

A HISTORICAL RECONSTRUCTION OF TOBACCO AND HEALTH IN THE U.S., 1954-1994

**EXPERT REPORT OF DR. ROBERT N. PROCTOR, Ph.D.
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I. INTRODUCTION

I, Robert N. Proctor, Ph.D., have been asked to evaluate the extent to which the tobacco industry acted responsibly in its response to the discovery of widespread tobacco hazards in the early 1950s. I have also been asked to evaluate how the history of smoking in the United States might have been different, had the industry responded honestly to credible evidence that its products posed a human health threat. Finally, I have been asked to evaluate how the smoking patterns of union employees might have been different, had the industry been honest about what it knew about the hazard.

II. BASIS OF EXPERTISE

I am Professor of the History of Science at the Pennsylvania State University, where I have been employed since 1989. I received the Bachelor of Science degree in Biology from Indiana University in 1976, and the Masters and Doctoral Degrees in History of Science from Harvard University in 1977 and 1984. I have received grants and/or fellowships from the National Science Foundation, the National Institutes of Health, the National Endowment for the Humanities, the National Library of Medicine, the Fulbright Commission, the Shelby Cullom Davis Center for Historical Studies at

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Princeton University, the Andrew Mellon Foundation, the U.S. Holocaust Memorial Museum, the Hamburger Institut für Sozialforschung, the Center for Advanced Studies in the Behavioral Sciences at Stanford, and the Max Planck Institut für Wissenschaftsgeschichte, among others. I have been invited to present scholarly lectures at Harvard, Princeton, Stanford, Yale, and several dozen other universities, both foreign and domestic; I have also lectured before and/or advised a number of government agencies, including the Canadian National Cancer Institute, the German National Cancer Institute, the National Institutes of Health, the President's Advisory Committee on Human Radiation Experimentation, among others (see curriculum vitae, attached).

My primary expertise is in the history of biomedical science and policy in twentieth century Europe and America. I have also published on environmental carcinogenesis and cancer policy; bioethics and environmental policy; the history of genomics, eugenics, and racial theory; the origins and resolution of scientific controversy; the role of values in science; and the social construction of ignorance. I am the author of more than a dozen articles, numerous chapters in books, thirty book reviews, several encyclopedia entries, and three books: Cancer Wars: How Politics Shapes What We Know and Don't Know About Cancer (Basic Books, 1995); Value-Free Science? Purity and Power in Modern Knowledge (Harvard University Press, 1991); and Racial Hygiene: Medicine Under the Nazis (Harvard University

Press, 1988). I have recently completed a book on the history of early twentieth century German theories of cancer causation, now under contract with Princeton University Press (forthcoming in 1999).

III. SUMMARY OF OPINIONS

1. The first scientific evidence of a tobacco health hazard appears in the eighteenth century, and is confirmed (e.g., for mouth and lip cancer) in the nineteenth century. Evidence of major health hazards (e.g., lung cancer and heart disease) grows in the 1920s and '30s, but does not enjoy widespread support in the American scientific community until the early 1950s.

2. By 1954, it is possible to talk about a "consensus" or "establishment" view within the scientific community that cigarettes are a major source of illness and premature death. That same year the tobacco industry responded to the growing evidence of a hazard by promising to investigate and publicize the health hazards caused by its products.

3. Instead of reporting honestly on the hazard, however, the industry began a massive campaign of disinformation to convince the public that smoking was safe. That campaign continued for nearly four decades, and must be judged one of the most ambitious and successful campaigns of deception in modern history, consuming hundreds of millions of dollars of industry funds.

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4. While it is correct to say that worries about the health effects of tobacco go back centuries (as the industry now likes to claim), people beginning to smoke or already smoking in the 1950s and 1960s were confronted with a barrage of claims from the industry denying those hazards, using subtle and carefully crafted propaganda tools. Well educated or well-informed people were often able to see through that propaganda (witness the fact that most smoking physicians quit after the 1964 Surgeon General's Report); less educated people--blue collar workers, for example--took somewhat longer to reduce their smoking rates, and their rates are still somewhat higher today.¹ Internal industry documents show that as late as the 1970s, many people were ill-informed about the nature or extent of tobacco hazards.

5. American smoking levels would never have risen as high as they did, if the tobacco industry had been honest in its assessment and reporting of well-established facts about the hazards of tobacco. Fewer people would have started smoking, and more people would have quit earlier. Smoking rates would not have grown as rapidly as they did in the 1950s, and the decline in smoking rates after 1964 would have occurred much sooner than it did.

6. The decline that began after the 1964 Surgeon General's Report could have,

¹ While it is true that smoking rates for college graduates dropped more rapidly than for the population as a whole (see Chart 6) it is also true that college graduates make up a relatively small percentage of the population. Therefore the smoking trends of blue collar workers, including the trust fund beneficiaries in this case, are not very different from those of the U.S. population as a whole.

should have, and would have begun at least ten years earlier than it did, if the industry had been honest about what it knew. Assuming nothing more than that the curve of smoking incidence were shifted ten years earlier--a reasonable and modest assumption--it is possible to calculate how many cigarettes would not have been smoked, had the industry not disguised what it knew about tobacco health hazards.

7. Had the tobacco industry been honest and forthright in its advertising, admitted what it knew about the health hazards of smoking, the anti-smoking movement would have been moved up by at least a decade and billions of cigarettes would not have been smoked by the Ohio union workers who are the trust fund beneficiaries in this case.

8. While other industries have been negligent in their reporting of consumer product hazards, the tobacco industry is unique in the magnitude of its efforts to fool and/or confuse the public concerning the hazards of its product. The industry conspired² to suppress the market for safer alternatives (such as nicotine gums and patches), while also stifling competition. The industry conducted massive, well-

² One documented case took place in 1982-1984 when Merrell Dow tried to market Nicorette, a nicotine-containing chewing gum, prompting Philip Morris to clamp down on what it called the circulation of "anti-smoking propaganda." See the following letters and memoranda found at <http://www.pmdocs.com>, the internet site maintained by Philip Morris, Incorporated: R.D. Latshaw memo to file, dated July 21, 1982, Starting Bates Number (SBN) 2023799798; R.D. Latshaw memo to A.J. Kay, Jr, May 7, 1984, SBN 2023799799; R.D. Latshaw memo to file, October 23, 1984, SBN 2023799801; A.J. Kay, Jr. letter to Andrew J. Butler, December 17, 1984, SBN 2023799804; R.D. Latshaw memo to file, January 22, 1985, SBN 2023799803.

financed political campaigns to limit or eliminate tobacco taxes, to block tobacco regulation, and to thwart anti-smoking policies, both in the United States and abroad. The industry not only knew³ and denied that nicotine was addictive; it also clandestinely manipulated the chemistry of tobacco smoke to maximize the speed by which nicotine enters the bloodstream (by adding ammonia, which increases the PH of tobacco smoke, a process known as "free-basing").

9. The tobacco industry is also unique in the magnitude of the harms it has caused. The U.S. Surgeon General estimates that tobacco kills upwards of 400,000 Americans every year, primarily from lung cancer and heart disease. The global toll is many times higher. And since American tobacco companies have long been the world's leading exporter of cigarettes, American companies must contribute more to worldwide premature death and illness than any other industry.

10. Judged globally, tobacco has to be regarded as the world's single largest cause of premature death and disease. Tobacco is estimated already to have caused the premature death of 100 million people worldwide, and that number is rapidly growing.

³ Charles Ellis, a scientific advisor to BAT, in 1962 confessed in an internal industry document: "we now possess a knowledge of the effects of nicotine far more extensive than exists in published scientific literature." Industry scientists not only knew the alkaloid was addictive, they had already begun to figure out ways to speed its delivery into the bloodstream (using potassium carbonate, for example); see Richard D. Hurt and Channing R. Robertson, "Prying Open the Door to the Tobacco Industry's Secrets About Nicotine," *JAMA*, 280 (1998): 1174; compare also the documentation in *Action on Smoking and Health, Tobacco Explained: The Truth About the Tobacco Industry . . . In Its Own Words: Summary* (London: ASH, 1998), chapter 2.

American tobacco companies have recognized that while the U.S. market is shrinking, there are enormous opportunities for expansion abroad. Global cancer rates are growing faster than at any time in history, primarily due to the expansion of tobacco sales abroad, often using many of the same duplicitous and strong-armed techniques first developed in the United States.

IV. METHODS

There is an immense scholarly literature on the health hazards of tobacco; there is also a smaller, but nonetheless significant, literature on the role played by the tobacco industry in suppressing evidence of tobacco hazards.⁴ In preparing for this testimony, I reviewed the historical development of both of these literatures, along with primary published papers demonstrating the nature and extent of the hazard, including chapters 7 and 8 in the 1989 Surgeon General's Report on Reducing the Health

⁴ Harold S. Diehl, Tobacco and Your Health: The Smoking Controversy (New York: McGraw-Hill, 1969); Alex M. Freedman and Laurie P. Cohen, "Smoke and Mirrors: How Cigarette Makers Keep Health Question 'Open' Year After Year," Wall Street Journal, February 11, 1993; Stanton Glantz et al., The Cigarette Papers (Berkeley: University of California Press, 1996); Philip J. Hilts, Smokescreen: The Truth Behind the Tobacco Industry Cover-up (Reading: Addison-Wesley, 1996); Richard Kluger, Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris (New York: Alfred A. Knopf, 1996); Maurine Neuberger, Smoke Screen (Englewood Cliffs: Prentice-Hall, 1963); Kenneth E. Warner, Selling Smoke: Cigarette Advertising and Public Health (Washington, D. C.: APHA, 1986); Elizabeth M. Whelan, A Smoking Gun: How the Tobacco Industry Gets Away With Murder (Philadelphia: Stickley Co., 1984); Thomas Whiteside, Selling Death (New York: Liveright, 1971).

Consequences of Smoking.⁵ I also reviewed scholarly histories of tobacco and health, concentrating on the following questions: How early was it possible to know that tobacco was a major cause of disease and death? And how did the tobacco industry respond to the discovery of these hazards?

I also reviewed the conclusions of experts writing on the question of whether worries over health were important in the decline of tobacco use after 1964. I reviewed many of the recently released internal documents of the tobacco industry, primarily to ascertain: a) the extent to which industry officials were early on aware of the hazards of tobacco, and b) the extent to which the industry took steps to inform the public of these hazards. As part of this general inquiry, I reviewed literature documenting the impact of tobacco industry advertising and tobacco industry pronouncements on popular perceptions of tobacco's health effects.

In addition, I examined the efforts of tobacco industry officials to create and/or influence markets for tobacco products in a number of countries outside the United States, where tobacco consumption patterns have changed dramatically in recent years. The point of this investigation has been to determine whether it is fair to conclude that the industry has established a pattern of using questionable methods to influence smoking patterns--by encouraging teenagers to smoke, for example, or by suppressing

⁵ U.S. Surgeon General, Reducing the Health Consequences of Smoking: 25 Years of Progress (Washington, D.C.: U.S. Govt. Printing Office, 1989).

efforts to limit smoking.

Finally, I looked at how American smoking patterns might have been different, had the tobacco industry been forthright in its acceptance of tobacco hazards. My assumption here, consistent with accepted historical methods, is that there is nothing natural or inevitable about the smoking patterns of a particular society. Smoking grows or declines in consequence of specific historical forces, including: advertising campaigns,⁶ publicity (or lack of publicity) concerning hazards, peer pressures, taxation policies, and so forth. I examined these and other factors to reconstruct an alternate historical pathway showing how smoking patterns might have evolved if the industry had not waged its massive campaign of disinformation.

These were essentially the methods followed in the 1989 Surgeon General's report, where (among other things) an effort was made to evaluate how many people would have continued smoking in the absence of the antismoking movement.⁷ My

⁶ R.J. Reynolds conceded the impact of advertising in getting people to smoke in a 1973 document: "Smokers appear in part to be produced through genetics--not solely advertising or peer pressure." See "Secondary Source Digest," reviewing the R&D Report by D.J. Wood; H. Williams's "Why do People Smoke"; and Dunn's 1973 "Why Do People Smoke?" (summarized in Minnesota Trial Exhibit #13,809, p. 2); compare also the Surgeon General's Reducing the Health Consequences of Smoking, pp. 501-08.

⁷ U. S. Surgeon General, Reducing the Health Consequences of Smoking, pp. 649-79; compare also Kenneth E. Warner, "Cigarette Smoking in the 1970's: The Impact of the Antismoking Campaign on Consumption," Science, 211 (1981): 729-31; also his "Effects of the Antismoking Campaign: An Update," American Journal of Public Health, 79 (1989): 144-51.

methods follow closely those used in the 1989 Surgeon General's report, adding to this only the idea that one can estimate how many people would not have smoked if the industry had been honest in its advertising.⁸

V. HISTORICAL BACKGROUND

Complaints about the health hazards of *nicotiana* go back hundreds of years, but it is not until the eighteenth century that tobacco was linked to cancer. The English physician John Hill in 1761 tied smoking to cancer of the nasal passages, and Samuel T. von Soemmerring in Germany three decades later identified pipe smoking as a cause of cancer of the lip.⁹ These early insights, based on clinical experience, were confirmed in the 1850s when a French physician by the name of E.-F. Bouisson noticed that 63 of his 68 patients with cancer of the mouth (*cancer des fumeurs*) were pipe smokers.¹⁰ The famous German pathologist Rudolf Virchow corroborated the

⁸ U. S. Surgeon General, Reducing the Health Consequences of Smoking, pp. 655ff. The report compares actual smoking trends with estimated prevalence assuming the absence of an antitobacco movement (pp. 655ff).

⁹ John Hill, Cautions Against the Immoderate Use of Snuff (London, 1761), pp. 27-38; Samuel T. Soemmerring, De morbis vasorum absorbentium corporis humani (Frankfurt, 1795), p. 109.

¹⁰ Etienne-Frédéric Bouisson, Tribut à la Chirurgie, vol. 1 (Paris: Baillière, 1858), pp. 259-303.

connection in the 1860s, by which time the tobacco historian Friedrich Tiedemann had reported several cancers of the tongue brought on by smoking.¹¹

Smoking remained a relative luxury throughout the nineteenth century, however, and the cancer contribution cannot have been substantial--which may also explain why the above-mentioned studies were never widely known, even within the medical profession. The most dangerous health hazards of tobacco--lung cancer and heart disease--were not discovered until the 1920s and '30s. This is partly because these most serious consequences of smoking come from cigarettes, which were not very popular prior to the First World War. By contrast with pipe tobacco or cigars, cigarettes tended to be inhaled, exposing lung tissues to irritants to an unprecedented degree.

Tobacco-induced lung cancers began to appear in the early years of this century, but establishing the link to cigarettes was delayed by the fact that both lung cancer and heart attacks generally have long periods of latency (lung cancer, for example, typically is diagnosed thirty or even forty or fifty years after the onset of smoking). As recently as the first World War, lung cancer was still an extreme rarity: a turn-of-the-century review put the entire number of cases known to medicine at only 140,¹² and in 1912,

¹¹ Friedrich Tiedemann, Geschichte des Tabaks (Frankfurt: H. L. Brönnner, 1854), p. 371.

¹² Michael Kaminsky, Ein primäres Lungencarcinom mit verhornten Plattenepithelien (Greifswald: Med. Diss., 1898).

when Isaac Adler produced the first book-length medical review of the disease, he felt he had to apologize for writing on such a rare and insignificant disease.¹³ Today, by contrast, it is the world's most common cause of cancer death, claiming more than 150,000 victims a year in the U.S. alone. China is soon going to have close to a million lung cancer deaths every year, thanks again, largely, to tobacco.¹⁴ We are in the midst of the most rapid rise of cancer the world has ever seen, owing to the rapid increase of world-wide smoking.

Most experts now agree that tobacco is the cause of 80 to 90 percent of all lung cancers,¹⁵ though it took some time for that consensus to become established. Lung cancer rates grew rapidly in the 1920s and '30s, but the increase was not at first attributed to smoking. The influenza pandemic of 1918 was sometimes blamed, as were automobile exhausts, dust from newly-tarred roads, diverse occupational

¹³ Isaac Adler, Primary Malignant Growths of the Lungs and Bronchi (New York: Longmans, Green, and Co., 1912), p. 3.

¹⁴ World Health Association, Tobacco or Health: A Global Status Report (Geneva: WHO, 1997).

¹⁵ Richard Doll and Richard Peto, The Causes of Cancer (New York: Oxford University Press, 1981). Tobacco industry documents from the 1970s show that even higher figures were conceded, privately, by the industry: a BAT memo of August 19, 1977, produced as part of an effort to evaluate cigarette safety, assumed that "95 % of all lung cancer deaths are caused by smoking cigarettes"; see S.J. Green to P. Sheehy, Aug. 19, 1977, p. 2, Minnesota Trial Exhibit #13,724.

exposures, the upsurge of racial mixing, and numerous other factors.¹⁶ Some scholars doubted the reality of the increase,¹⁷ but the more common view by the 1930s was that the disease was genuinely on the rise, for as yet unclear reasons.

German and American scientists in the 1920s and '30s produced the first statistical evidence that tobacco was responsible for the rapid growth of lung cancer.¹⁸ A 1939 German paper by Franz Hermann Müller used case-control methods to show that tobacco was not just a cause of lung cancer, but rather "the major cause" of lung cancer.¹⁹ The paper was abstracted in the Journal of the American Medical Association, and was well known to tobacco industry scientists by the early 1950s.²⁰ Other German scientists reaffirmed these conclusions shortly thereafter, using the sophisticated statistical techniques of "experimental epidemiology" (employing carefully constructed case-control methods, in other words). American and English scientists independently confirmed these results in a series of influential papers in the early and

¹⁶ Wilhelm C. Hueper, Occupational Tumors and Allied Diseases (Springfield, Ill.: Charles C. Thomas, 1942), pp. 369-468.

¹⁷ Franz Herz, "Hat das Lungenkarzinom an Häufigkeit zugenommen?" Medizinische Klinik, 26 (1930): 1666-69.

¹⁸ Robert N. Proctor, "The Nazi War on Tobacco: Ideology, Evidence, and Public Health Consequences," Bulletin of the History of Medicine, 71 (1997): 435-488.

¹⁹ Franz H. Müller, "Tabakmissbrauch und Lungencarcinom," Zeitschrift für Krebsforschung, 49 (1939): 57-85.

²⁰ Claude E. Teague, "Survey of Cancer Research, with Emphasis upon Possible Carcinogens from Tobacco," Feb. 2, 1953, p. 17, Bates No. 50418 4873-4894.

mid 1950s, now regarded as the "classic" proofs of the lung cancer hazard.²¹ In 1953, Ernest Wynder et al. showed that cigarette smoke condensate applied to the skin of mice produced cancerous tumors in nearly half the animals tested;²² E. Cuyler Hammond of the American Cancer Society by the mid 1950s had good evidence that two-pack-a-day smokers were dying, on average, about seven years earlier than nonsmokers.²³

Historians generally regard these American and British papers from the early 1950s as the turning point in tobacco health science, the point when an overwhelming body of detailed, unimpeachable, carefully gathered and analyzed empirical evidence showed that tobacco was a major cause of many deleterious health effects. The information was disseminated widely enough to prompt a 1952 Reader's Digest article advertising the hazards of cigarettes and a number of other popular articles on the

²¹ Ernest L. Wynder and Evarts A. Graham, "Tobacco Smoking as a Possible Etiologic Factor in Bronchiogenic Carcinoma," JAMA, 143 (1950): 329-36; Richard Doll and A. Bradford Hill, "Smoking and Carcinoma of the Lung. Preliminary Report," British Medical Journal, 2 (1950): 739-48; Robert Schrek et al., "Tobacco Smoking as an Etiologic Factor in Disease. I. Cancer," Cancer Research, 10 (1950): 49-58; Morton L. Levin, Hyman Goldstein and Paul R. Gerhardt, "Cancer and Tobacco Smoking: A Preliminary Report," JAMA, 143 (1950): 336-38.

²² Ernest Wynder, Evarts Graham, and A. B. Croninger, "Experimental Production of Carcinoma with Cigarette Tar," Cancer Research, 13 (1953): 855ff.

²³ James T. Patterson, The Dread Disease: Cancer and Modern American Culture (Cambridge, Mass.: Harvard University Press, 1987), p. 209.

topic.²⁴ Richard Doll was knighted for his contribution, and the papers are routinely cited as among the most important papers in twentieth century medicine.

VI. THE "FRANK STATEMENT"

The mid 1950s is also a turning point in another sense, however, for that is when the tobacco industry launched its subtle and well-funded attack on the scientific evidence. It is disturbing enough (and rarely noticed) that the industry did so little to investigate the hazards of tobacco prior to the 1950s; even more disturbing is how the industry responded to the path-breaking papers of the 1950s demonstrating harms. For while tobacco industry officials at this time privately admitted that cigarettes caused cancer,²⁵ they carefully concealed their concession from the public, while also launching a massive campaign of boomfoggery to dispute, dilute, and distract from the scientific consensus.

Immediately following Wynder and Graham's 1953 animal experiment, tobacco

²⁴ Roy Norr, "Cancer by the Carton," *Reader's Digest*, Dec. 1952, pp. 7-8.

²⁵ In 1958, the British American Tobacco company interviewed scientists at eighteen institutions and research laboratories in North America, including three tobacco companies, the Scientific Advisory Board of the Tobacco Industry Research Committee, the National Cancer Institute, and several universities, and managed to find only one scientist who disagreed with the proposition that cigarettes had been shown to cause lung cancer. An early set of interviews (1954) showed at least one tobacco industry research director commenting "Boy, wouldn't it be wonderful if our company was the first to produce a cancer-free cigarette. What we could do to the competition!" See Hurt and Robertson, "Prying Open the Door," p. 1174.

executives from Philip Morris, R.J. Reynolds, and other leading tobacco manufacturers (Brown and Williamson, American Tobacco, U. S. Tobacco, and Benson and Hedges) met secretly to formulate a coordinated response to the emerging tobacco-health consensus. Minutes from the meeting show that industry officials worried that acknowledging the health threat could prompt the government to step in to regulate tobacco the way alcohol or drugs were already regulated.

The decision was eventually made not to acknowledge the hazard; instead, acting on the advice of the PR firm Hill and Knowlton, the industry decided to mount a massive public relations campaign to counter scientific evidence of the hazard.²⁶ The campaign was carefully crafted, and ingenious: the industry would claim to be taking seriously the question of whether tobacco might pose a health danger, while at the same time doing everything in its power to diminish public awareness of the true nature and extent of the hazard. The industry went to extraordinary lengths to claim there was "doubt" about smoking-disease links; the industry's repeated calls for ever "more research" were actually part of this larger scheme to reduce public fears that smoking involved a risk of premature death or illness.²⁷

²⁶ Hilts, *Smokescreen*, pp. 1-7.

²⁷ There are countless examples: Fred Panzer, a vice president of the Tobacco Institute, in a 1972 memo to institute president Horace R. Kornegay recommended sticking with the "brilliantly conceived" strategy of "creating doubt about the health charge without actually denying it"; see Geoffrey Cowley, "Science and the Cigarette," *Newsweek*, April 11, 1988, p. 67. The memo is reproduced in *Harper's Magazine*,

The first major product of this PR campaign was a "Frank Statement" published by the major tobacco companies in January 1954, announcing an ambitious effort to "study" the nature and extent of tobacco hazards. The "Frank Statement," published in dozens of newspapers throughout the country, announced the formation of a Tobacco Industry Research Committee (later named Council for Tobacco Research (TIRC/CTR)) as part of an effort to promote research by "independent scientists" into tobacco use and health. The "Frank Statement" proclaimed the industry ready and willing to investigate tobacco health effects honestly and without bias; the goal was to research the question and to "let the results speak for themselves."

Historians now agree that the "Frank Statement" was anything but frank.²⁸ Instead, the document is widely regarded as the first blast in a massive, decades-long propaganda campaign designed to prevent the public from becoming convinced that tobacco was a major cause of death and injury. The industry claimed to be investigating the health question openly and without bias, when in fact the industry hid

June 1988, pp. 25-26. Compare also the internal Brown and Williamson memo subpoenaed by the Federal Trade Commission in 1969, which reads: "Doubt is our product since it is the best means of competing with the 'body of fact' that exists in the mind of the general public. It is also the means of establishing a controversy. If we are successful at establishing a controversy at the public level, then there is an opportunity to put across the real facts about smoking and health." See Proctor, Cancer Wars, p. 110.

²⁸ Harold S. Diehl, Tobacco and Your Health: The Smoking Controversy (New York: McGraw Hill, 1969); Elizabeth M. Whelan, A Smoking Gun: How the Tobacco Industry Gets Away With Murder (Philadelphia: Stickley Co., 1984).

what it knew, attacked the best available science of the time, and repeatedly claimed that smoking was safe:

-- Industry scientists repeatedly claimed that the cancer link was unproven, even though internal industry documents show that the link was already conceded. Claude E. Teague of R.J. Reynolds on Feb. 2, 1953, for example, produced an elaborate review of contemporary cancer literature, conceding that "excessive and prolonged use of tobacco, especially cigarettes, seems to be an important factor in the induction of lung cancer," that "the incidence of lung cancer is considerably higher among moderately heavy to chain smokers compared to the general hospital population without cancer," that "the occurrence of lung cancer in a male nonsmoker is a rare phenomenon," and tobacco was probably "an important etiologic factor in the induction of primary cancer of the lung."²⁹ Teague called for "complete, detailed surveys" to be made of the topics covered in his report; instead the company's law department barred the survey from circulating and ordered all extant copies destroyed.³⁰

-- Industry scientists and ad men repeatedly claimed that tobacco was not

²⁹ Teague, "Survey of Cancer Research," Feb. 2, 1953, pp. 11, 14. Teague concluded: "There appears to be a growing suspicion, or even acceptance, among medical men and cancer researchers that the parallel increase in cigarette consumption and incidence of cancer of the respiratory system is more than coincidence" (Ibid., p. 5).

³⁰ "RJR Research and Development," p. 57.

addictive, while privately referring to nicotine as both an addictive drug and the "sine qua non" of smoking. Claude Teague, for example, wrote in 1972 that the tobacco industry should be considered a "highly ritualized and stylized segment of the pharmaceutical industry";³¹ subsequent years would see countless reaffirmations ("We are basically in the nicotine business"; "Think of the cigarette as a dispenser for a dose unit of nicotine"; BAT "should learn to look at itself as a drug company rather than a tobacco company"; "nicotine is the addicting agent in cigarettes," etc.).³²

-- Industry scientists claimed that there was "doubt" about the nature or extent of tobacco hazards, when one of its main goals was actually to manufacture and magnify that doubt. A 1976 industry review of the "Industry Response to Cigarette/Health Controversy" noted that two of the primary goals of the industry vis a vis the health issue were 1) to "support scientific research to refute unfavorable findings" and 2) to "conduct information campaigns against claims by the antismoking lobby." This same review boasted that the funding of "health research" by the industry had "allowed the industry to take a respectable

³¹ Claude E. Teague, "Research Planning Memorandum on the Nature of the Tobacco Business and the Crucial Role of Nicotine Therein," RJR, April 14, 1972, Minnesota Trial Exhibit #12408.

³² Minnesota Trial Exhibits #13165 and #18089; also the memo from W. K. Dunn ("The Nicotine Kid") to Wakeman of Philip Morris; Exhibit #11361 dated April 22, 1980; and many references in Hurt and Robertson, "Prying Open the Door."

stand along the following lines: "After millions of dollars and over twenty years of research, the question about smoking and health is still open."³³

-- The industry was remarkably successful at creating doubt.

Contradicting recent industry claims that the hazards and habit-forming properties of tobacco have been well-known for centuries, a 1958 Gallup poll found that only 44 percent of the American (adult!) public knew that cigarettes caused lung cancer; a 1962 poll found an even smaller percentage (38 percent).³⁴ Young people, the people deciding whether to begin smoking, must have known even less, of course.³⁵ Public ignorance abated somewhat after the Surgeon General's report: a 1966 Gallup survey found that nearly 60 percent of the public believed cigarettes caused cancer.³⁶ The tobacco industry was well aware of the public's ignorance: a 1978 Brown & Williamson internal memo reported that "very few consumers are aware of the effects of nicotine, i.e., its addictive

³³ "Industry Response to Cigarette/Health Controversy," Feb. 4, 1976, pp. 1-2.

³⁴ Kluger, *Ashes to Ashes*, p. 222.

³⁵ The 1989 Surgeon General's Report on the Health Consequences of Smoking concludes that "many of those who start to smoke do not understand the nature of tobacco addiction and are unaware of or underestimate important health consequences of smoking" (p. 596).

³⁶ Ronald J. Troyer and Gerald E. Markle, Cigarettes: The Battle over Smoking (New Brunswick: Rutgers University Press, 1983), p. 77.

nature and that nicotine is a poison."³⁷ Perhaps that is not surprising, given the constant barrage of tobacco industry propaganda assuring the public that "Claims that Cigarettes are Addictive Contradict Common Sense" (the headline of a May 16, 1988, Tobacco Institute press release).³⁸

-- Industry officials claimed to be interested in examining the safety of tobacco honestly, when in fact the projects undertaken by the TIRC/CTR and industry labs were routinely vetted by industry legal departments, worried that industry scientists might reveal tobacco products as actually responsible for death or disease.³⁹ At R.J. Reynolds, the head of the law department (Henry Ramm) was actually the architect of the company's research into the smoking and health issue. Industry documents show that Ramm's "greatest fear" was that the company would do something that would "enable the FDA to assert jurisdiction over cigarettes." Company lawyers directed scientific research "because the lawyers did not want anyone performing research that would appear to

³⁷ Hurt and Robertson, "Prying Open the Door," p. 1178.

³⁸ See Minnesota Trial Exhibit #14,384.

³⁹ Much documentation can be found in "RJR Research and Development." The establishment of the TIRC/CTR had a clever legal rationale: the existence of a large scale health research program could be used to argue the industry was not ignoring health concerns: "The TIRC/CTR's research programme takes into account the need for the manufacturers not being negligent in research"; see P.J.R. and G. E.T., "Report on Policy Aspects of the Smoking and Health Situation in U.S.A.," Oct. 1964, p. 2, Bates No. 100311 9099-9135.

acknowledge that cigarettes or cigarette smoke contained harmful constituents." Papers on "polycyclic hydrocarbons, hydrogen cyanide, carbon monoxide, and similar materials" known to be present in cigarette smoke were barred from being submitted for publication,⁴⁰ and in 1970, the company closed its entire Biological Division (firing 26 research scientists), worried about the unfavorable findings that might emerge.⁴¹

-- Industry officials promised a frank discussion, but industry legal departments routinely "word-smithed" documents to guarantee that expressions suggestive of harms (physical or legal) be avoided.⁴² When carcinogens were discussed, for example, they had to be described as "alleged carcinogens" and were often referenced using code words ("nitrosamine," for example, was "IN31").⁴³ Internal memos and reports were censored: R.J. Reynolds developed what it called the "New York Times Principle" according to which nothing was to be written down that you didn't want to see printed in the New York Times--the primary worry being, again, that the industry's recognition of a hazard might become public.⁴⁴

⁴⁰ "RJR Research and Development."

⁴¹ Kluger, Ashes to Ashes, pp. 359-60.

⁴² "RJR Research and Development," pp. 25-36, 48-49.

⁴³ *Ibid.*, p. 59.

⁴⁴ *Ibid.*, pp. 60-62.

-- The "Frank Statement" promised to keep the public abreast of industry findings, when in fact the public was consistently misled about health hazards. At least one popular article on the tobacco health "question" was written under a pseudonym to cover up the fact that the author was actually working for the tobacco industry.⁴⁵

Industry spokesmen consistently lied to Congress about the hazards of tobacco, published misleading and mendacious claims about the state of scientific knowledge, and withheld internal information from governmental review committees investigating tobacco and health. The industry exerted pressure on popular magazines to side-step the entire issue: a 1978 article in the Columbia Journalism Review noted that in the past seven years it had not been able to find a single article in a leading national magazine discussing the health effects of smoking. So great was the advertising clout of the industry, it had managed to discourage publishers from even mentioning such hazards. The 1989 Surgeon General's Report clearly linked the restriction of media coverage of tobacco hazards to broad public ignorance of the nature and extent of the

⁴⁵ The most notorious are the articles published in True magazine on Jan. 15, 1968, and in the National Enquirer shortly thereafter; both were written by a Mr. Stanley Frank working for Brown and Williamson (via Hill and Knowlton), but the True magazine piece is published under the pseudonym, "Charles Golden." The National Enquirer piece was accompanied by the headlines: "Most Medical Authorities Agree, Cigarette Lung Cancer Link is Bunk--70 Million Americans Falsely Alarmed." See Whelan, Smoking Gun, p. 113.

hazard;⁴⁶ industry officials were well aware of the public's ignorance (they were helping create and maintain it, after all), though they admitted this only privately.

-- The "Frank Statement" promised open inquiries into the health question, when in fact it was industry policy to hide anything that might suggest a hazard. Companies were barred from mentioning safety in patent applications, fearing that any reference to making cigarettes safer would imply they were not already completely safe.⁴⁷ In 1957, the RJR company withdrew a patent for a method to extract harmful high-molecular weight fats, waxes, and sterols from cigarettes; the patent was dropped because the patent rationale made it clear that the process could help to remove substances that, when burned, were "carcinogenic to mice." Even the hint of such a possibility made the patent "too sensitive." In 1967, the company barred inquiry into a process that had been shown to help remove carbon monoxide from cigarette smoke; research was prohibited on the grounds that pursuing such a line of inquiry would have required admitting that cigarette smoke actually does contain carbon monoxide.⁴⁸

There are many more examples of such abuses; the overall pattern, however, is clear and consistent. Tobacco industry officials conspired to suppress publication of

⁴⁶ U. S. Surgeon General, Reducing the Health Consequences of Smoking, p. 508.

⁴⁷ Ibid., p. 65.

⁴⁸ Ibid., pp. 76-77, 82-83.

knowledge that would indicate that tobacco was a major risk to health. The body that was supposedly assigned the task of investigating such hazards, the Tobacco Industry Research Committee (TIRC/CTR), never conducted research that might have implicated tobacco products; the research published is narrow and technical, and virtually indecipherable to a non-expert. The industry never honestly publicized the extent to which tobacco might be a cause of injury or premature death. TIRC/CTR papers address narrow questions of biochemical mechanisms and never even touch on the larger and most significant truth--that cigarettes are deadly.

VII. WHAT WOULD HAVE AN HONEST "FRANK STATEMENT" HAVE LOOKED LIKE?

An honest "Frank Statement" would have admitted that the best science of the time indicated a major and growing health hazard, would have admitted the addictive nature of the product, would have admitted that the product contained benzpyrene and carbon monoxide and ammonia and other chemicals known to cause cancer and other life-threatening illnesses--most of which had been identified in tobacco smoke prior to the 1950s. Following up on the promise, the industry would have dedicated honest efforts to confirm the magnitude of the hazard, would have informed the public and the U.S. government of its findings, would have stopped marketing to children and other vulnerable or poorly informed populations. An honest industry would have warned that

lung cancer rates could be expected to grow in the future, and would have taken immediate steps to either eliminate the cancer hazard from tobacco smoke or to develop alternate nicotine delivery systems which did not pose cancer hazards. The industry should have stopped their deceptive advertising and stopped producing "research" designed to insinuate doubt.

The industry would have honestly searched for alternative, less deadly nicotine delivery systems (like gums and patches), and would have refrained from encouraging young people to smoke through youth-directed advertising. An honest "Frank Statement" would have kept its promise to cooperate with government, would have informed governmental authorities of what the industry knew about hazards and the addictive nature of tobacco, would have created a climate of open and honest exchange with health authorities in a sincere effort to lower the hazard.

VIII. WHAT IF THE INDUSTRY HAD COME CLEAN?

There is nothing natural or inevitable about how much tobacco a nation consumes, or for how long. The history of smoking in the United States--and therefore the incidence of American cancers, heart attacks, and so forth--would have been dramatically different had the industry acknowledged the scientific evidence and taken steps to solve the problem. The industry could have conceded that the product was addictive, could have introduced less harmful alternatives (like nicotine gums or

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patches), and could have taken honest steps to prevent children from using the product. Instead, the industry continued to market aggressively to teenagers, to deny health hazards, to promote scientific "research" deliberately designed to deflect attention from tobacco as a cause of injury and death.

The question can be asked: How would U.S. smoking patterns have been different, if the industry had admitted the nature of the hazard, had not marketed to teenagers, had not deceived the public when evidence of the dangers became widely apparent? The question is significant, because how soon activists and governmental agencies respond to a threat has a great deal to do with how seriously that threat is perceived. The power of the industry to deny or deflect attention from the hazard has played a major role in delaying responsible efforts to address the hazard. Questions of the form "how might history have been different" invariably involve a certain degree of uncertainty--since historical counter-factuals can never be known for sure--but it is nonetheless possible to come to some conclusions which are robust and reliable.

It should first of all be noted that the industry itself has long been aware that its ability to sell cigarettes depends on many factors, including: the success of its PR efforts, the strength of anti-smoking movements, the social acceptability of the habit, the failure of governments to take action, public ignorance of the hazards, and much

else as well. The industry has worked to influence each of these areas,⁴⁹ and at various points has constructed contingency plans to deal with events that might adversely impact the industry. In the late 1940s, for example, the industry was worried that the FDA might step in and regulate tobacco products.⁵⁰ Fifty years earlier, around the turn of the century, the industry worked hard to have tobacco excluded from the Food and Drugs Act of 1906.⁵¹ In either case, if the regulators had prevailed, the growth of tobacco use would have been profoundly affected.

Historians and public health experts agree that the publication of the 1964 Surgeon General's Report was the single most important factor reducing tobacco use in the postwar era.⁵² The report was not, of course, the only factor; there were other influences at work, including the growth of the anti-smoking movement, growing

⁴⁹ Stanton Glantz and Michael E. Begay have shown that tobacco industry campaign contributions have been important in blocking tobacco legislation; see their "Tobacco Industry Campaign Contributions Are Affecting Tobacco Control Policymaking in California," JAMA, 272 (1994): 1176ff.

⁵⁰ The fact that early postwar regulatory efforts did not succeed has largely to do with the anti-regulatory climate of the McCarthy era, combined with the power of the industry to win supporters in the U.S. Congress. This is made clear in the Morris Fishbein collection of documents at the University of Chicago.

⁵¹ James H. Young, Pure Food: Securing the Federal Food and Drugs Act of 1906 (Princeton: Princeton University Press, 1989).

⁵² "1964 marked the beginning of the first period of sustained, substantial, and expanding antismoking activity"; see U.S. Surgeon General, Reducing the Health Consequences of Smoking, pp. 649-50.

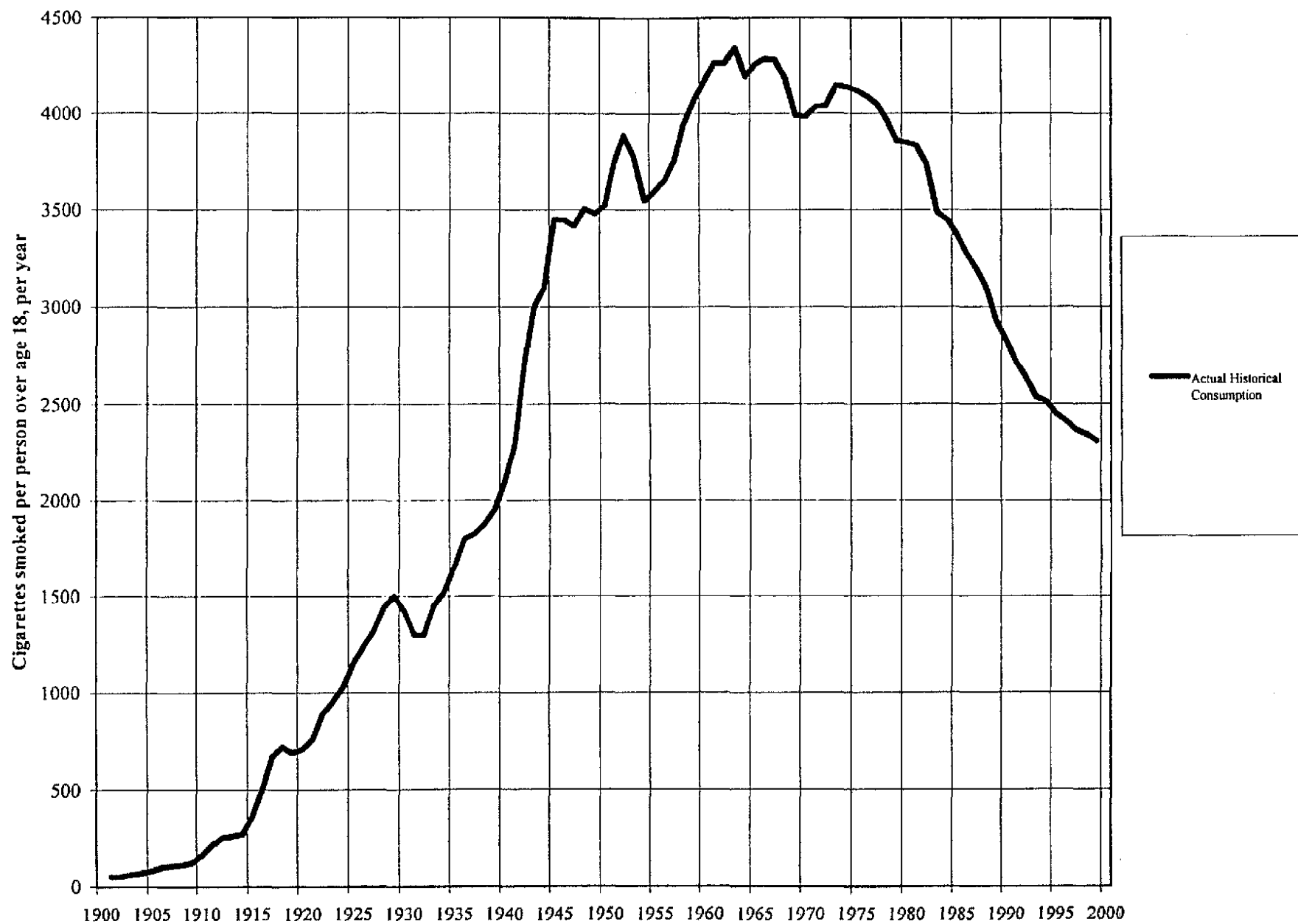
concerns about health and safety in the culture as a whole, and so forth. Historians and public health experts tend to agree, however, that awareness of health hazards has been the single most important force in moving Americans to reduce their smoking.

The response to the Surgeon General's Report was profound: Adult per capita smoking dropped from a peak of 4,345 cigarettes per year to about half that figure two decades later. A 1981 estimate calculated that the 1964 Report had decreased tobacco consumption by 39 percent over the period 1964 to 1978.⁵³ The fraction of the adult population smoking declined, as did the total number of cigarettes smoked per person. The trend is represented graphically in Chart 1.

It should be pointed out, again, that there was nothing natural or inevitable about the shape of this curve. People start or quit or continue smoking for many different reasons, including peer pressure, industry advertising, economic well being, the strength of antismoking movements, and other social forces in the culture. Historians and public health experts generally agree, however, that the decline in smoking from the 1960s through the present has largely been due to fears of harms caused by smoking. Awareness of the possibility of injury or death affects how many people start and how many people quit; it influences how many cigarettes are smoked by people who already smoke, but it also affects the strength of anti-smoking efforts and the

⁵³ L. Schneider, B. Klein and K. M. Murphy, "Governmental Regulation of Cigarette Health Information," Journal of Law and Economics, 24 (1981): 575-612.

CHART 1 - Per-Capita Consumption of Cigarettes in the U.S.



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Sources: U.S. Tobacco Statistics, U.S. Department of Agriculture Economic Research Service; K. Warner, *New England Journal of Medicine*, 312 (1985):384-88

willingness of governments to impose taxation.⁵⁴

A number of questions can therefore be asked. Why did it take so long for U.S. cigarette smoking rates to decline? How much sooner could they and should they have begun to decline, and what would the health consequences have been if the decline had come sooner? What if the kind of information widely available and publicized in 1964 had been available and publicized when it could have and should have been publicized: in 1954?

Since scientific proof of the ill-effects of smoking was well established by the early 1950s (and not until then, significantly), it is reasonable to assume that the government--acting through the Surgeon General or some other body--could have informed the public of the hazard in 1954. The U.S. Public Health Service and private philanthropic organizations were already used to responding to crises in other areas of public health. The Delaney Amendment to the U.S. Food and Drug Act barred carcinogens from foods, and the March of Dimes successfully organized a large-scale test of Salk's polio vaccine to rid the nation of that scourge. By the mid-1950s, the National Institutes of Health was spending millions to research and combat threats to public health and safety. Many of these campaigns were remarkably successful: the polio campaign of the early 1950s has already been mentioned, but there was also the

⁵⁴ U. S. Surgeon General, Reducing the Health Consequences of Smoking, chapters 7 and 8.

campaign to identify and treat carriers of sexually transmitted diseases, which dramatically lowered the incidence of syphilis and gonorrhea from the 1930s to the 1950s.⁵⁵

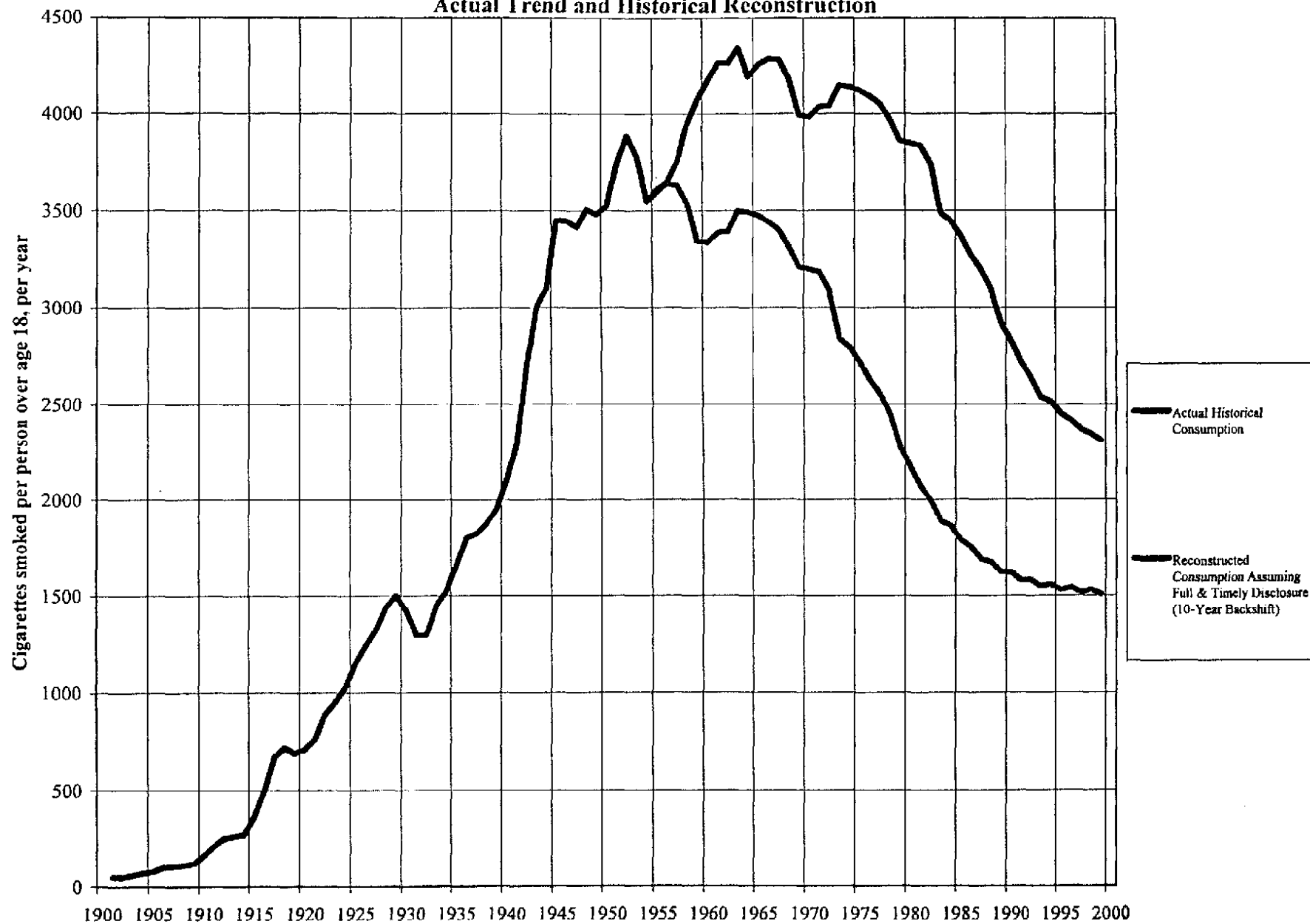
What is remarkable is how little public attention was given to tobacco, a far greater hazard than any other health issue at this time. The crucial difference, of course, is that tobacco differed from many other kinds of threats, in that enormous funds were spent to coddle and protect the hazard--which was not true for, say, syphilis or polio. No one was spending millions of dollars to defend polio or syphilis. No one was manufacturing doubt, manipulating public opinion, trying to say that the evidence against polio or syphilis was "merely statistical" or "not yet proven." Successful efforts were therefore launched against polio and syphilis and carcinogenic food dyes and DDT and saccharine, while the far greater hazard of tobacco--buttressed by powerful political and economic patrons--remained almost entirely unregulated, from a public health point of view.

If the tobacco industry had been honest and responsible, the growth of smoking could have been halted in the 1950s, ten years before its eventual decline. Chart 2 shows how tobacco use in the U.S. most likely have evolved, had the industry come clean.

The historical reconstruction shown in Chart 2, however, assumes only that the

⁵⁵ Allan Brandt, *No Magic Bullet* (New York, 1981).

CHART 2 - Per-Capita Consumption of Cigarettes in the U.S.:
Actual Trend and Historical Reconstruction



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Sources of historical line: U.S. Tobacco Statistics, U.S. Department of Agriculture Economic Research Service; K. Warner, *New England Journal of Medicine*, 312 (1985):384-88

decline was moved up ten years, what was widely known in the medical community was not suppressed by industry boomfoggery, and that information widely available after the 1960s was publicized at the time of its discovery. We have not taken into account the subsequent history of deception practiced by the industry: the deliberate manipulation of nicotine chemistry to increase the effectiveness of blood absorption, the decades-long marketing to children, the manipulation of the political process to block taxation and other forms of regulation, etc.--all of which delayed the implementation of antismoking policies.

What if the industry itself had actually taken the lead to advertise honestly the nature of the hazard? How low, then, would consumption rates have gone?

If tobacco industry pronouncements are to be believed, the industry itself should have halted production as soon as evidence of harms was available. In 1954, for example, George Weissman, vice president of Philip Morris, announced in a widely-reported speech in Chicago that the industry would "stop business tomorrow" if it thought its product was harming smokers. Weissman blamed the cancer problem not on tobacco but on "medical propaganda . . . by a small number of doctors and a large number of magazines and newspapers."⁵⁶ A late draft of the "Frank Statement" had offered similar reassurances, promising consumers that "We will never produce and market a product shown to be the cause of any serious human ailment." The final

⁵⁶ Quoted in the Pioneer Press, March 31, 1954, p. H.

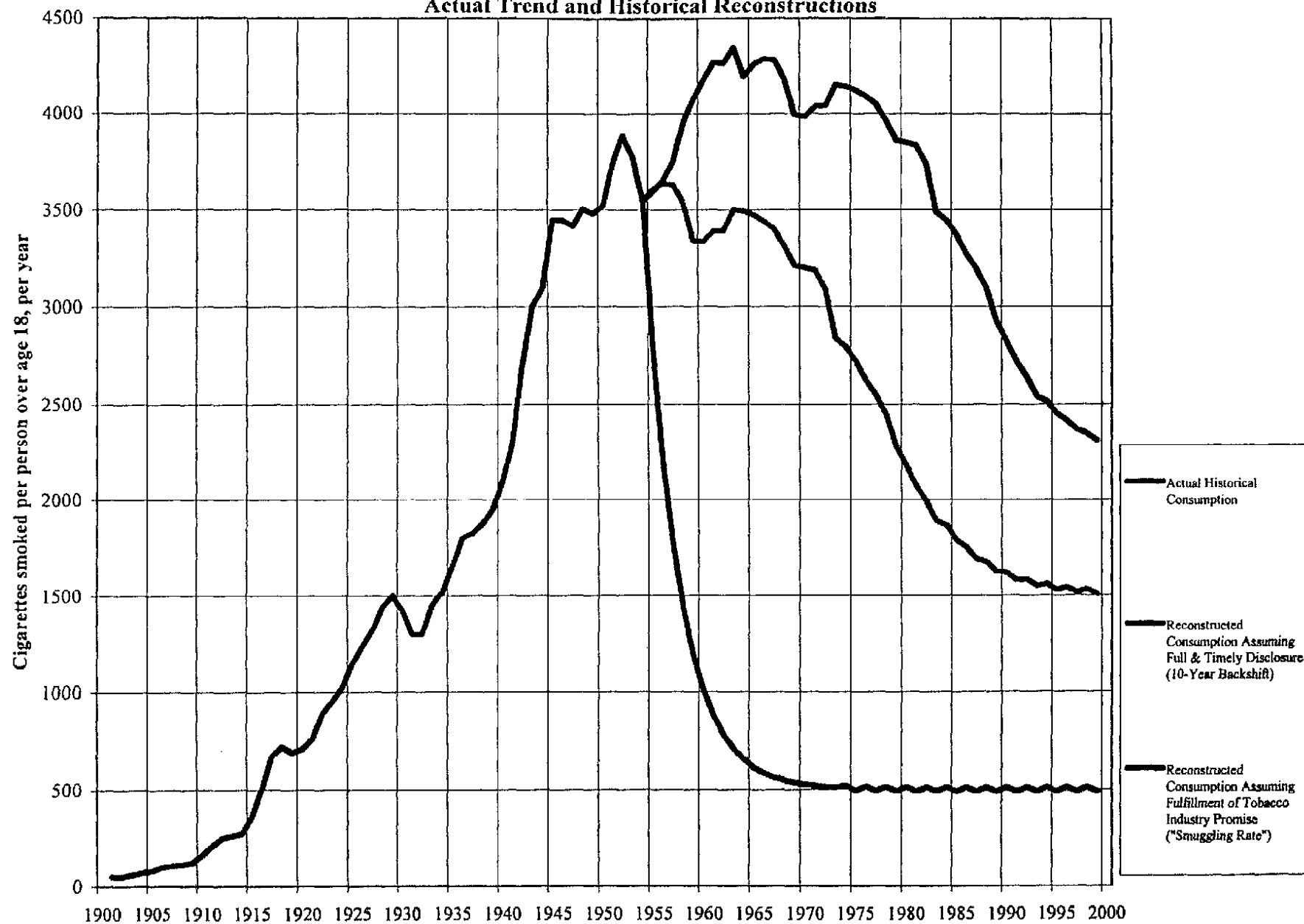
version pledged "an interest in people's health as a basic responsibility, paramount to every other consideration in our business"; it also promised to "cooperate closely" with officials responsible for safeguarding public health.⁵⁷

Smoking rates would never have dropped to zero, of course: even if Weissman's promise had been carried out, it is reasonable to assume that home-growing or smuggling would always have allowed a minor level of smoking. One also has to assume that some people would have started smoking despite knowledge of the risks, and that some would continue smoking despite such knowledge. A probable rate under such a scenario would be that depicted in Chart 3.

If the industry had been responsible, however, it would have taken aggressive steps to advertise what it knew about tobacco hazards as soon as information was available. Large and visible warnings (of the lung cancer hazard, for example) would have immediately been placed on packages, comparable to the warnings already placed on poisons and medicines, comparable to what chemical manufacturers were doing for many of their products. The industry would have conceded that the "low-tar" and "low-nicotine" cigarettes did little or nothing to reduce risks (since people compensated by smoking more). The industry itself, the manufacturer, would have taken the lead in acknowledging the harms, and would have conducted an honest effort to market other nicotine delivery devices (patches and/or gums, for example) not having the harms

⁵⁷ Hurt and Robertson, "Prying Open the Door," p. 1173.

**CHART 3 - Per-Capita Consumption of Cigarettes in the U.S.:
Actual Trend and Historical Reconstructions**



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Sources of historical line: U.S. Tobacco Statistics, U.S. Department of Agriculture Economic Research Service; K. Warner, *New England Journal of Medicine*, 312 (1985):384-88

associated with smoking (most cigarette harms, it should be noted, come from combustion products rather than from nicotine. This was already known in the 1930s).⁵⁸

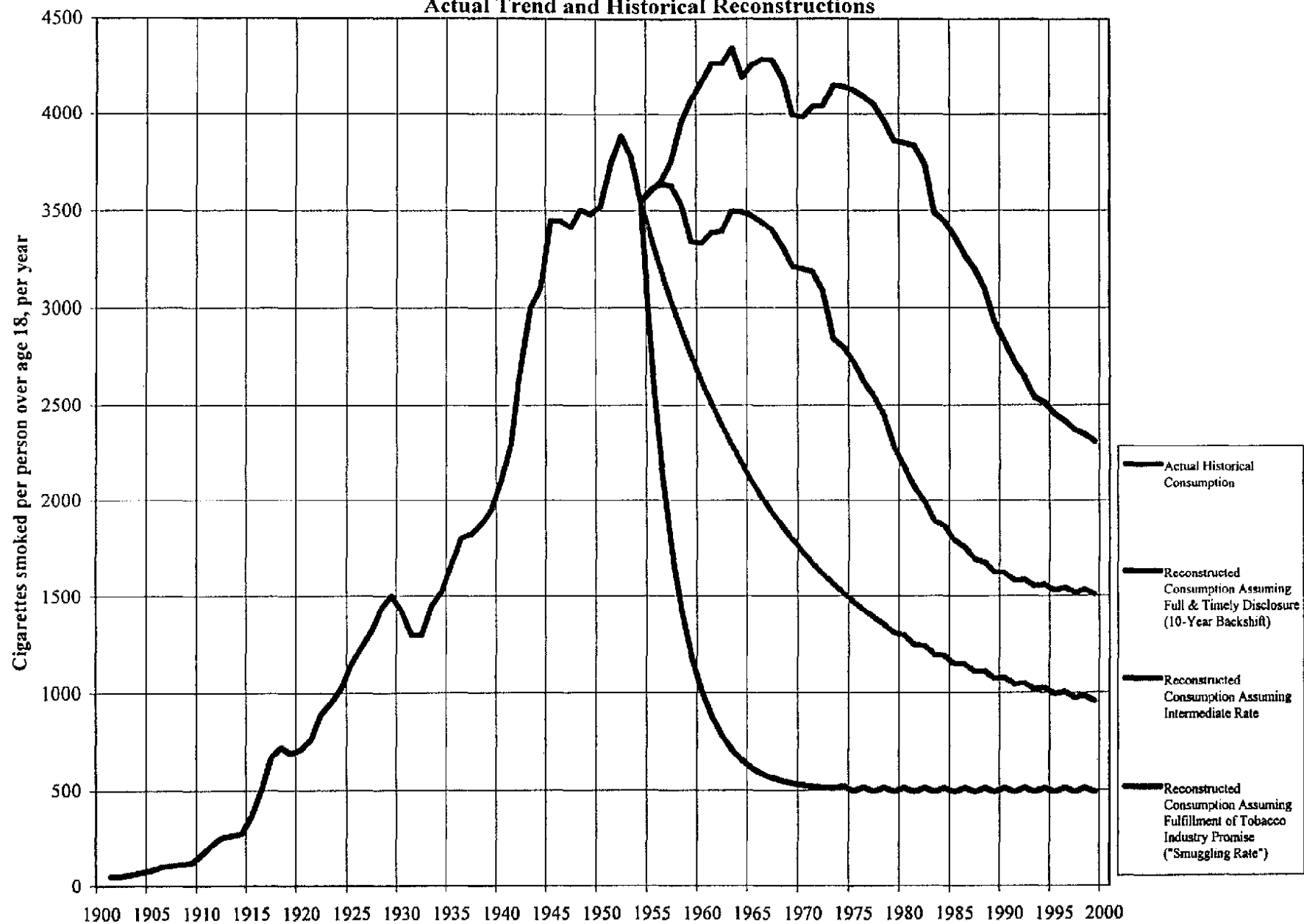
If the tobacco industry had been honest, in other words, there is reason to believe that consumption rates could have gone lower even than what is indicated in Chart 2. No one can say precisely how much lower, but it is reasonable to assume a midpoint between the "extreme" position promised by the industry (halting production altogether) and the more modest assumption of a rate that began to fall in 1954, following a timely Surgeon General's warning subsequent to the establishment of the "scientific consensus" (see Chart 2). This would give us the likely tobacco consumption trend illustrated in Chart 4.

This is the kind of trend one could have, should have and most likely would have have expected if the industry had been honest, had admitted and advertised what it knew, had marketed a nicotine product honestly without targeting youth or people with less education, had made honest efforts to create a product that was safe (rather than pushing deceptive filter cigarettes and with low-tar and low-nicotine products, which actually did little to reduce health risks),⁵⁹ had not conducted an unprecedented, multi-

⁵⁸ Proctor, "Nazi War on Cancer."

⁵⁹ The "tar derby" of the 1950s and the rush to buy filter cigarettes shows that people were in fact eager to reduce their health risks. The failure of the industry to honestly describe the risks led people to believe--wrongly--that low tar, low nicotine,

**CHART 4 - Per-Capita Consumption of Cigarettes in the U.S.:
Actual Trend and Historical Reconstructions**



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Sources of historical line: U.S. Tobacco Statistics, U.S. Department of Agriculture Economic Research Service; K. Warner, *New England Journal of Medicine*, 312 (1985):384-88

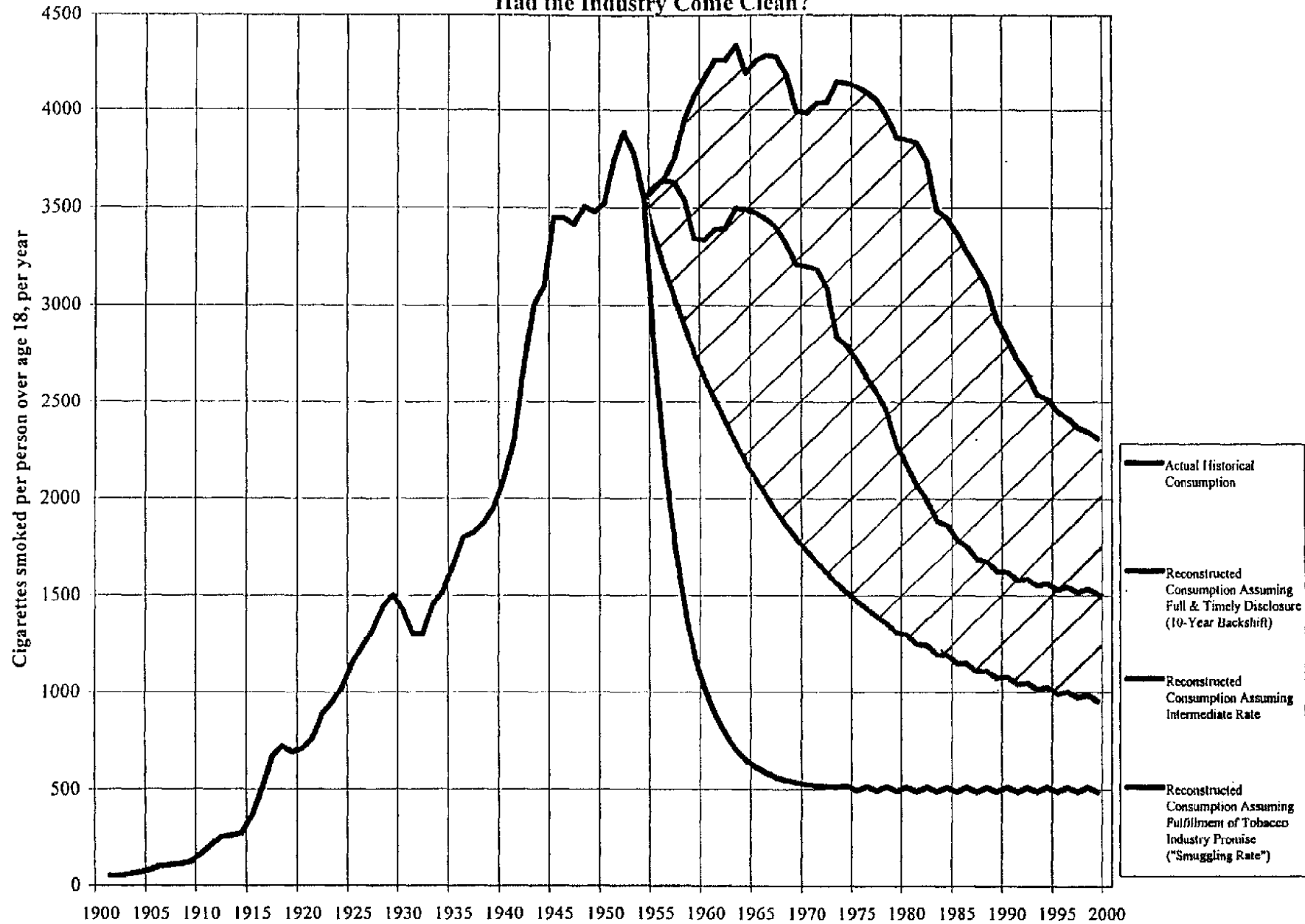
million dollar campaign of deception, had not wielded its enormous financial and political clout to stifle taxation and delay regulation. Government actions could have come sooner, consumers would have been better informed, and antismoking campaigns would have flourished much earlier. Last but not least, millions of Americans could have been saved a death from coughing up blood or suffocation or premature heart attack or one of the many other ways that smoking kills. By subtracting the "intermediate rate" consumption line in Chart 3 from the actual historical trend line (depicted in Charts 1-3) we can estimate the total number of cigarettes that would not have been consumed if the industry had been honest and responsible in its business practices. Assuming a U.S. adult population of 100 million over the period in question, this means that roughly 8 trillion cigarettes would not have been smoked if the tobacco industry had come clean in its dealings with the public (see Chart 5 for details).

IX. THE HISTORICAL EXPERIENCE OF OTHER COUNTRIES

The pattern of tobacco industry's deception should not be seen in isolation, but rather as part of a global plan of market penetration, using many of the same duplicitous techniques developed in the Americas. The industry has recognized for some time now that the future growth of tobacco sales will come from abroad, where

and filter cigarettes were significantly less harmful to your health.

**CHART 5 - How Many Cigarettes Would Not Have Been Smoked
Had the Industry Come Clean?**



The shaded area represents the number of cigarettes that would not have been smoked if the industry had come clean. Assuming a U.S. adult population of 100 million, every shaded box is 250 billion cigarettes and there are 32 boxes, which means that roughly 8 trillion cigarettes would not have been smoked if the industry had come clean.

anti-smoking movements are not as strong, health concerns not as prominent, and millions of new potential smokers are becoming wealthy enough to afford cigarettes. The U.S. market is now shrinking, as a result of public health consciousness, and the overwhelming bulk of U.S. tobacco sales is now moving abroad. Given the importance of this world market, it is not surprising that the industry has undertaken questionable activities to guarantee that smoking increase abroad.

Canada, for example, had some of the highest tobacco taxes in the world until smuggling from the U.S. forced a rollback. The Progressive Conservative government raised tobacco taxes by \$ 2 a carton in 1985, another \$ 4 in 1989, and a further \$ 6 two years later, in addition to local and provincial taxes. Defending the 1991 increase, Finance Minister Michael Wilson claimed that the new taxes would result in "about 100,000 fewer teenage smokers" and substantial health gains.⁶⁰

Canadian tobacco taxes did, in fact produce a dramatic drop in Canadian tobacco use: per capita consumption fell by more than 40 percent over a space of only seven years. Canadians in 1982 were smoking more cigarettes than anyone else in the world on a per capita basis; a decade later they were in 13th place. The Canadian chronicler of this history, Rob Cunningham, has concluded that Finance Minister Wilson did "more to reduce smoking than any other Canadian ever." Cunningham also shows,

⁶⁰ Rob Cunningham, Smoke and Mirrors: The Canadian Tobacco War (Ottawa: International Development Research Centre, 1996).

however, that cigarette manufacturers, assisted by U.S. companies, managed eventually to overturn the taxes--the most aggressive ever in North America, through the following remarkable sequence of events.⁶¹

The high price of Canadian cigarettes eventually led to smuggling from the U.S., since tobacco could be had south of the border for a fraction of the domestic price. By 1993, an estimated one in four cigarettes smoked in Canada had been smuggled in from the United States--mostly via the Akwesasne Indian Reservation straddling the borders between Quebec, Ontario, and New York State. Tobacco companies publicized the breakdown in law and order, though Cunningham also presents evidence that tobacco manufacturers promoted the smuggling. The Canadian government tried to stem the flow of contraband--almost all of which originated in Canada--by imposing an export tax of \$ 8 per carton. "Exports" (= smuggling, since almost all returned to Canada as contraband) fell dramatically, much to the consternation of the industry, which mounted a successful campaign to repeal the export tax. As smuggling resumed, tensions on reservations heated up, tax revenues declined, and Quebecois separatists and others pushed for action. In 1994, the government finally caved in to calls to roll back taxes. Retail cigarette prices plummeted from \$ 47 a carton to \$ 23 a carton in Ontario and Quebec. Smoking rates began to increase in Canada for the first time in decades--the strongest increasing among teenagers.

⁶¹ Ibid.

Canadian cigarette manufacturers managed to crush the Canadian tobacco tax, one of the strongest and most effective anti-smoking campaigns in recent history. Canadian tobacco companies had managed to portray the tax as a threat to law and order (citing smuggling), but there is also evidence that U.S. and Canadian tobacco companies conspired to promote the smuggling operation--to erode support for the tobacco taxes.⁶² The question of the extent to which U.S. and Canadian firms collaborated in promoting the smuggling operation is presently under legal investigation both in Canada and the U.S.

What this story shows is that policies can affect--and dramatically--the levels of smoking in a society. It shows there is a close relationship between price and levels consumed, and that young people are most strongly affected. It shows that the abusive power by the tobacco industry extends across national boundaries, and it shows that that power can be used to crush progressive anti-smoking policies like the Canadian tobacco tax.

⁶² That is the thesis of Cunningham (ibid); it is also a conclusion appearing from other sources. One leading figure involved in the smuggling--Larry Miller--has identified the RJR tobacco company as being part of the smuggling operation. Miller claims to have briefed two executives from the company, who in turn advised him on where to send the cigarettes. See Raja Mishra, "Suspect Accuses Tobacco Firms of Smuggling," Seattle Times, June 28, 1998.

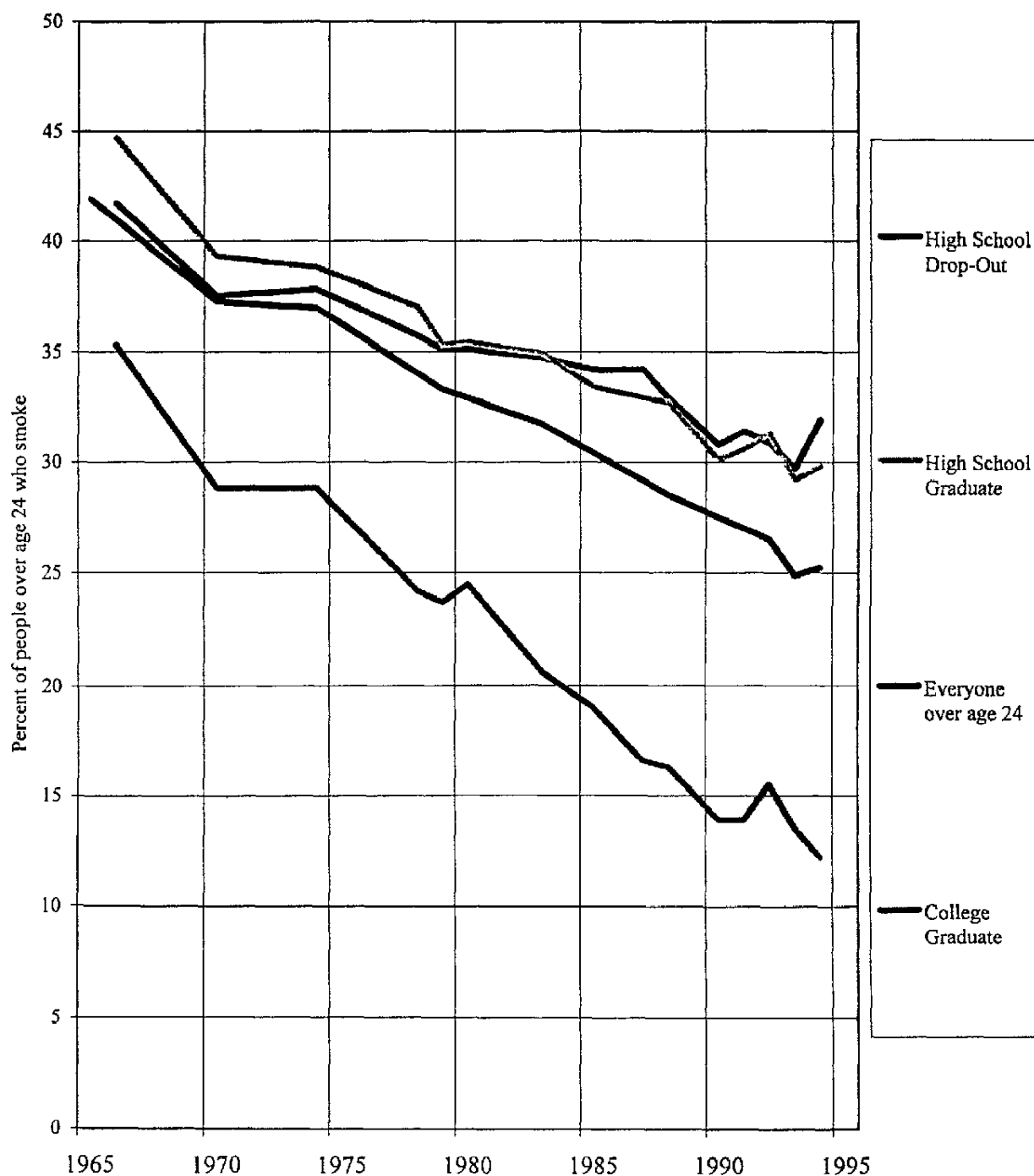
X. CONCLUSION

Tobacco and AIDS are the two most rapidly growing causes of premature death in most of the world today, the most brutally afflicted populations being those in less-developed nations, where tobacco use is growing by leaps and bounds. In Asia alone, tobacco sales are expected to increase by 33 percent from 1991 to the year 2000. The global revenues of tobacco companies exceed \$ 120 billion per year, a larger sum than the Gross Domestic Products of 180 of the world's 205 countries.

The World Health Organization estimates that tobacco products caused three million deaths a year in the early 1990s; it also estimates that if present growth rates continue, tobacco will be causing about 10 million deaths a year worldwide in the early decades of the next century.⁶³ Since the United States is the world's leading exporter of manufactured cigarettes, one has to conclude that the tobacco industry in this country is deeply complicit in the world's largest single cause of preventable death and illness. The fact that duplicity, suppression of information, and calculated insinuation of doubt, have been and are still being used to spread the tobacco habit, makes the ongoing history of this tragedy all the more deplorable.

⁶³ World Health Organization, Tobacco or Health.

CHART 6 - Smoking Prevalence Trends



This chart shows that the more education a person had, the more likely they were to quit smoking (or never start)

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