health specialists now identify smoking itself as a disease, something inherently undesirable that happens to unwilling victims. The foreword to the 1988 surgeon general's report informs us, "Tobacco use is a disorder which can be remedied through medical attention."[107]

FIRST, DO LESS HARM

Since public health specialists seek to reduce morbidity and mortality, they should welcome less hazardous forms of tobacco (less virulent strains of the "disease"). And, in fact, the search for a safer cigarette initially drew support both from the federal government and from private health organizations such as the American Cancer Society. Over the

years, however, the anti-smoking movement became increasingly hostile not only toward new cigarette designs but also toward cigars, pipes, and smokeless tobacco. Many anti-smoking activists see these products not as safer alternatives to standard cigarettes but as dangerous distractions from the goal of eliminating tobacco use. In this respect (as in others), the contemporary anti-smoking movement resembles the temperance movement of the nineteenth century, which at first emphasized the hazards of distilled spirits and excessive drinking but eventually opposed all forms of alcohol and called for complete abstinence.

The tobacco companies responded to the cancer scare of the 1950s and the 1964 surgeon general's report by introducing brands with lower tar and nicotine yields. (Tar seems to play a much more important role in smoking-related disease than nicotine, which is not carcinogenic and has not been linked to lung damage, though it may contribute to cardiovascular disease.) Cigarette makers brought the tar and nicotine levels down through a variety of methods, including filtration, ventilation, increases in the burn rate, and the use of fillers such as reconstituted and puffed tobacco. Brands with tar yields of less than fifteen milligrams, representing 2 to 3 percent of the domestic market in the late '60s, accounted for 56 percent in 1981 and 69 percent in 1992.[108] Today that category includes such ultra-low brands as Now and Carlton, which advertise tar yields of 1 milligram or less. By contrast, tar yields of forty milligrams or more were common in the 1950s.

Responding to the trend toward lower-yield cigarettes and the ensuing "tar derby" among cigarette makers, the Federal Trade Commission banned claims of medical approval or health benefits in 1955. It continued to allow statements of tar and nicotine yields but only if substantiated. In 1959 the FTC, frustrated by the lack of uniform standards for measuring tar and nicotine, announced that "all representations of low or reduced tar or nicotine, whether by filtration or otherwise, will be construed as health claims."[109] In 1966, after warning labels started appearing on cigarette packages, the FTC reversed itself again, allowing statements of tar and nicotine yields as determined by a testing method it had approved. Three years later, the FTC asked Congress to *require* such statements in cigarette ads and on packages. In 1970, the commission proposed a regulation mandating tar and nicotine numbers in ad-

vertising. The regulation was never formally implemented; instead, the tobacco companies agreed to comply with the FTC's wishes, and since 1971 all cigarette ads have included average tar and nicotine yields as measured by the "FTC method." Though it is not required, packages (generally those of the lower-yield brands) sometimes include this information as well.

The change in the FTC's position reflected the belief that information about tar and nicotine content would encourage smokers to switch to lower-yield, presumably less hazardous, brands. That goal was part of a pragmatic public health approach recognizing that, as AMA president Edward R. Annis remarked after the release of the surgeon general's 1964 report, "it is unrealistic to assume that the American people are suddenly going to quit smoking."[110] Given that reality, it made sense to encourage innovations that would reduce the risks of smoking. Accordingly, Surgeon General Terry called for a safer cigarette as well as education about the hazards of smoking, and the National Cancer Institute sponsored research toward that end in the 1960s and '70s.

By the late 1970s, however, tobacco's opponents had become less keen on the idea of a safer cigarette, as Gio Batta Gori discovered. In 1976 Gori, a microbiologist who oversaw the government's safer-cigarette research as director of the NCI's Smoking and Health Program, argued in *Science* that "low-toxicity cigarettes hold significant promise in the prevention of diseases related to smoking." Gori looked at various epidemiological studies to see at what level of smoking they were able to detect an increased risk of disease. For lung cancer, the average was 5.7 cigarettes a day. For coronary heart disease, it was 3.5. For all smoking-related diseases, it was 2. Based on these data and information about the composition of smoke from pre-1960 cigarettes (the kind smoked by subjects in the studies), he estimated "critical values" for tar, nicotine, carbon monoxide, nitrogen oxides, hydrogen cyanide, and acrolein. Gori emphasized that "it would be erroneous to interpret these critical values as indicators of safe smoking levels." But he concluded that "a rapid shift in cigarette consumption habits toward the proposed range of critical values would make it reasonable to expect that the current epidemic proportions of smoking-related

diseases could be reduced to minimal levels in slightly over a decade."[111]

Two years later, Gori went a step further. Writing in *JAMA*, he and Cornelius J. Lynch, a scientist involved in the NCI-funded research, noted that the levels of toxic components in cigarette smoke had changed dramatically since 1960. On the basis of laboratory analyses of the smoke from twenty-seven low-yield brands, they estimated how many of each would be equivalent to two pre-1960 cigarettes in terms of the six components they measured. Nine Benson & Hedges Lights, twenty-eight Lucky 100s, and seventy-two Carlton Menthols, for example, yielded as much tar as two pre-1960 cigarettes. You could smoke four Benson & Hedges Lights, eight Lucky 100s, or twenty-three Carlton Menthols without exceeding the "critical value" for any of the six measured components. Gori and Lynch again emphasized that "these are by no means safe levels but merely imply that, for a smoker whose daily consumption does not exceed these levels, any attendant tobacco-related mortality risk may be epidemiologically indiscernible from that of a nonsmoker."[112]

Gori's suggestions for harm reduction did not fit well with the mood of the public health establishment. As he later put it, "The new policy was: Smokers shouldn't be helped; smokers should be eliminated."[113] Press coverage of Gori and Lynch's findings set off a storm of criticism. It started with an August 1978 story in the *Washington Post* under the inaccurate headline SOME CIGARETTES NOW 'TOLERABLE,' DOCTOR SAYS. What Gori actually said was, "We can now begin to talk about 'tolerable' levels of smoking *from an overall, public health standpoint.*" He stressed: "I am not calling any cigarette 'safe.' The only cigarette that is safe is the cigarette that is not lit. I am not talking about what might happen to any individual. I am talking about averages. There may be a risk that may still be there even though we might not see it in overall, large population studies." The story quoted a National Cancer Institute spokesman who said, "[Gori] probably represents the best expertise we have on smoking and health." It also quoted Gori's boss, NCI director Arthur Upton, who reiterated that "no cigarette now on the market can be considered wholly without risk to health."[114]

The next day, presumably after he saw the headline in the *Post*,

Upton had a stronger reaction. He called Gori's use of the word *tolerable* "unfortunate," because smokers might misinterpret it as meaning that low-yield cigarettes were safe. He said, "[Gori's comments] set back our cause, and even if we can correct the misinterpretation, we will have lost valuable momentum." HEW Secretary Califano, who had recently announced his anti-smoking campaign, said public health officials were "all very disturbed" by Gori's comments. "There is no such thing as a safe cigarette," he said. Surgeon General Julius Richmond likewise insisted, "There is no known safe level of smoking any cigarette of any type." Sidney Wolfe, head of the Ralph Nader Health Research Group, called Gori "reckless" and said he should be fired for "the most damaging statement that has been made about smoking in the last 10 years."[115]

Thus Gori was accused of saying something he had explicitly and repeatedly denied: that people could smoke without danger. While he may have been excessively optimistic about the benefits of low-yield cigarettes, his aim was to reduce risk, not eliminate it. Two prominent authorities interviewed by the *Post*—Ernst Wynder, the pioneering lung cancer researcher, and Arthur Holleb, the American Cancer Society's medical director—agreed that low-yield cigarettes were less hazardous. That belief has been supported by several studies. In one, E. Cuyler Hammond analyzed data gathered by the ACS between 1960 and 1972. He found that lung cancer, heart disease, and total death rates were lower among smokers who switched to low-yield brands, even after initial differences in smoking behavior (light smokers were more likely to switch) were taken into account.[116] A 1979 autopsy study by Oscar Auerbach designed to assess the impact of reduced cigarette yields found that precancerous changes in lung tissue were much less common in smokers who died in the '70s than in smokers who died in the '50s.[117] The 1989 surgeon general's report summarized the evidence this way: "Studies have shown that smoking filtered lower tar cigarettes reduces the risk of lung cancer compared with smoking unfiltered higher tar cigarettes. However, there is no conclusive evidence that the lower yield cigarettes are associated with reduced risk of overall mortality, cancers other than lung, [chronic obstructive lung disease], or heart disease."[118]

DEADLY DELUSION?

Many anti-smokers insist that, as a 1985 article in the *New York State Journal of Medicine* put it, "the 'less hazardous' cigarette is a deadly delusion."[119] This claim is based mainly on evidence that the official tar and nicotine ratings are a poor measure of what smokers actually absorb. The FTC-approved method for measuring tar and nicotine yields uses a smoking machine that puffs on a cigarette once a minute, down to a specified length. The tar and nicotine drawn from the cigarette are then weighed. Critics of this method, including the surgeon general and the FTC itself, have noted that people and machines do not smoke cigarettes the same way. In particular, smokers, unlike machines, may adjust their behavior to achieve the nicotine dose to which they are accustomed. When they switch to low-yield brands, they may take more puffs, inhale more deeply, retain the smoke longer, or subconsciously cover the ventilation holes.[120]

But the existence of such compensatory behavior does not mean there is *no* benefit from switching to low-yield brands. A 1989 summary of seventeen studies estimated that "smokers who reduce the tar yields of their cigarettes by half will, on average, reduce their intake of tar by 24 percent."[121] That conclusion, together with the epidemiological evidence, supports the belief that low-yield brands are significantly less hazardous. Nevertheless, the desire to maintain a certain level of nicotine intake is an important consideration, one that Gori, pilloried for overselling the benefits of low-yield cigarettes, took into account. In his *Science* article, he argued that nicotine levels should remain high enough to keep smokers satisfied, and in the *JAMA* article, he and Lynch calculated yields of various smoke components per milligram of nicotine for each of the brands they examined.

Hostility to cigarette innovation extends beyond today's low-yield brands. One critic went so far as to deny even the possibility of developing a safer cigarette. Insisting that "there will never be a 'less hazardous' cigarette," he said, "All funding for the development of a 'less hazardous' cigarette should be discontinued."[122] Similarly, some anti-smoking activists and public health specialists have opposed recent innovations in cigarette design that promise substantial risk reduction.

In 1988 R. J. Reynolds introduced Premier, a cigarette with a piece of carbon at the tip that, when lit, heated the air drawn into the cylinder, which contained a roll of tobacco and beads coated with tobacco extract, flavorings, and glycerol. Because Premier did not burn like an ordinary cigarette, it produced very little ash or smoke and no tar. R. J. Reynolds said it also produced less carbon monoxide than 70 percent of the cigarettes sold in the United States and less nicotine than 97 percent of them. The Coalition on Smoking or Health filed a petition with the Food and Drug Administration, asking it to review Premier for "safety and efficacy" as if it were a new drug, which would have kept the brand off the market. The AMA asked state regulators to prevent distribution of the product in test markets. In the end, Premier was withdrawn mainly because of disappointing sales. Customers did not like the taste and found it difficult to keep lit.

In 1994 the *New York Times* reported that R. J. Reynolds planned to try again. The new brand, Eclipse, also used a charcoal tip to heat air, but the flavored beads were gone; instead, the hot air passed through processed tobacco treated with glycerine, which vaporized, picking up nicotine and flavor from blended tobacco near the filter. R. J. Reynolds claimed the design reduced the amount of tar delivered to the smoker by 90 percent as compared to a standard cigarette. Company tests also showed sharp reductions in benzo(a)pyrene, nitrosamines, and acrolein. Like Premier, Eclipse produced little ash or smoke, but it delivered a full dose of nicotine and about as much carbon monoxide as a regular cigarette. Two days after the *New York Times* story about Eclipse appeared, the Coalition on Smoking or Health said it would again ask the FDA to keep the brand off the market, on the ground that it was not a cigarette but a "drug delivery device." The FDA's subsequent decision to regulate *all* cigarettes as drug delivery devices (see chapter 7) did not bode well for Eclipse—or any other innovative cigarette design. The proposed nationwide tobacco settlement announced in June 1997 said the FDA would have to approve any "less hazardous tobacco products" and could then force the manufacturer to license the technology to competitors.[123]

The response to Premier and Eclipse revealed a split within the anti-smoking movement. Representative Henry Waxman, a California Democrat who is one of the tobacco industry's most vociferous critics in Congress, said Eclipse was a positive development. "It may have the advantage of being safer, relatively speaking," he said. "That is impressive and could be a big advantage." John Pauly, a smoking expert at Roswell Park Cancer Center, said: "We have come to realize that despite numerous warnings since 1964, there exists a very large segment of the smoking population who are either unwilling or unable to give up smoking. It's worthwhile to come in with a safer cigarette. I interpret Eclipse as an effort by the industry to have a safer cigarette."[124]

Other opponents of smoking viewed the new brands with alarm. "We think it's just a desperate attempt on their part to reverse the growing social taboo against smoking," an American Lung Association spokeswoman said of Premier, adding that the organization was "alarmed at the possibility that young people in particular may be encouraged by this marketing ploy by R. J. Reynolds to take up smoking."[125] Conceding that "it sounds like the level of tar is far reduced," Jan Hitchcock, associate director of Harvard's Institute for the Study of Smoking Behavior and Policy, said, "It would be too bad to see the current momentum—which has encouraged a lot of people to quit smoking—defused or confused."[126] As Matthew Myers, then staff director of the Coalition on Smoking or Health, explained, "The fact that a product is safer doesn't mean that there is a net health gain if it ends up leading more people to smoke."[127]

Similarly, the physician and addiction specialist John Slade has argued that innovation in cigarette design threatens public health because it encourages people to keep smoking. "If the new products were not available, more people would be able to respond directly to concerns about illness and death from smoking and become completely abstinent from nicotine," he wrote in *Priorities*, a publication of the American Council on Science and Health. Slade argued that the government should "prohibit any new products" whose safety had not been demonstrated. "Had such a policy been in effect in 1950," he wrote, "the only cigarettes on the market today would be unfiltered 70 mm smokes, and far fewer people would be smoking."[128]

This argument against innovation hinges, in part, on an empirical

question: Do safer cigarettes encourage so many people to keep smoking or start smoking that the ultimate result is an increase in tobacco-related deaths? But that question is decisive only from the collectivist perspective of public health, which says that what matters is the total number of smokers—the fewer, the better. From the perspective of an individual consumer, what matters is the risk–benefit ratio offered by cigarettes—the lower, the better. As cigarettes become safer, some people who enjoy smoking but abstain for health reasons might take up the habit or return to it because they have decided that the benefits now outweigh the risks. For them, safety improvements are a good thing. For public health specialists, they are fraught with peril.

ALL OR NOTHING

Attitudes toward forms of tobacco other than cigarettes have also hardened. Pipe and cigar smoking declined more rapidly than cigarette consumption after 1964; the share of men smoking cigars or pipes but not cigarettes dropped by two-thirds, from 9 to 3 percent, between 1965 and 1985.[129] Yet it has long been known that cigar and pipe smokers are much less prone to smoking-related diseases (especially lung cancer) than are cigarette smokers, mainly because they inhale less. In a 1958 American Cancer Society study, for example, the overall death rate was 57 percent higher for cigarette smokers than for nonsmokers, but only 12 and 22 percent higher, respectively, for pipe and cigar smokers.[130] A subsequent ACS study found that "death rates were far higher in cigarette smokers than in nonsmokers," while "cigar smokers had somewhat higher death rates than nonsmokers" and "there was little difference between the death rates of pipe smokers and the death rates of men who never smoked regularly."[131]

Recognizing that cigars and pipes are much less hazardous than cigarettes, the 1972 Consumers Union report *Licit and Illicit Drugs* suggested that people concerned about the health effects of smoking should try to "convert smokers from cigarettes to cigars or pipes."[132] By contrast, the chapter on tobacco in the 1991 Consumers Union report *The Facts About Drug Use* says only that "pipe and cigar smoking are far from

risk free."[133] Anxious to discourage teenagers from experimenting with cigars, public health officials go to great lengths to obscure the truth. "Tobacco is tobacco is tobacco," Michael Eriksen, director of the CDC's Office on Smoking and Health, told the *New York Times* in 1997. The *Times* itself went further, incorrectly asserting that cigars pose "higher risks than . . . cigarettes."[134]

The anti-smoking movement is especially hostile, oddly, toward smokeless tobacco. Again, it's instructive to compare the two Consumers Union books. The 1972 report said, "Efforts should be made to popularize ways of delivering frequent doses of nicotine to addicts without filling their lungs with smoke." Accordingly, one of its suggestions was to "popularize chewing tobacco and snuff."[135] That recommendation was conspicuously absent from the 1991 book. Instead, the authors expressed concern about the rising popularity of smokeless tobacco, especially among adolescents. "The evidence is compelling that smokeless tobacco produces nicotine levels in the body comparable to those produced by smoking and carries additional risk of cancer of the mouth," they said, giving no indication that snuff and chewing tobacco might pose less of a health hazard than cigarettes.[136]

This one-sided treatment of the topic reflects the attitude of the public health establishment. In 1986 Surgeon General C. Everett Koop issued a report that condemned smokeless tobacco as carcinogenic and addictive. He warned against "the tragic mistake of replacing the ashtray with the spittoon." That same year, Congress banned broadcast ads for smokeless tobacco and required warning labels. One of those labels sums up the prevailing view, echoed by public health officials, anti-smoking activists, self-help books, and newspaper columnists: Smokeless tobacco "is not a safe alternative to cigarettes."[137]

Like Califano's observation that "there is no such thing as a safe cigarette," this is true enough, but it's hardly helpful to someone trying to assess the relative risks of different forms of tobacco. In particular, as Brad Rodu has observed, it is no help to a smoker who is looking for a less hazardous alternative to cigarettes. Rodu, an oral pathologist at the University of Alabama at Birmingham (UAB), thinks smokers ought to give up tobacco completely. But if they choose not to, he says, they are

much better off with smokeless tobacco than with cigarettes. In his 1995 book *For Smokers Only: How Smokeless Tobacco Can Save Your Life,* Rodu notes that oral cancer is the only well-established life-threatening risk associated with the use of smokeless tobacco, and even that disease is twice as common among smokers. A 1981 study published in the *New England Journal of Medicine* found an oral cancer rate of 26 per 100,000 among long-term users of smokeless tobacco, compared to 6 per 100,000 among nonusers. Noting that the survival rate for oral cancer is 50 percent, Rodu estimates that "if all 46 million smokers used smokeless tobacco instead, the United States would see, at worst, 6,000 deaths from oral cancer [a year], versus the current 419,000 deaths from smoking-related cancers, heart problems, and lung disease."[138]

By this measure, Rodu argues, smokeless tobacco is 98 percent safer than smoking. He and his colleagues have estimated that life expectancy for a thirty-five-year-old smokeless tobacco user is 80.9, virtually the same as for nonusers. The average thirty-five-year-old cigarette smoker, by contrast, lives to be 73.1. (The eight-year gap is not due entirely to smoking, since cigarette smokers also die more frequently from other causes, including accidents, suicide, and cirrhosis of the liver.) Rodu's message to smokers is straightforward: You can enjoy tobacco flavor and nicotine at a fraction of the risk, without the pesky smoke. Still, Rodu emphasizes, "Smokeless tobacco should only provide a viable and comparatively safe *damage control measure* for the current and last generation of nicotine addicts. Forty years or so from now I hope there are no tobacco users left on the planet."[139]

Like Gio Gori, Rodu has been condemned by other opponents of tobacco because they consider his message detrimental to the cause. "To say that one form of tobacco is safer than the other at this point in the debate is just irresponsible," Gregory Connolly, director of the Massachusetts Tobacco Control Program, told the Associated Press after Rodu discussed his ideas in scientific journals and on television in 1994. "Tobacco is tobacco. . . . It's like telling someone to jump from the fifth floor instead of the 10th floor."[140] The American Association of Oral and Maxillofacial Surgeons preferred a different analogy: "Suggesting this switch is like telling someone to use a rifle instead of an Uzi."[141] Robert Mecklenburg, dental coordinator for the

National Cancer Institute's tobacco control program, offered yet another comparison: "We know that more children are killed by cars than trains, but you wouldn't tell children to play on railroad tracks instead of in the street."[142] The president of the American Dental Association (ADA) called Rodu's proposal "naive at best and irresponsible at worst."[143]

Beginning in 1993, Rodu and his colleagues conducted a pilot study in which they showed volunteer smokers how to use smokeless tobacco and then followed them for a year to see if the switch had been successful. The initial results were encouraging, but the researchers had a hard time publishing them. "The disappointing thing is that the ideas are not being rejected on the basis of sound science or logic," Rodu said. "They're being rejected on the basis of philosophy. . . . We are getting very emotionally wrought rejections. They're attacking me personally, my ethics, [saying] this shouldn't be tried at all. . . . You simply would not see this kind of vicious attack in the normal scientific process."[144]

The ADA unsuccessfully urged Rodu's professional organization, the American Academy of Oral and Maxillofacial Pathology, to repudiate his work.[145] In July 1994, after Rodu and University of Alabama epidemiologist Philip Cole published a letter in *Nature* suggesting the benefits of switching from cigarettes to smokeless tobacco,[146] the National Cancer Institute prepared a statement rejecting "the substitution of one known carcinogen for another," which it called "medically and ethically unwarranted." The statement, which the NCI sent to University of Alabama officials for comment, said recommending a switch to smokeless tobacco "sends the wrong message" and "raises questions of both legal liability and medical malpractice."[147] After requesting records related to Rodu's study, NCI deputy director Edward J. Sondik contacted the Office for Protection from Research Risks at the National Institutes of Health, suggesting that the project violated NIH guidelines for human research. (Rodu's study did not receive any federal money, but the NIH is a major funding source for research at the university.) In an angry letter to NIH director Harold Varmus, a UAB vice president said, "NCI officials have overstepped both their authority and

responsibility and have, in so doing, come perilously close to harassment and censorship."[148]

The Office for Protection from Research Risks launched a yearlong investigation of Rodu's study and, eventually, of other research projects at the university. "They were on a fishing expedition," Rodu says. "It became clear after the first two or three months that they weren't going to get anywhere with this." The university's Institutional Review Board, which had unanimously approved Rodu's study, did so again after the investigation started. "The implication that there might be ethical problems or legal problems in this research I find a little insulting," the board's chairman said in a letter to the OPRR.[149] "They never found any significant problem with my study, but it did get kind of nasty," Rodu says. "You get this kind of pressure from some tiny effort to get smokers to quit. It's just ridiculous."[150]

The vehemence of the opposition to smokeless tobacco, together with the objections to the very concept of a safer cigarette, suggest that public health is not the only thing at stake here. After all, trying to keep tobacco use as dangerous as possible for the sake of deterrence is a very risky strategy if your aim is a net reduction in morbidity and mortality. It makes more sense if your goal is to eliminate all forms of tobacco use, regardless of their relative hazards. Which suggests that the contemporary anti-smoking movement has more in common with prior efforts to suppress tobacco use than is generally recognized. Tobacco's opponents have always been concerned about its impact on the body, but they also worried about its impact on the soul—and they still do. The revulsion of sixteenth-century clergymen at heathen tobacco rituals and the alarm of early anti-cigarette crusaders about the corrupting effects of "little white slavers" may seem quaint to us now. But the moral objections to tobacco remain. As Gregory Connolly explained in a TV report about the control of nicotine in cigarettes, "It's a drug, it's a drug, it's a drug."[151]

Americans have long had an ambivalent attitude toward psychoactive substances. To help resolve our mixed feelings, we like to put drugs into neat categories: medicinal or recreational, good or evil, legal or illegal. Once hailed as a miracle remedy, tobacco was later praised as a comfort in times of distress, a stimulant to relieve boredom, an aid to concentration and conviviality. Today it is widely seen as a plague and a poison, an enslaver of children, a deadly seductress. Its users, once perfectly respectable, are now portrayed as sick, sinful, and anti-social—more like heroin addicts than coffee drinkers. This dramatic reversal goes beyond concerns about physical health. It reflects a feeling of betrayal. We may finally be heeding Johann Michael Moscherosch, the seventeenth-century anti-tobacco polemicist. "Consider well," he said, "how the Devil hath deceived you!"[152]

to discourage smoking and other risky behavior to mandatory vaccination of schoolchildren and laws against assault.[65]

While Koop may simply be confused, some defenders of the public health movement explicitly recognize that its aims are fundamentally collectivist and cannot be reconciled with the American tradition of limited government. In 1975 Dan E. Beauchamp, then an assistant professor of public health at the University of North Carolina, presented a paper at the annual meeting of the American Public Health Association in which he argued that "the radical individualism inherent in the market model" is the biggest obstacle to improving public health. "The historic dream of public health that preventable death and disability ought to be minimized is a dream of social justice," Beauchamp said. "We are far from recognizing the principle that death and disability are collective problems and that all persons are entitled to health protection." He rejected "the ultimately arbitrary distinction between voluntary and involuntary hazards" and complained that "the primary duty to avert disease and injury still rests with the individual." Beauchamp called upon public health practitioners to challenge "the powerful sway market-justice holds over our imagination, granting fundamental freedom to all individuals to be left alone."[66]

Of all the risk factors for disease and injury, it seems, freedom is the most pernicious. And you thought it was smoking.

Appendix

TEN MYTHS OF THE ANTI-SMOKING MOVEMENT

1. *The tobacco companies hid the truth about the hazards and addictiveness of cigarettes from the American public.* Industry double-talk notwithstanding, warnings about the health risks of smoking go back hundreds of years. James I, in his 1604 *Counterblaste to Tobacco,* called smoking "a custome lothsome to the eye, hatefull to the Nose, harmefull to the braine, dangerous to the Lungs." In every generation, tobacco's opponents have echoed him, attributing a long list of maladies to smoking (see chapter 1). Persuasive scientific evidence of tobacco's hazards, which began to emerge in the early 1930s, has received widespread attention since the '50s (see chapter 2). Likewise, the difficulty of giving up the tobacco habit has been common knowledge for centuries (see chapter 7). Sir Francis Bacon, lord chancellor under James I, observed, "In our times the use of tobacco is growing greatly and conquers men with a certain secret pleasure, so that those who have once become accustomed thereto can later hardly be restrained therefrom." The seventeenth-century polemicist Johann Michael Moscherosch called smokers "thralls to the tobacco fiend," while Cotton Mather dubbed them "*Slave*[s] to the *Pipe.*" Fagon, court physician to Louis XIV, described the tobacco habit as "a fatal, insatiable necessity . . . a permanent epilepsy."

2. "*Tobacco is tobacco.*" Although all tobacco products pose some health risks, cigarettes are by far the most hazardous. Cigars and pipes are con-

siderably less dangerous. Research by the American Cancer Society found that "death rates were far higher in cigarette smokers than in nonsmokers," while "cigar smokers had somewhat higher death rates than nonsmokers" and "there was little difference between the death rates of pipe smokers and the death rates of men who never smoked regularly." By one measure, smokeless tobacco is 98 percent safer than cigarettes. (See chapter 2.)

3. *People smoke because of advertising.* There is remarkably little evidence that advertising plays an important role in getting people to smoke, as opposed to getting them to smoke a particular brand. The 1989 surgeon general's report conceded that "there is no scientifically rigorous study available to the public that provides a definitive answer to the basic question of whether advertising and promotion increase the level of tobacco consumption. Given the complexity of the issue, none is likely to be forthcoming in the foreseeable future." The 1994 report, which focused on underage smoking, also acknowledged the "lack of definitive literature." None of the widely publicized studies that have appeared in recent years, including the much-hyped research on Joe Camel, actually measured the impact of advertising on a teenager's propensity to smoke. (See chapter 3.)

4. *Smoking imposes costs on society.* Because smokers tend to die earlier than nonsmokers, the costs of treating tobacco-related illness are balanced, and probably outweighed, by savings on Social Security, nursing home stays, and medical care in old age. Every analysis that takes such long-term savings into account, including reports from the RAND Corporation, the Congressional Research Service, and Harvard economist W. Kip Viscusi, concludes that "social cost" cannot justify raising cigarette taxes. (See chapter 4.)

5. *Secondhand smoke poses a grave threat to bystanders.* The evidence concerning the health effects of secondhand smoke is not nearly as conclusive as the evidence concerning the health effects of smoking. The research suggests that people who live with smokers for decades may face a slightly higher risk of lung cancer. According to one estimate, a nonsmoking woman who lives with a smoker faces an additional lung cancer risk of 6.5 in 10,000, which would raise her lifetime risk from about 0.34 percent to about 0.41 percent. Studies of secondhand smoke and heart disease, including the results from the Harvard Nurses Study published in 1997, report more dramatic increases in disease rates—so dramatic, in fact, that they are biologically implausible, suggesting risks comparable to those faced by smokers, despite the much lower doses involved. In any case, there is *no* evidence that casual exposure to secondhand smoke has any impact on your life expectancy. (See chapter 5.)

6. *If secondhand smoke really is dangerous, smoking ought to be banned everywhere, except in private residences.* Since almost all of the epidemiological evidence about the health effects of secondhand smoke relates to long-term exposure in the home, the fact that this is the one place exempted from current and proposed smoking bans suggests a residual concern for property rights. Yet business owners have property rights, too. If the government respected their right to establish rules about smoking on their own property, potential employees and customers could take such policies into account when deciding where to work or which businesses to patronize. Whether secondhand smoke is a health hazard or merely a nuisance, such a voluntary system is the most appropriate way to deal with the conflicting demands of smokers and nonsmokers, since it allows for diversity and competition, rather than simply imposing the will of the majority on everyone. (See chapter 5.)

7. *States have a right to demand compensation from tobacco companies for the costs of treating smoking-related diseases under Medicaid.* This claim ignores the long-term savings traceable to smoking (see Myth 4) and the tobacco taxes smokers already pay to cover the costs they supposedly impose on others. Furthermore, by the same logic, states could sue the manufacturer of any product associated with disease or injury, including alcoholic beverages, fatty foods, candy, firearms, swimming pools, bathtubs, skateboards, and automobiles. The makers (and consumers) of such products should not be blamed because politicians decided to pay for health care with taxpayers' money. (See chapter 6.)

8. *The tobacco companies have been secretly manipulating the nicotine in cigarettes to keep smokers hooked.* Nicotine control was never a secret. Several brands of denicotined cigarettes were introduced as early as the 1920s. Claims of reduced tar and nicotine have been conspicuous since the 1950s, and the yields of each brand have been advertised since 1971. The very idea of a consistent nicotine yield for a given brand implies control, which cigarette manufacturers achieve through a variety of methods that have long been discussed in trade journals, books, and government reports. (See chapter 7.)

9. *Smoking is "a pediatric disease."* Although most smokers start as teenagers, the vast majority are, in fact, adults. And while it raises the risk of certain illnesses, smoking itself is a behavior—something people choose to do—not a disease. As then-surgeon general C. Everett Koop noted in his 1984 speech calling for "a smoke-free society," smoking "is a voluntary act: one does not have to smoke if one does not want to." (See chapter 7.)

10. *Once people have started smoking, nicotine addiction prevents them from stopping.* This is so contrary to everyday experience that it's amazing politicians and anti-smoking activists can say it with a straight face. In fact, there are about as many former smokers in this country as there are smokers, and almost all gave up the habit on their own, without formal treatment—usually by quitting cold turkey. (See chapter 7.)

NOTES

Author's Note

1. In fiscal year 1996, Philip Morris Companies gave $25,000 to the Reason Foundation and bought $6,766 in ads from *Reason.* The foundation's total budget was about $4 million.
2. Stanton A. Glantz, letter to the editor, *Globe and Mail,* December 11, 1996.
3. Philip J. Hilts, *Smokescreen: The Truth Behind the Tobacco Industry Cover-Up,* Reading, Mass.: Addison-Wesley, 1996, p. 106.
4. *Afternoon Edition,* NewsTalk Television, January 10, 1995.
5. Scott Ballin, "Tobacco Tax Argument Scorched," *Wall Street Journal,* August 17, 1994, p. A13. Gary S. Becker and Michael S. Grossman, "Smoking Out Red Herrings," *Wall Street Journal,* August 29, 1994, p. A11.
6. Glantz, letter to the editor.
7. Majority Staff of the House Subcommittee on Health and the Environment, "The Tobacco Industry's Misinformation Campaign," *ETS Facts,* July 22, 1994, p. 2.
8. See, e.g., Jon Cohen, "Tobacco Money Lights Up a Debate," *Science,* 272 (April 26, 1996), pp. 488–494.

Introduction. Without a Doubt

1. U.S. Department of Health, Education, and Welfare, *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service,* U.S. Public Health Service, Center for Disease Control, 1964, p. 33.
2. *The Steve Kane Show,* WFTL, Ft. Lauderdale, Florida, December 27, 1995.
3. Ibid.
4. Ibid.
5. John Stuart Mill, *On Liberty,* Indianapolis: Bobbs-Merrill, 1956 (originally published in 1859), p. 13.
6. Interview with Alan Blum, May 14, 1996.
7. James Bennett, "Anti-Smoker Presses Shea Billboard Battle," *New York Times,* April 26, 1993, p. B3.