

WORKING PAPERS



CIGARETTE ADVERTISING, HEALTH INFORMATION AND REGULATION BEFORE 1970

John E. Calfee

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**CIGARETTE ADVERTISING, HEALTH INFORMATION
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I: INTRODUCTION

Cigarettes and advertising have always been business partners. The cigarette became a mass consumer product in the 1920s through innovative uses of advertising and to this day probably no other consumer product is so widely advertised wherever it is legal to do so.¹ The period of the cigarette's prominence also happens to coincide almost exactly with the Federal Trade Commission's existence as a regulator of advertising.² It is unsurprising, therefore, that the history of cigarette advertising is intertwined with the story of FTC advertising regulation. The FTC has brought dozens of cases against cigarette advertisers and has engineered several industry-wide agreements without formal litigation.³ After 1964, when the federal government began to play a

¹ *Business Week*, Dec. 5, 1953, p. 68, noted, "Cigarettes offer the classic case, studied in every business school in the country, of how a mass-production industry is built on advertising." Hence a common phrase is "The industry that advertising built;" see, for example, *Printer's Ink*, Feb. 14, 1964, p. 32. Cigarettes have for many years been among the most advertised consumer products. In 1982, cigarettes led all national advertisers in newspapers and were second in magazines. Federal Trade Commission (1985), p. 8.

² It was not until passage of the Wheeler-Lea Amendment in 1938 that the FTC was formally empowered to bring cases against practices that injured consumers, as opposed to competitors. Nonetheless, the Commission routinely brought deceptive advertising cases before 1938, usually finding that harm to consumers also involved harm to competitors.

³ Some of these initiatives on cigarette advertising served as models for later FTC litigation and rule-making on advertising in general. Examples are the advertising substantiation doctrine (implicitly applied in the 1955 Cigarette Advertising Guides and the 1960 voluntary ban on tar and nicotine advertising, and later established through litigation,) cases involving deception by omission (where the *FTC v. Lorillard* is often cited; see Holmes, 1982 at 385,) and cases and rules based on the notion of "unfairness" (where the 1964 draft trade rule on cigarette advertising served as the basis for the Commission's later explanation of how it would attack unfair practices; see Federal Trade Commission, 1980.) On

prominent role in the regulation and discouragement of cigarette smoking, the Commission's role expanded to include continuous surveillance of cigarette advertising and scientific testing of cigarettes for tar and nicotine content.⁴

For the past decade and a half, cigarette advertising has been extraordinarily simple. There is no TV or radio advertising at all. Print ads usually attempt no more than to show smoking in an attractive context, although somewhere the ads contain a small, stiffly worded warning that smoking is dangerous in any of several ways,⁵ and often there is reference to taste or flavor. The ads also contain tar and nicotine measures; these may be in small print or may form the focus of the ad. Beyond this, there is little -- no references to coughs or throats or lungs, nothing on shortness of breath or effects on the heart, nothing on carbon monoxide, no reference to the power of nicotine to induce relaxation or enhance concentration, no reference to effects on dieting or on digestion, nothing on the many additives that enhance the flavor of filtered smoke, nothing on the differences among filters in how they work in actual smoking conditions or on how one brand may be safer than another -- and the list goes on.⁶

cases establishing the advertising substantiation doctrine, see *FTC v. Pfizer, Inc.*, 81 FTC 23, 73 (1972.) *Firestone*, 81 FTC, 398, 451-52 (1972), *aff'd*, 481 F.2d 246 (6th Cir.), *cert. denied*, 414 U.S. 1112 (1973); *National Dynamics*, 82 FTC 488, 549-50 (1973); *aff'd and remanded on other grounds*, 492 F.2d 1333 (2d Cir.), *cert. denied*, 419 U.S. 993 (1974), *reissued*, 85 FTC 391 (1976); and *National Comm'n on Egg Nutrition*, 88 FTC 89, 191 (1976), *aff'd*, 570 F.2d 157 (7th Cir.), *cert. denied*, 439 U.S. 821, *reissued*, 92 FTC 848 (1978).

⁴ In 1981, the FTC also began to publish carbon monoxide measurements; these are not covered by the voluntary industry agreement to advertise tar and nicotine content.

⁵ The warnings are required by a consent order between the FTC and the six major cigarette manufacturers: *FTC v. P. Lorillard Co., et al*, 80 F.T.C. 455 (1972). In mid-1985 the FTC, carrying out a Congressional requirement (HR 3979, signed by the President on Oct. 12, 1984), established a set of four rotating warnings more specific than the ones used from 1965 until 1985. See 49 *ATRR* 535 (September 26, 1985.)

⁶ Probably the closest any current cigarette ads come to arguing health matters are ads along the lines of, "if you must smoke . . . try Vantage," (*Psychology Today*, September 1985,) and "if you smoke, please try Carlton," (*Atlantic Monthly*, September 1985.) The December 1979 FTC staff report on cigarette advertising during 1978 noted similar messages such as, "Smoking.

This sterilized variant of advertising is almost entirely a result of government regulations and rulings established in the 1950s and 60s. In particular, health-related claims for cigarettes are essentially forbidden by various FTC rulings and guides,⁷ and advertising of the FTC's measurements of tar and nicotine are the result of an industry agreement forged in the face of a threatened FTC trade regulation rule.⁸

These rules, especially those dealing with tar and nicotine ratings, are widely regarded as necessary. The usual argument goes along the following lines. The information most needed by consumers is on a topic that cigarette sellers would prefer consumers know nothing about, namely, the health effects of smoking. Sellers therefore have no incentive to advertise health information or to reinforce information consumers obtain from other sources. Even worse, individual sellers will not dispute competitors who falsely claim that smoking is harmless, since in order to challenge these claims truthfully the seller would have to advertise that his own product is also unsafe. A particularly difficult problem arises from the fact that improved cigarettes would contain lesser amounts of chemicals such as tar and nicotine which consumers cannot measure. If an externally provided standard for such measures did not exist, sellers would use the method most favorable to themselves and comparisons among brands would be impossible. Thus one concludes that advertising will not correct inadequate health information and will not encourage competition for safer cigarettes. Third parties such as consumer magazines or public health experts can help relatively little because of inadequate property rights to information. It follows that the market will respond sluggishly to new health information. Substantial improvements in cigarettes and

Here's what I'm doing about it." FTC (1979), p. 6-6.

⁷ See the discussion below on the FTC's 1955 Cigarette Advertising Guides and preceding FTC cases.

⁸ FTC (1981), p. 4-4. The proposed trade rule can be found in 35 *Federal Register* 12671 (1970). Use of FTC measures is not quite universal. The opinion in *FTC v. Brown and Williamson* (1983 at n. 29) noted that some firms have occasionally advertised and labeled packages with numbers lower than the FTC figures, with no response from the FTC.

in information about cigarettes will occur only when forced to by the government.⁹

The cigarette market is therefore often believed to be a classic example of a market that fails because of informational problems. Even trenchant critics of advertising regulation have argued that government intervention is necessary in order to eliminate health claims from advertising (since health claims, if any, will be false), to force true health information into the market, and to encourage competitive forces in the production of cigarettes that contain less tar and nicotine.¹⁰ The present situation, however flawed, must be far superior to an unregulated market.

In this paper I attempt to show that this thinking is almost entirely wrong. Competition on the informational aspects of smoking can easily arise spontaneously in competitive or oligopolistic markets. This is because cigarette sellers may encounter opportunities to emphasize the harmful effects of their product in a way that makes other brands appear even more harmful. Such advertising can attract sales from competing brands and therefore earn profits for a single seller even if the advertising harms the cigarette market as a whole. This kind of competition may become mutually destructive, so competitors may occasionally attempt coordinated action to prevent it. But all the traditional problems in implementing cartel agreements will come into play, and the incentives for some firms to break ranks will tend to overwhelm joint interests. Thus successful promotion of the cartel's welfare tends to be at best transitory in the absence of government support of market-wide agreements.

The historical result of these incentives is that cigarette advertising has often drawn attention to unhealthy aspects of smoking even when doing so was detrimental to the interests of cigarette manufacturers as a group. Moreover, as the scientific evidence on smoking became more alarming, so did the advertising. Eventually, cigarette advertising was extraordinarily effective in publicizing the

⁹ For such arguments, see Posner (1973), p. 7, and Doron (1979) p. 98. Also see Beales, Craswell, and Salop (1981), p. 514, n. 73, and p. 538, where they assume that standardized tar and nicotine measures are needed to cure a natural market failure in information.

¹⁰ Posner (1973), p. 7, and Beales, Craswell, and Salop (1981), p. 514, n. 73, and p. 538.

fact that smoking is dangerous and that changes in smoking habits could improve health. Voluntary health-related advertising reached its climax in the 1952-54 "cancer scare" when, with no government assistance, the industry's self-inflicted "negative" advertising helped cause sales to decline more rapidly than at any other time between the Great Depression and the present.¹¹ Near the end of 1954, however, the FTC brought the industry's alarmist health advertising to a halt by establishing a set of cigarette advertising guides that eliminated virtually all health claims in cigarette advertising. The market's self-destructive episode of 1952-54 has never been repeated.

Of particular interest is tar and nicotine advertising. Contrary to what present appearances suggest, government action to prompt such advertising is unnecessary. The FTC had to struggle for years to *prevent* cigarette manufacturers from advertising tar and nicotine content. When government restrictions were absent the market responded quickly to consumer demand for tar and nicotine information. In the single three-year period from 1957 to 1960, during which frequent tar and nicotine advertising was tolerated by the FTC, the market spontaneously produced reliable measures of tar and nicotine content, widespread advertising of the results, and a reduction of more than one-third in the sales-weighted average of tar and nicotine content in cigarettes. After 1960, the year in which the FTC engineered an industry-wide agreement that completely eliminated tar and nicotine advertising, reductions came much more slowly. Progress resumed after the late 1960s when the Commission reluctantly reversed its policy and began to encourage the "tar derby." Nonetheless, the Great Tar Derby of the late 1950s probably saw more improvement in cigarettes than has taken place in the twenty years since the FTC about-face. Indeed, the system now imposed by the FTC may constitute a barrier to continued improvement in consumer information and in cigarettes themselves.¹²

¹¹ The sole exception to this statement is the year 1983, in which the Federal cigarette tax was increased from eight to sixteen cents per package. Sales data are analyzed more thoroughly in the discussion below on the events of 1953-54.

¹² One important aspect of FTC regulation of cigarette advertising will probably change. In October 1985 the FTC voted to solicit public comments on plans to modify its cigarette testing methods to take into account some of the criticisms of the previous five years. [*Wall Street Journal*, October 9, 1985, p. 41,

These events suggest that dissemination of negative product information in competitive markets is a remarkably robust process. Governmental efforts to regulate this kind of information can easily make the market worse, for the FTC seems mainly to have retarded rather than hastened market adjustment to new information on the health effects of smoking. This is particularly true of the two landmarks in FTC intervention, the 1955 Cigarette Advertising Guides and the 1960 ban on tar and nicotine advertising. These two actions constructed new standards for advertising competition, standards that harmed smokers but may have benefitted the cigarette manufacturers as a group.

Also notable, in view of the predominance of the FTC's current advertising substantiation doctrine, is the fact that the 1955 and 1960 interventions were both founded on the principle that firms should be prohibited from making implied claims for which there is no conclusive scientific substantiation. In the context of cigarette advertising, where health claims were usually "less unhealthy" claims, the effect of the substantiation principle was to create a market bias against providing new and valuable health information.

II: ECONOMIC INCENTIVES FOR HEALTH ADVERTISING IN THE CIGARETTE MARKET

*"More Doctors Smoke Camels Than Any Other Cigarette"*¹³

The cigarette market has always been plagued by the popular fear that cigarette smoking is dangerous. The 1970 edition of *Webster's New World Dictionary* defines "coffin nail" as "[Old slang] a cigarette," and this phrase was indeed common from the earliest days of the cigarette.¹⁴ Since as early as the

and 49 *ATRR* 632, Oct.10, 1985.] Criticisms of the FTC's cigarette testing techniques are discussed below.

¹³ Magazine ad for Camel cigarettes, *Time* magazine, Sept. 23, 1936, as noted in Federal Trade Commission, Bureau of Economics (1964), p. LBA 1a. This slogan was used for many years.

¹⁴ References to cigarettes as coffin nails were undoubtedly common for many years (more so than at the present, one suspects.) Borden (1942, p. 223) describes usage of the term by the Anti-Cigarette League during his boyhood.

mid-nineteenth century, medical and scientific authorities have mounted frequent assaults on smoking.¹⁵ These attacks were not generally persuasive until careful epidemiological studies began to appear in the 1950s. In the meantime, smokers and their acquaintances could not help but notice such symptoms as "smoker's cough" (another ancient phrase) and shortness of breath. In fact, cigarettes were so suspect in the popular mind that in the 1910s and 1920s many of the same people who succeeded in prohibiting liquor turned to cigarettes as the logical next target, and such popular heroes as Henry Ford and Thomas Edison publicly denounced cigarette smoking. For a time, many states prohibited cigarette smoking altogether.¹⁶

Sellers of such a product face a mixed set of incentives that depend partly on market structure. The cigarette market has been a remarkably stable oligopoly -- four firms in the 1920s and early 1930s, six in the half-century since -- although relative shares have shifted substantially.¹⁷ Referring to the four or six firms as "the cartel," one can say that the interests of the cartel lie with allaying

The 1929 candy ads described below refer derisively to "nails in your coffin." The 1942 *Reader's Digest* article that triggered the FTC's 1943 cases against Lorillard, also discussed below, noted [p. 751] the difficulty of determining which brand would nail one's coffin most quickly. In Robert (1949, p. 245), the section devoted to anti-cigarette activity in the 1920s is entitled "And Still the Coffin Nail." Finally, *Consumer Reports*, February 1953 at 60, lists some of the then current slang names for cigarettes: "coffin nails, gaspers, weeds, pills, lung dusters, dope sticks, and poison sausages."

¹⁵ For example, see the long series of letters, representing various views, to the editor of the English medical journal *The Lancet*, starting Jan. 10, 1857. Also see Steinhaus and Grunderman (1941) and the literature review in Doll and Hill (1950). Robert (1949), p. 253, notes that in the 1920s the arguments against smoking by women were particularly vociferous, and that among the reasons advanced by anti-smoking advocates was the possibility that smoking would harm unborn fetuses. More generally, see Wagner (1971), chapter 3.

¹⁶ The motives for these laws included aesthetics and hygiene as well as health. The anticigarette laws quickly fell in the 1920s as cigarette smoking overwhelmed tobacco-chewing, pipe-smoking and other forms of tobacco use. See Wagner (1971), pp. 40-47, Robert (1949), p. 245-256, and Borden (1942), p. 223.

¹⁷ When the "cancer scare" hit the market in 1952, the three largest firms (with a combined market share of 79%) were the same three firms that had emerged from the famous antitrust decision of 1911 with most of the assets of the old American Tobacco Company. *Consumer Reports*, February 1953 at 61. Sales data from Wootten (1954).

all fears that smoking is dangerous. But the interests of individual firms diverge from those of the cartel. When a firm admits or encourages fears of smoking, it bears only part of the costs imposed on the cartel since the effect is to discourage all smoking. Thus if a firm reminds smokers of their fears and then suggests that his own brand is less dangerous, the private benefits to that firm may exceed the private costs even if the market as a whole suffers a loss. Clearly smaller firms are more likely than larger ones to find this technique profitable.

Smaller firms will therefore be tempted to depart from the cartel's best strategy for health advertising, which often is to engage in no health advertising at all. Additional factors that inhibit cartel profit-maximizing behavior in health advertising are varying cost functions for different kinds of cigarettes and divergent expectations about such matters as the state of consumer knowledge, the probable results of scientific research, consumer responses to new information or informational advertising,¹⁸ and so on.

¹⁸ On several occasions cigarette manufacturers have been unable to agree on the probable effects on consumers of various kinds of information. One example, discussed later, is the disagreement within the industry in 1966 over whether to continue the voluntary code banning tar and nicotine advertising after the FTC changed policy and declared that such advertising was desirable. About this same time, some manufacturers apparently thought the mere act of developing filter cigarettes would imply to consumers that cigarettes were harmful (Wagner, 1971, p. 91.) In 1981 Reynolds and Philip Morris, the two largest sellers, urged the FTC to prohibit Brown and Williamson's use of FTC tar and nicotine measures in ads for Barclay, a new low-tar brand. Reynolds and Philip Morris argued that the measures were inaccurate for Barclay's innovative filter and therefore the use of these figures threatened the integrity of the FTC measurement system. When the FTC sued Brown and Williamson (this case is discussed later), Liggett and Myers supported Brown and Williamson and even suggested that FTC testing should end since the measures were generally inaccurate and were deceptive for most brands. See *FTC v. Brown and Williamson Tobacco Corp.* (1983) and *Advertising Age*, July 11, 1983, p. 66. More recently, R.J. Reynolds launched a series of "public service" advertisements on various controversies over smoking, including the question of whether smoking causes heart disease; one such ad, entitled "Of Cigarettes and Science," occupied a full page in the March 19, 1985 *Washington Post* and many other publications. This campaign has proved extremely controversial and has been attacked by governmental and other public health advocates on the grounds that the ads distorted the evidence on smoking and health and were likely to promote smoking. [Coalition on Smoking OR Health (1985), *Washington Post*, May 1, 1985; *Wall Street Journal*, July 24, 1985, p. 7.] Tobacco companies themselves also may have reasons to fear the Reynolds ads because of the public debate prompted by the arguments advanced and because the ads explicitly conceded that virtually all authorities agree that smoking con-

These factors can induce one or more small sellers to refer in its advertising to the health effects of smoking and then reap private advantage from consumer fears. Competitive forces may cause other brands to retaliate, partly because once health references become a familiar part of advertising there is less private loss to the larger firm from admitting the health problem. The result can be a major advertising campaign that actually frightens smokers. This is most likely to happen when negative publicity arrives from outside the market, because this lowers the cost of arousing consumer fears to be exploited through advertising.¹⁹

These market forces can improve consumer information and product choices over what would otherwise occur. Of course information will never become perfect or even close to unbiased. But consumers can easily be *better* informed than before: more aware of possible problems, more suspicious of sellers' reassurances, more alert to new views and more eager to gather information from sources less likely than advertisers to be biased. The product itself will change as individual brands are improved to gain competitive advantage. Finally, the negative information that various sellers emphasize for personal advantage may actually reduce overall industry demand and also increase public interest in the health effects of smoking, thus causing consumers to seek information from other sources and perhaps further reducing demand for cigarettes.

An interesting aspect of this form of competition is that historically there were probably few, if any legal restraints on cartel attempts to prevent these untoward events. The FTC's numerous cases against health claims in the 1930s and 1940s suggests that an industry agreement to limit health claims might have been welcomed. The cigarette industry occasionally attempted to restrain negative advertising through public statements on the damage to the market of certain

tributes to heart disease. Since this campaign was launched by Reynolds alone instead of by a tobacco trade group -- although other tobacco companies had often pointed out the study's results while refraining from advertising them [Raleigh, N. C. *News and Observer*, April 21, 1985] -- and since for many years no tobacco firm had taken such a measure when the evidence was far more favorable to smoking, one must assume that current Reynolds management takes a different view of the ads' effects on smokers than does present and past management of their competitors.

¹⁹ The marketing literature suggests that negative product publicity tends to exert a disproportionate effect on consumer beliefs. See, for example, Lynch and Srull (1982) and Mizerski (1982).

kinds of advertising, and the 1965 industry advertising code (discussed below) provided a formal mechanism for coordinating claims. But as so often happens with cartels, these efforts were usually unsuccessful in the absence of FTC or other government support.²⁰

III: THE SIGNIFICANCE OF HEALTH-RELATED CIGARETTE ADVERTISING

1. Before 1950: "Not a Cough in a Carload"²¹

The effects of the mixed incentives facing cigarette manufacturers can be seen throughout the history of cigarette advertising. For many years advertisers routinely reminded smokers of their worries, and did so in a manner that followed the current state of knowledge on the health effects of smoking.²² Before 1950 few authorities believed that moderate smoking was potentially lethal, and many

²⁰ A prominent example is the cigarette industry's 1965 self-regulation advertising code, which is discussed later. Virtually everything in the code coincided with announced FTC policy, if not with the results of past FTC cases. When the FTC reversed policy on allowing tar and nicotine claims, which were prohibited under the code and under previous FTC policy, two firms quickly withdrew from the code, despite widespread feeling in the industry that tar and nicotine claims were harmful to the cigarette market as a whole. This episode is discussed below.

²¹ Advertisement for Chesterfield cigarettes, 1930 and many other years. See Federal Trade Commission, Bureau of Economics (1964) p. LBA 4, 5. The very long appendix A to this document, and the several added volumes of representative advertisements, are an invaluable source of information on past cigarette advertising campaigns.

²² There are theoretical reasons to expect that health-related cigarette advertising would correspond roughly to current state of knowledge. The most efficient way to exploit consumer fears of health effects is to refer to what is already known. Using advertising to instill new consumer knowledge would be costly and subject to free-riding by competitors. As noted below, before the 1950s most of what was known scientifically was also apparent to smokers and their friends from direct observation; knowledge of these effects could be taken for granted by advertisers. Later, after other parties had incurred the cost of obtaining less obvious information on the effects of smoking (the connection between smoking and lung cancer, for example,) advertisers could free-ride on that information.

were certain that it was not.²³ Thus health concerns in this era consisted primarily of observable symptoms: "smoker's cough," reduced athletic performance, throat irritation, and so on. All these symptoms received attention as sellers attempted to argue that their own product produced less of the adverse effect: "No Throat Irritation -- No Cough . . . we . . . removed . . . harmful corrosive acids" (Lucky Strike, early years);²⁴ "Not a cough in a carload" (Chesterfield, many years); "Do you inhale? What's there to be afraid of? . . . famous purifying process removes certain impurities" (Lucky Strike, 1932);²⁵ "More doctors smoke camels than any other cigarette;" "Not a Single Case of Throat Irritation Due to Smoking Camels;"²⁶ "Smoking's more fun when you're not worried by throat irritation or 'smoker's cough'" (Philip Morris, 1942 or earlier);²⁷ "Remember Juleps, forget your cough," (1942 or earlier);²⁸ and many, many other ads on irritation, coughs, "cigarette aftertaste," mildness, and so on. Major sellers even advertised lower tar and nicotine at least as early as 1940, and for many years

²³ For example, a July 1938 *Consumer Reports* article on smoking concluded "cigarette smoking is probably slightly deleterious to the human machine," noting that "unbiased scientists have tried to determine the harmfulness of smoking and have tried, on the whole, in vain." [p. 6.] The article also quoted from Walter Mendenhall, research pharmacologist and author of *Harvard Health Talk on Tobacco*, "if a man or woman uses tobacco in moderation, he or she may live as long, be as happy and free of disease as a neighbor who does not indulge." [p. 6.] In January 1950, *Reader's Digest* provided a popular review of past research, noting that conclusive evidence of harm was absent and that on the specific problem of lung cancer (the rate of which had increased rapidly in recent years,) the American Cancer Society stated that no scientifically valid answers were available, although results of careful studies might be available soon [p. 7.] For a more thorough review from the perspective of the year 1950, see Wynder and Graham (1950) at 329.

²⁴ An early slogan for Lucky Strike, in 1929 and other years. Wagner (1971), p. 56. Also see Federal Trade Commission, Bureau of Economics (1964), p. LBA 2.

²⁵ Brecher, et al. (1963) at 142. Also see Federal Trade Commission, Bureau of Economics (1964) at LBA 2a.

²⁶ Wagner (1971), p. 72. Also see Federal Trade Commission, Bureau of Economics (1964), p. RA1 and RA1a, for ads run in 1950 and 1951, and p. LBA 16 for 1949. This slogan ran for many years.

²⁷ *FTC v. Philip Morris & Co., Ltd., Inc.* 49 FTC 703, 713 (1952).

²⁸ *FTC v. Penn Tobacco Co.*, 34 FTC 1636, 1637 (1942).

minor manufacturers advertised and sold "de-nicotinized" cigarettes that were much lower in nicotine than standard brands.²⁹

In the presence of such advertising from all sides it was probably impossible for any smoker or potential smoker to forget that cigarettes led to smoker's cough and other unpleasant symptoms. Cigarette sales still increased during these years because for many consumers the enjoyment of smoking exceeded the apparent harm. Nonetheless, contemporary observers considered it obvious that advertising served as a constant reminder of the symptoms associated with smoking. At the height of the "cancer scare" late in 1953, *Business Week* noted under a headline aptly worded "Ads Come Home to Roost,"

. . . the cigarette companies achieved much of this remarkable result [establishing the market through advertising in previous decades] by screaming at the top of their lungs about nicotine, cigarette hangovers, smoker's cough, mildness, and kindred subjects.³⁰

Another of past cigarette advertising is particularly surprising from the perspective of the present day. The ads frequently cited medical authorities, experiments and surveys on throat irritation and other effects of smoking. In the

²⁹ On tar and nicotine advertising by major brands, see section below on early tar and nicotine advertising, and sources cited therein. On de-nicotinized cigarettes, see *Consumer Reports*, July, 1938, p. 5-9.

³⁰ *Business Week*, Dec. 5, 1953, at 66. The article also noted that from the early 1930s on, the single advertising theme that worked best was "sell health." Earlier that year *Consumer Reports* (February 1953 at 63), noting that health was one of the three persistent themes in cigarette advertising (the others being "pleasure" and "snob appeal,") added

One recent survey indicated that smokers are often aware that cigarette smoking may not be good for them and they don't like to be reminded of it by ads. Some members of the industry also insist that adclaiming health advantages for a particular brand merely underscore the possible dangers from smoking, to the detriment of the whole industry and without helping the advertised cigarette. But health themes have been and are still widely used.

The 1963 Consumers Union book, published when the evidence against smoking was of increasing political interest, noted that "in one way or another, health is a theme which has been at the center of cigarette advertising from the very beginning." It observed that even the original campaign for Camels, which when marketed in the 1910s was the first modern cigarette, implied that Camels were less worrisome than the harsher varieties then popular. Brecher, et al. (1963) at 143.

1930s and 1940s, when there was no convincing epidemiological evidence against smoking, an appeal to science was an attractive method for soothing the fears of smokers. A typical ad was this one for Philip Morris:

With Philip Morris--you have no opinion--no facts from any private research of our own. Instead we simply call your attention to the findings of an independent group of doctors. You can draw your own conclusions. For the sole benefit of their own profession these doctors report in authoritative medical journals . . .³¹

One result of this technique was to impress upon the public's mind that scientific scholarship was the appropriate means for settling questions about the effects of smoking.³² This advertising theme, like the more obvious one that cigarettes were associated with alarming medical symptoms, would later return to haunt the cigarette industry when scientific evidence turned the other way.

I do not mean to imply that all health claims in cigarette advertising were of the faintly alarmist type. Cigarette ads also claimed medical benefits. Some of the most prominent of these claims, such as that cigarettes can aid dieting or digestion³³ or offer a means of relaxation and mental concentration,³⁴ have since been shown to be true, although little scientific proof was available at the time

³¹ *FTC v. Philip Morris & Co., Ltd., Inc.* 49 FTC 703, 713 (1952). Another example is

"[Philip Morris cigarettes] . . . have been proved by actual tests on the human throat measurably and definitely milder than ordinary cigarettes."

Federal Trade Commission, Bureau of Economics (1964), p. LBA 4, describing a 1936 ad for Philip Morris. Also see page LBA 1b, containing a 1949 ad for Camels.

³² *Consumer Reports*, February 1953 at 63, noted that "one of the most frequently used clichés in the trade is the reference to the 'independent laboratory.'" As noted below in the discussion of the 1950-54 "cancer scare," for many years the cigarette manufacturers secretly supported scientific research on smoking and health.

³³ "For digestion's sake, . . . smoke Camels." From a 1936 ad, described in Federal Trade Commission, Bureau of Economics (1964), p. LBA-1a.

³⁴ "Never jangle your nerves," from a 1936 ad for Camels, described in Federal Trade Commission, Bureau of Economics (1964), p. LBA-1a, and (it's true!) an ad showing a smoking physician with the headline "a lung surgeon needs steady nerves."

and most such claims were successfully attacked by the FTC in the 1940s.³⁵ Other claims, for which no foundation has ever been found, were that smoking would cure or ameliorate various ailments such as colds, and some ads simply said smoking had no ill effects at all.³⁶

Even when sellers advertised the benefits of smoking, however, market incentives could lead to increased consumer awareness of the dangers of smoking. The best example was the campaign for Lucky Strike begun in the middle 1920s. These ads turned on the famous theme "reach for a Lucky instead of a sweet." Market discipline took the form of a strenuous response from the candy manufacturers, who resorted to such ads as

Do not let anyone tell you that a cigarette can take the place of a piece of candy. The cigarette will inflame your tonsils, poison with nicotine every organ of your body, and dry up your blood -- nails in your coffin.

The American Cancer Society could hardly have said it better. The ensuing melee produced useful public information on the effects of excess consumption of sugar as well as of cigarettes. Eventually, a truce was apparently engineered by the FTC.³⁷

³⁵ On recent developments in the study of nicotine's effects, see "New Knowledge about Nicotine Effects" (1982) and Blakeslee (1984) p. 33 ["The addictive drug [nicotine] appears to have unique properties that make it 'perfect' for coping with the vicissitudes of life," and, "there is evidence that cigarettes make task performance easier, improve memory, reduce anxiety, increase tolerance of pain and reduce hunger."] The FTC cases, which are discussed below with full citation, were *FTC v. American Tobacco Co.*, *FTC v. P. Lorillard Co.*, *FTC v. R. J. Reynolds Co.*, and *FTC v. Philip Morris & Co., Ltd. Inc.*

³⁶ See, for example, Brecher, et al, (1963) at 156. Also see *FTC v. Julep Tobacco Co.*, 27 FTC 1637 (1938), consent; and *FTC v. Brown and Williamson Tobacco Corp.* 34 FTC 1689 (1942), consent. Some claims were remnants from the period in which tobacco had been widely used as a medicine. See Stewart (1967; as cited in Kozlowski, 1985.)

³⁷ The main sources on the candy-and-cigarettes war are Wagner (1929), p. 343-345, and Wagner (1971) at 59. The final resolution of the little war between candy and cigarettes is not known to me with certainty. Wagner (1971 at 60) suggests the FTC eventually ended the battle. FTC case reports include a 1929 consent with an unnamed respondent who agreed not to represent that its cigarettes would cause weight loss "in all cases." 13 FTC 435 (Nov. 18, 1929.) At any rate, the "reach for a Lucky instead of a sweet" slogan continued into the 1940s. The 1982 medical news item in the *Journal of the American Medical*

The claims and slogans that achieved greatest notoriety, however, were almost certainly the ones that sought to capitalize on the many possibly unhealthful effects known to accompany smoking. These claims were the primary target of a series of cases brought by the FTC in 1942 and 1943 against most major cigarette manufacturers and several minor ones.³⁸ Litigation consumed about eight years, during which most of the offending advertising was apparently

Association cited in the note above provided the final word:

Remember the cigarette advertisements of the 1940s[sic]: "Reach for a Lucky instead of a sweet" and "Have a Camel with your meal and after it -- they satisfy"?

Well, recent research suggests that those ads were accurate. It appears that cigarettes may reduce the desire for sweets and help some people to achieve greater satisfaction from their meals.

"New Knowledge about Nicotine Effects" (1982).

³⁸ *FTC v. R. J. Reynolds Co.*, 46 FTC 706 (1950), *modified*, 192 F.2d 535 (7th Cir. 1951), *on remand*, 48 FTC 682 (1952); *FTC v. P. Lorillard Co.*, 46 F.T.C. 735 (1950), *order modified*, 46 F.T.C. 853 (1950), *aff'd*, 186 F.2d 52 (4th Cir. 1950); *FTC v. American Tobacco Co.*, 47 FTC 1393 (1951), *order modified*, 48 FTC 1161 (1952); *FTC v. Philip Morris & Co., Ltd., Inc.* 49 FTC 703 (1952), *vacated and remanded on motion of Commission. complaint dismissed on affidavit of abandonment*, 51 FTC 857 (1955). Most of these cases also involved tar and nicotine claims, which are discussed in the second half of this paper. More limited cases, mainly against small firms, were *FTC v. Benson and Hedges* 33 FTC 1659 (1941); *FTC v. Penn Tobacco Co.*, 34 FTC 1636 (1942), consent; *FTC v. Brown and Williamson Tobacco Corp.*, 34 FTC 1689 (1942), consent; *FTC v. Estabrook & Eaton Co.* 35 FTC 925 (1942), consent; *FTC v. Penn Tobacco Co.*, 34 FTC 1636 (1942), consent; *FTC v. Brown and Williamson Tobacco Corp.* 36 FTC 1099 (1943), consent; and later, *FTC v. R. L. Swain Tobacco Co.*, 41 FTC 312 (1945); *FTC v. Brown and Williamson Tobacco Corp.* 43 FTC 805 (1947), consent; *FTC v. Brown and Williamson Tobacco Corp.* 46 FTC 1240 (1950), consent; and *FTC v. Leighton Tobacco Co.*, 46 FTC 1230 (1950), consent. In addition, there were consents with unnamed respondents, such as 12 FTC 640 (April 12, 1929: advertising for "de-nicotinized cigarettes"); 13 FTC 416 (September 16, 1929: claims that cigarettes could be smoked in any quantity without danger); 13 FTC 411 (September 16, 1929: claims that tobacco products were free of nicotine and harmless); 13 FTC 514 (May 2, 1930: claims that tobacco products were harmless or free of nicotine); 17 FTC 597 (Jan. 28, 1933: claims that cigarettes would cure asthma).

stopped; Old Gold, for example, began to advertise "A Treat Instead of a Treatment."³⁹

The FTC cases of 1942 and 1943 concluded in 1950 through 1952. They are remarkable for some of the findings recorded in the Commission's opinions and for some provisions of the orders. The Commission found that all cigarettes were harmless when smoked in moderation; this was one of the reasons for prohibiting all claims of health differences (such as less "smoker's cough") among cigarettes.⁴⁰ The Commission also concluded that manufacturing cigarettes with significantly reduced tar or nicotine was technically infeasible, and on these grounds prohibited both comparative "irritation" claims and comparative tar and nicotine claims.⁴¹ Moreover, the clauses prohibiting all these claims made no allowance for resuming the claims under changed circumstances. This meant that a manufacturer who wished to advertise a new development such as a reliable filter could do so only by first completing research and development and then seeking a

³⁹ *Newsweek*, April 17, 1950, p. 75.

⁴⁰ *FTC v. R. J. Reynolds Co.*, 46 FTC 706, 724 (1950):

The record shows, however, as a general proposition, that the smoking of cigarettes, including Camel cigarettes, in moderation by individuals not allergic nor hypersensitive to cigarette smoke who are accustomed to smoking and who are in normal good health, with no existing pathology of any of the bodily systems (circulatory, respiratory, digestive, nervous, neuromuscular, and special senses), is not appreciably harmful.

The 1950 *Lorillard* and 1951 *American Tobacco* opinions did not include this finding. The Commission also found in *Reynolds* that such psychological effects as relaxation, enhanced concentration, an emotional "lift," or decreased appetite were purely "subjective" except as they related to cravings for nicotine by habitual smokers. [Opinion at 724-729.] As noted earlier, recent research has shown that these phenomena are real and are separate from withdrawal symptoms. "New Knowledge about Nicotine Effects" (1982) and Blakeslee (1984).

⁴¹ For example, *Lorillard*, 749, "It is not practically possible for respondent, or any of the other manufacturers of leading brands of cigarettes, to maintain a constancy of nicotine in the finished cigarette." *FTC v. P. Lorillard Co.*, 46 F.T.C. 735, 749 (1950). (The same conclusion was reached for tar content on p. 750.) Also see *FTC v. American Tobacco Co.*, 47 FTC 1393, 1407-1408 (1951). It was understood that these conclusions applied to cigarettes made of tobacco types used in the most popular brands rather than to other types such as Turkish tobacco, which had different characteristics.

formal order modification, a lengthy public process that would make surprise impossible.⁴²

It was widely anticipated that the FTC's 1950-51 orders had permanently banished health claims from cigarette advertising: there would be no more talk of irritation, coughs, mildness, relaxation and so on.⁴³ Indeed, these kinds of claims have been almost completely absent in the years since.⁴⁴ Nonetheless, health advertising was about to enter its most vigorous era yet.

2. The 1950s cancer scare and tobacco's self-inflicted injury

In the 1920s through 1940s the health hazards of smoking were known to the public mainly through overt symptoms.⁴⁵ Then in 1950 and 1952 controlled retrospective epidemiological studies appeared that indicated victims of lung cancer were disproportionately smokers of cigarettes.⁴⁶ In 1953 came the first demonstration that cancer in laboratory animals could be induced by the "tar" in

⁴² The Appeals Court decision on *Lorillard* considered exactly this situation:

If, in the future, advertising of the sort prohibited should become truthful because of a change in the character of the cigarettes to which it has reference, a very remote contingency, applications can be made to the Commission for a revision of the order. It will be time enough to give consideration to that matter when the occasion for it arises. [186 F.2d (4th Cir.) 52, 59 (1950).]

⁴³ For example, see *Newsweek*, April 17, 1950, p. 75, and *Business Week*, April 8, 1950, p. 21. The latter said, ". . . the [FTC order] was so sweeping that it knocked down just about every idea thought up to get you to smoke one brand of cigarettes instead of another."

⁴⁴ An unexpected exception was advertising in the early 1950s by Liggett and Myers, who had not engaged in health advertising earlier and thus had never been sued by the FTC on these grounds. This case is discussed briefly in a later footnote.

⁴⁵ See Miles (1982) p. 40, for a graph (based on data presented in U.S. Public Health Service, 1971), showing the very small number of articles in the popular press before 1950 connecting smoking with health problems.

⁴⁶ Doll and Hill (1950); Wynder and Graham (1950); Doll and Hill (1952). These and other studies are reviewed in Burney (1959), Royal College of Physicians (1962, p. 12-16), U.S. Public Health Service (1964) and Federal Trade Commission (1964c). Wynder and Graham (1950) begins with a substantial bibliography of previous studies, dating back to 1912. Wagner (1971), pp. 68-75, also provides a useful popular account of early research.

cigarette smoke.⁴⁷ The significance of these studies can hardly be overestimated. Previously, researchers generally believed there existed no results from "well-controlled and large scale clinical studies" that could link smoking with lung cancer or other major illnesses.⁴⁸ The problem was not merely lack of systematic research during the previous chaotic decades; additional factors were that lung cancer is easily misdiagnosed and takes many years to develop, so that not until decades after cigarettes became popular could systematic evidence easily be gathered.

The popular press quickly made these results known to the general public.⁴⁹ *Reader's Digest*⁵⁰ and *Consumer Reports*⁵¹ published fairly thorough accounts and these and other circumstances⁵² led to major stories in the news magazines and

⁴⁷ Wynder, Graham and Croninger (1953).

⁴⁸ Wynder and Graham (1950), p. 329. Levin, et al. (1950) similarly noted, "the published literature on use of tobacco and its possible association with human cancer fails to show clearcut consistent observation. Reviews of the literature for the past twenty years reveals [sic] that it is often conflicting and that it consists for the most part of studies which are inconclusive because of lack of adequate samples, lack of random selection, lack of proper controls or failure to age-standardize the data." [p. 336.]

⁴⁹ For example, Federal Trade Commission (1964c) quotes the statistician Berkson on the multitude of vivid newspaper reports on the 1954 Hammond and Horn study.

⁵⁰ Norr (1952) and Miller and Monahan (1954.)

⁵¹ The *Consumers Report* article published in February 1953 stressed the opinion of many physicians that there was probably a connection between smoking and lung cancer and possibly one with heart disease. The article did not review the epidemiological studies just beginning to emerge, however, except to note that the American Cancer Society was conducting a large-scale study on smoking and lung cancer.

⁵² For example, the American Medical Association announced that starting Jan. 1, 1954, it would no longer accept cigarette advertisements in its publications. Interestingly, the AMA said this decision had nothing to do with lung cancer but was a protest against the use of health claims in cigarette advertising. *Business Week*, Dec. 5, 1953, p. 68.

elsewhere.⁵³ The business and trade press then described the reactions to these stories and in so doing again recounted the evidence against smoking.⁵⁴ The June 1952 and February 1953 issues of *Consumer Reports* published tar and nicotine measures for leading brands.

But there was no scientific consensus, partly because of the weak controls inherent in retrospective studies.⁵⁵ From the perspective of the present day, the reactions of persons eager to play a public role in health were surprisingly mild. The December 1953 annual *Consumer Reports Buying Guide* summed up,

There is increasing evidence that the rising incidence of lung cancer may be due in part to an increasing consumption of cigarettes. Until final evidence is available, heavy cigarette smokers would be wise to cut their smoking to moderate levels -- no more than a pack a day.⁵⁶

The July 1954 issue of *Reader's Digest* quoted the official position of the American Cancer Society:

. . . that evidence to date justified the suspicion that smoking does, to a degree not yet determined, increase the likelihood of developing lung cancer.⁵⁷

Moreover, the federal government took no public position at all on the smoking-cancer controversy.

⁵³ *Time Magazine*, December 1952. Again, see the graph in Miles (1982) p. 40, showing the rapid increase after 1950 in the number of articles in the popular press connecting smoking with health problems.

⁵⁴ *Business Week*, Jan. 23, 1951, p. 68; Nov. 17, 1952, p. 73; Dec. 27, 1952, p. 41 (referring to "an age that is increasingly worried about the ill effects of smoking on health"; Nov. 7, 1953, p. 142; Nov. 14, 1953, p. 54; Nov. 21, 1953, p. 140; Dec. 5, 1953, p. 68 ["few scientists seem to doubt now that some relationship [between cigarette smoking and lung cancer] does exist."]; and Nov. 11, 1954, p. 54 ["widespread fear that cigarettes may induce lung cancer is making the cigarette manufacturers turn some strange somersaults."]

⁵⁵ Not until 1954 did controlled prospective studies appear (Doll and Hill; Hammond and Horn.) The emergence of these, along with other considerations, tended to confirm the retrospective studies published in 1950 and 1952. See Royal College of Physicians (1962 at 16) and Federal Trade Commission (1964c at 8: "the year 1954 was a watershed in the history of smoking research.")

⁵⁶ *Consumer Reports Annual Buyers' Guide*, Dec. 1953, p. 326.

⁵⁷ *Reader's Digest*, July, 1954, p. 4.

Nonetheless, the market reacted with vigor. Cigarette manufacturers, noting that cigarette smoking had been attacked on medical grounds many times in the past, generally refused to acknowledge the medical significance of statistical relations between smoking and cancer.⁵⁸ Their disdain counted for nothing. What did matter was that they introduced new cigarettes. First Lorillard, one of the smallest of the six major actors,⁵⁹ introduced Kent, which used a powerful filter and (as tests soon showed) provided much less tar and nicotine than any leading brand.⁶⁰ In 1953 came L&M, a filter cigarette from Liggett and Myers. In 1954 the other four major manufacturers introduced filtered brands, one of which, R. J. Reynolds' Winston, soon became the most popular filter cigarette.⁶¹

What is most remarkable is the manner in which these and other brands were advertised. Kent ads said, "sensitive smokers get real health protection with new Kent,"⁶² and "takes out more nicotine and tars than any other leading

⁵⁸ In 1954, however, the tobacco industry formed the Tobacco Industry Research Corporation to conduct research on the connections between smoking and illness. On this, and the denials of a causal relation between cancer and smoking, see Miles (1982) at 59 ff. Somewhat surprisingly, individual firms had long supported and conducted laboratory research on smoking and health, but had kept this secret. *Business Week*, Dec. 5, 1953, p. 66. Their motives for engaging in research were probably, first, to see whether it was possible to demonstrate that smoking was *not* the cause of lung cancer and other diseases; second, to be prepared for bad news when it arrived; and, third, possibly to design safer cigarettes. The desire to keep the research a secret illustrates, of course, the constant danger to cigarette manufacturers of public reaction to any information touching on the health aspects of smoking. Indeed, the cigarette companies were extremely reluctant even to attack publicly the evidence that appeared in the early 1950s. Commenting on this, *Business Week* (Dec. 5, 1953 at 66) noted, "fear . . . played a part. Cigarette people will admit that they were afraid that if their own company made any statement about lung cancer the only effect on the public consciousness would have been to connect disease with their brand."

⁵⁹ In 1949 the three largest manufacturers (American Tobacco, Reynolds and Liggett and Myers) commanded 79% of the market, with Lorillard, Philip Morris and Brown and Williamson having 19%; minor actors had the remaining 2%. Tennant (1950), Table 19 on p. 94.

⁶⁰ *Consumer Reports*, February 1953. Before 1950, Brown and Williamson's Viceroy was the only filter brand with a market share approaching one per cent. See Wootten (1954).

⁶¹ On brand proliferation in this period, see Wootten (1954) pp. 26-30.

⁶² *Consumer Reports*, February 1953 at 66.

cigarette -- *the difference in protection is priceless*,⁶³ and demonstrated on TV the dark residue left by tobacco smoke on Kent's filter.⁶⁴ Viceroy, which had previously dominated the minuscule filter market, advertised "double-barrelled protection."⁶⁵ The new L&M filter was "just what the doctor ordered."⁶⁶ In ads for Chesterfield, Liggett and Myers stated in massive headlines, "NOSE, THROAT, and Accessory Organs not Adversely Affected by Smoking Chesterfields. First Such Report Ever Published About Any Cigarette," and the ad proceeded to describe a report by a "medical specialist."⁶⁷ In highly controversial ads, Philip Morris said of their brand, "Takes the Fear Out of Smoking,"⁶⁸ and "Stop worrying . . . Philip Morris and only Philip Morris is *entirely free* of irritation used [sic] in *all other* leading cigarettes" (1953).⁶⁹ Lorillard, who was under an FTC order prohibiting comparative tar and nicotine ads for Old Gold (on the grounds that all popular brands had been found to be essentially equal,) even turned that to their advantage by advertising "no other leading cigarette is less irritating, or easier on the throat, or contains less nicotine than Old Gold; this

⁶³ Emphasis added. Wagner (1971), p. 82.

⁶⁴ *Business Week*, Dec. 5, 1953, p. 68.

⁶⁵ *Business Week*, June 19, 1954, p. 58.

⁶⁶ Wagner (1971), p. 83.

⁶⁷ 55 FTC 371. This ad, which concluded that Chesterfields were "much milder," was vigorously attacked by the FTC, which first unsuccessfully sought an injunction in late 1952 and then in January 1953 issued a complaint. Since Liggett and Myers had generally avoided the kind of health advertising that had prompted the FTC's cases in the 1940s, it had never been sued on this issue and thus was not under an order similar to those that had been issued against American Tobacco, Reynolds, and Lorillard. The Commission eventually won its case in September 1958 on the usual grounds that all cigarettes were equally mild, or unmild -- a strange result in view of the highly effective "tar derby" then underway. By the time the L&M decision was finally handed down, the 1955 Guides (discussed below) had long since eliminated the sort of advertising attacked in that case. *FTC v. Liggett & Myers Co.*, prelim. injunction denied, 108 F. Supp. 573 (S.D.N.Y. 1952), aff'd mem., 203 F.2d 956 (2d Cir. 1953); 55 FTC 354 (1958).

⁶⁸ *Business Week*, Nov. 14, 1953, p. 54.

⁶⁹ Emphasis in original. Brecher, et al, at 146.

conclusion was established on evidence by the United States Government."⁷⁰ As *Business Week* put it, the market saw an "avalanche of advertising that today features doctors, filters, tars."⁷¹

These developments were extraordinarily disruptive to a market that had long been a model of stability. Market shares for individual brands began to gyrate. For twenty-five years three to five *brands* had commanded eighty to ninety-five percent of the market.⁷² Major cigarette firms had traditionally concentrated on a single brand each, although in the few years preceding 1950 most firms had added one king-size brand to their stable. Now some of the king-size brands were suddenly advancing with unprecedented rapidity; the third best selling brand in 1954 was Pall Mall, which advertised that it "travels the smoke further," (thus filtering the smoke.)⁷³ Also doing well were the increasingly numerous filter brands. Some of the old-time regular brands, on the other hand, saw their jealously guarded market shares drop precipitously. Between 1950 and 1955 the combined market share of the top five regular size brands dropped from over 90% to 50%.⁷⁴

⁷⁰ *Consumer Reports*, February 1953 at 66.

⁷¹ *Business Week*, Dec. 5, 1953, p. 68. The "health advertising," as it was often referred to, apparently began in earnest sometime in 1952, not long after the first well-publicized studies appeared. *Printer's Ink*, Dec. 30, 1955, p. 17, notes "Back in November 1952, when health copy was rampant, . . ."

⁷² The top brands were Camel (Reynolds), Lucky Strike (American Tobacco), Chesterfield (Liggett and Myers), Philip Morris (Philip Morris), and Old Gold (Lorillard). The top three brands (Camel, Lucky Strike and Chesterfield) commanded 82% of the market in 1925 and 85% in 1935. In 1950 those three plus Philip Morris and Old Gold had 84%, with an additional 6% for the king-sized Pall Mall (American Tobacco.) Federal Trade Commission Staff (1964), Table 6, p. 38, and p. 41. By 1963, the filter-tip onslaught would reduce the combined share of the original big three brands to 21%. Federal Trade Commission (1964c) at 71.

⁷³ A cigarette butt is a fairly good filter if you don't smoke the filter, too. This was pointed out by *Reader's Digest* and *Consumer Reports*. When the modern version of Pall Mall was first introduced in 1939-1940, its ads pointed out, "it's a scientific fact that tobacco is its own true filter." Federal Trade Commission, Bureau of Economics (1964), p. LBA 6. On cigarette sales in this period, see Wootten (1954), p. 26-30.

⁷⁴ *Printer's Ink*, Dec. 30, 1955, p. 17.

More important, *total* per capita sales dropped: by 2.8% in 1953 and a remarkable 6.1% in 1954, for a two-year decline of 8.9%.⁷⁵ This decline has not been equalled before or since. The last previous decline (a much smaller one) had been in 1931. The largest declines after 1954 were 3.5% in 1964 and 4.6% in 1969, the latter during the height of the anti-smoking campaigns on TV. The largest two-year decline, in 1968-69, was 6.8%.⁷⁶ The unmatched 1953-54 decline occurred even though cigarette taxes and prices remained stable during the 1950s but increased in the late 1960s.⁷⁷ Taking into account other factors such as the trend toward increased smoking by females would alter these comparisons somewhat but would probably make the 1953-54 decline relatively even greater.

The "fear" advertising that began in 1952 was widely credited with causing much of the sales slump.⁷⁸ Alternative explanations for the cigarette sales

⁷⁵ Stock values also suffered, according to contemporary observers. *Business Week*, Nov. 21, 1953, p. 145, noted strong declines in preceding months for all five of the Big Six which were publicly traded (Brown and Williamson was not so traded) and noted that non-cigarette tobacco stocks had not suffered.

⁷⁶ Sources for per capita data: Maxwell (1979) for years before 1969, and Federal Trade Commission (1985) for later years. Per capita figures refer to the population aged fifteen years or more. The only year in which per capita sales dropped more than in 1954 was 1983, when sales decreased 7.6% after a decline the previous year of 2.2%. In 1983, however, a doubling of the federal cigarette tax increased retail prices by roughly 8%. Since various studies have indicated price elasticity for cigarettes of about .5 (see Harris, 1980, p. 306, and Ippolito and Ippolito, 1985, p. 62,) the 8% price increase would yield a corresponding per capita consumption decrease of about 4%, leaving only about 3.6% that could be credited to factors other than price increases.

⁷⁷ Maxwell (1973), Table VIII.

⁷⁸ In Nov. 21, 1953 (p. 145) *Business Week* noted,

. . . there is no question but that the tobacco companies themselves have helped cause the sales drop. . . [the advertising] scared some smokers out of the cigarette habit by claiming that each brand of cigarette does not contain the "harmful ingredients" that others do; . . . pushed filter mouthpiece cigarettes with advertising that has not only turned many smokers from conventional cigarettes, but, in addition, scared some smokers away from cigarettes entirely.

Also see *Business Week* (June 19, 1954 at 58) [citing marketing expert Dichter and noting that fear advertising "may boost an individual brand's share of the market, but what good is that if the whole market dwindles,"] and Wooten (1956, 1957,

decline were of course available. These included the end of the Korean war (since cigarette consumption traditionally increased during wartime,) the business cycle, and new information about smoking and health, which presumably would have had some effect even without the lurid advertising. But contemporary searches for explanations barely mentioned the Korean War or ignored it completely, presumably because there had been no decline after the far more disruptive end of World War II.⁷⁹ Also, cigarette sales had survived far stronger turns in the business cycle than anything experienced in 1953-54. As for health information, we shall see below that the far more comprehensive information of 1957 and 1962-64 apparently had much weaker effects on cigarette sales.⁸⁰

One could argue that judging by the evidence available at the time, the initial "cancer scare" about cigarettes was somewhat exaggerated, as often happens when a new cancer study or two hits the headlines. The remarkable fact here is that the cigarette industry's advertising tended to help exaggerate the response beyond what might normally have arisen from scientific and journalistic circles.⁸¹

All this aroused a good deal of public questioning of why the cigarette industry would undertake so self-destructive a campaign.⁸² The answer can be

1958) [invariably cited the apparent end of the "health scare" when describing the rapid growth in sales in the late 1950s.]

⁷⁹ See *Business Week*, November 21, 1953, p. 142, and Dec. 5, 1953, p. 68; also see Wootten (1954.) Wootten, who continually sought comfort for the industry by suggesting the possibility of some transient cause for the sales decline, ascribed some effect to the end of the war, population changes, and so on. But as just noted, his later analyses cited the apparent end of the "health scare" when describing the rapid growth in sales in the late 1950s. Wootten (1956, 1957, 1958.)

⁸⁰ See Warner (1977), who found the effects of the health information of the early 1950s to be lasting, whereas that was not true for 1962 and 1964. "The logic is that strong and *repeated* publicity in the early 1950s continued to affect *additional* smokers for a few years following the major publicity." [p. 647; emphasis in original.]

⁸¹ Recall the earlier statement from the American Cancer Society, quoted by the *Reader's Digest* in 1954 as saying the new evidence justified a "suspicion" that cigarettes cause cancer.

⁸² *Business Week* noted late in 1953 that the industry's continued practice of "pounding harder on the health theme, which could drive away even more smokers than the critics say have already been driven away . . . doesn't make sense," and

found by looking at who was doing what kind of advertising. The two largest firms, American Tobacco and Reynolds, with a combined market share in 1952 of 59%, avoided "fear" advertising altogether, even for filter brands.⁸³ Essentially, their new filter brands were free-riding on much of the advertising for competing filters while at the same time their traditional best-selling brands were suffering from the negative externalities imposed on the cigarette market by that same advertising for filter brands.

The most aggressive exploiters of smokers' fears were the smaller actors: Liggett and Myers (20% in 1952,) Philip Morris (9%), Lorillard (6%), and Brown and Williamson (6%.) This pattern would be expected in view of the incentives described earlier. What the theoretical analysis does not tell us is whether for any single firm the private gain from engaging in fear advertising would exceed the advertiser's share of the cartel's loss. That so much fear advertising by smaller firms actually occurred seems to answer the question. In fact, Philip Morris once tried to temper its advertising, only to see sales falter before returning to the appeal to fear, and Brown and Williamson, the most aggressive advertiser of filter cigarettes and the firm most dependent on filter brands, was the only one of the six major sellers that actually gained sales in 1954.⁸⁴

3. The 1955 FTC cigarette advertising guides and the end of health claims

The years 1954 and 1955 brought a revolution in cigarette advertising. In the summer and fall of 1954 the trade press noted a sharp decline in the number

"No one will put his guns on the table until the others do," concluding

Why has the industry persisted in this "negative" form of advertising even when, as tobacco growers and others complain, it hurts the trade by making people conscious that cigarettes can be harmful?

Business Week, Dec. 5, 1953, p. 68.

⁸³ Wootten (1954).

⁸⁴ For market shares in 1952, see *Business Week*, Dec. 27, 1952. For sales in 1954, see Maxwell (1979.)

of "fear" or other health-related ads.⁸⁵ At about the same time (in September) the FTC's Bureau of Consultation notified all major manufacturers that it intended to require compliance with a new set of cigarette advertising guides designed to eliminate all health claims that could not be substantiated by scientific methods.⁸⁶ The rules would prohibit references to "throat, larynx, lungs, nose or other parts of the body," or to "digestion, energy, nerves or doctors." The press release accompanying the Guides emphasized that "no advertising should be used which refers to either the presence or absence of any physical effect of smoking."⁸⁷ The Guides also specifically prohibited all tar and nicotine claims "when it has not been established by competent scientific proof . . . that the claim is true, and if true, that such difference or differences are significant."⁸⁸

Most firms apparently quickly agreed to abide by the new guidelines.⁸⁹ One year later, in September 1955, the Cigarette Advertising Guides (which are still in force and still effective) were formally announced.⁹⁰ It was universally agreed that almost all advertising already conformed to the new guidelines. The health and "fear" advertising of 1952-54 had disappeared and even ads for filter brands now emphasized taste instead of filtration.⁹¹ Thus the Guides and the devastating experience of 1952-54 achieved what twenty years of FTC litigation had failed to achieve. The decades-long period in which cigarette advertising constantly reminded smokers of the dangers of their habit was finally at an end. As

⁸⁵ *Business Week*, June 19, 1954, p. 58, and Sept. 24, 1954, p. 124. The FTC noted the same thing in the Sept. 22, 1955 press release accompanying the Cigarette Advertising Guides [FTC Press Release, Sept. 22, 1955].

⁸⁶ *Business Week*, Sept. 24, 1954, p. 124; Oct. 1, 1954. The FTC press release, Sept. 22, 1955, said the conferences began at the FTC's initiative on Sept. 14, 1954.

⁸⁷ FTC press release, Sept. 22, 1955.

⁸⁸ Federal Trade Commission (1955) "Cigarette Advertising Guides."

⁸⁹ FTC Press Release, Sept. 22, 1955.

⁹⁰ Federal Trade Commission (1955) "Cigarette Advertising Guides."

⁹¹ Examples of the switch in advertising themes are legion. See, for example, *Printer's Ink*, Dec. 30, 1955, p. 15.

Printer's Ink put it in leading off their annual year-end story on cigarette advertising:

The saga of cigarette advertising for 1955 filters down to this: *Good taste took over*. Advertising copy stressed good taste, flavor and enjoyment consistently. Ads themselves, on the whole, seemed in better taste. By and large, whatever grim messages remained from the health scare days gave way to pleasant, almost "Pollyanna" prose.⁹²

Indeed, some in the trade felt that the "health scare" itself was over.⁹³

A notable feature of the new guides was that they reversed the burden of proof. Cigarette manufacturers were now required to prove their claims rather than just refute an FTC attempt to show the claims false. This was contrary to then-established law. Thus it was not clear that the Commission could enforce the Guides except possibly through lengthy litigation, and the Guides were accordingly regarded as being partly voluntary. *Business Week* noted insightfully, "the Commission is evidently relying on the industry's worry over the cancer scare to get compliance to the code."⁹⁴ The guides were in fact successful and later were described by the FTC as "an outstanding example of an industry's self-regulation."⁹⁵

It is entirely possible that the cigarette market benefitted from the new

⁹² Emphasis in original; *Printer's Ink*, Dec. 30, 1955, p. 15.

⁹³ E.g., Wootten (1955) p. 12, noted in his year-end review that the "health scare" has "apparently ceased to be a factor."

⁹⁴ *Business Week*, Sept. 25, 1954, p. 129. The full quote is

Several of the proposals thus go beyond what FTC [sic] could actually enforce under the laws covering deceptive practice [sic] and false or misleading advertising. The commission is evidently relying on the industry's worry over the cancer scare to get compliance to the code.

Seventeen years later, in 1972, the Commission adopted the "ad substantiation doctrine," under which claims must be supported by reasonable evidence at the time they are made. This was later upheld by reviewing courts. See Guerard and Niemasik (1978) and Federal Trade Commission (1983) "Policy Statement on Deception," at n. 5, and citations therein.

⁹⁵ *Printer's Ink*, Feb. 28, 1958, p.10: "These [the 1955 Guides] got such widespread acceptance that FTC spokesmen have cited this response as an outstanding example of an industry's self-regulation."

regime of cleaner advertising, a fact that was pointed out at the time.⁹⁶ Sales rebounded sharply in 1955 and continued to increase in each of the next dozen years except for a one-year break when the most famous of the Surgeon General's reports was released in 1964.⁹⁷

The 1953-54 episode of self-destructive cigarette advertising has never recurred. But one kind of advertising the Guides were intended to halt did reappear under intense market pressure. This was tar and nicotine advertising, and its story requires separate treatment.

IV: THE CURIOUS HISTORY OF TAR AND NICOTINE ADVERTISING

*"Today's Marlboro -- 22% less tar, 34% less nicotine"*⁹⁸

Regulation and encouragement of tar and nicotine advertising has been the central element of FTC activity in cigarette advertising in the past two decades. The FTC began publishing its own tar and nicotine ratings in 1967 and in 1970 the cigarette industry signed a non-binding pledge to use FTC ratings in all

⁹⁶ *Printer's Ink*, Dec. 30, 1955, p. 15, noted:

Smokers may become concerned with health again, of course, as continuing research reports come in. And there are several projects under way. But tobacco men now have some reason to hope for findings favorable, or at least not damaging, to smoking. At any rate, it's doubtful that any major cigarette again will be stamped into a campaign like, "Take the fear out of smoking." Or even, "Just what the doctor ordered." The 1955 comeback should have taken care of that. . . . the chances are that advertisers will stick to cajoling the smoker with soft, "gentle" phrases and oh-so-gay jingles.

In the *Printer's Ink* annual review of cigarette advertising at the end of 1956 (December 28, 1956, p. 15), the analyst observed, "now that the most potent health scare is well behind it (despite recurring data linking smoking with disease), . . ."

⁹⁷ This study does not attempt to assess numerically the consequences of FTC actions on cigarette advertising.

⁹⁸ The ad ran in 1959. Federal Trade Commission, Bureau of Economics (1964), p. PFA 4a.

cigarette advertising.⁹⁹ One result has been intense competition to manufacture and sell cigarettes with superior ratings: overall tar and nicotine content as measured by the FTC declined by roughly forty percent between 1967 and 1981.¹⁰⁰

FTC involvement with tar and nicotine advertising goes back to the early 1940s. Between that time and 1966, however, the FTC sought to halt tar and nicotine claims. This effort achieved only sporadic success through the 1950s. Then in January 1960, at the height of the most dynamic of the "tar derbies," the Commission negotiated a voluntary industry-wide agreement to ban all tar and nicotine advertising. For the next six years the market was essentially free of this kind of advertising. In 1966 and 1967, however, the FTC reversed direction. It began publishing tar and nicotine figures and sought to require the information on labels and in advertising. The events leading to this dramatic reversal tell much about how advertising and advertising regulation affect the cigarette market.

1. Before 1950

Some tar and nicotine advertising occurred in the early 1940s despite the relative paucity of public data on which to base claims.¹⁰¹ In 1942 and 1943 the FTC sued three of the five largest sellers for, among other things, advertising relative tar and nicotine content.¹⁰² One case, *FTC v. P. Lorillard Co.*,¹⁰³

⁹⁹ Brown and Williamson (1970) and Federal Trade Commission (1981), pp. 4-4, 4-5. As described below, the pledge has not prevented occasional use of alternative measurements by individual firms.

¹⁰⁰ Federal Trade Commission (1984b), Table 12. The FTC stopped calculating sales-weighted tar and nicotine averages after that report, which covered the year 1981.

¹⁰¹ Littell (1942), p. 5-8, refers to various recent advertisements of tar and nicotine content. Steinhaus and Grunderman (1941, p. 6) report that American Tobacco advertised in the fall of 1940 that Lucky Strike cigarettes averaged 12% less nicotine than the average of the other four leading brands. *Consumer Reports* published a set of nicotine measures in July, 1938; whether they formed the basis for much in advertising I do not know. Bogan (1929) published nicotine ratings; they are reproduced in Steinhaus and Grunderman (1941.)

¹⁰² These cases were discussed earlier for their health claims on matters other than tar and nicotine content. Two of the cases were *FTC v. R. J. Reynolds Co.*, 46 FTC 706, 721 (1950), 192 F.2d 535 (CA 7, 1951) 48 FTC 682 (1952, modified order) and *FTC v. American Tobacco Co.*, 47 FTC 1393, 1406 (1951). Reynolds advertised "less nicotine" during 1940 through 1942 and American

achieved notoriety. This proceeding focused on Old Gold cigarettes advertising based on a 1942 *Reader's Digest* article.¹⁰⁴ The article had included tar and nicotine figures for the half dozen leading brands, but the purpose was to demonstrate that the brands differed so little as to leave the smoker with no means for avoiding possibly harmful ingredients. Lorillard advertised the results anyway (Old Gold was lowest in both tar and nicotine) and invited smokers to read the article. The FTC won its case on the grounds that Lorillard advertising should have disclosed the *Digest's* opinion that the differences were insignificant.¹⁰⁵ The case has been frequently cited as precedent for litigation against material omissions.¹⁰⁶

Lorillard and *R. J. Reynolds* were not completed until 1950, and *American Tobacco* not until 1951, just as the cancer scare began. Each of the three orders issued by the FTC prohibited advertising of tar or nicotine content for the brand in question. So far as I can tell, no tar and nicotine figures had been published during this lengthy litigation and there had been no movement toward renewed advertising of such information.

2. 1950-1954: a threatened tar derby

The reports in 1950 through 1954 linking cancer with cigarettes and cigarette tars aroused interest in tar and nicotine content. In June 1952

apparently made similar claims at about the same time. The printed reports provide no details, however; perhaps the advertising was inspired by the tar and nicotine measures published in the July, 1938 issue of *Consumer Reports*. Other possible examples of action against tar and nicotine advertising are *FTC v. Benson and Hedges*, 33 FTC 1659 (1941), a consent order on claims for a "non-nicotine" filter, and a 1943 consent order, *FTC v. Brown and Williamson Tobacco Corp.* 36 FTC 1099 (1943). Like *Lorillard*, discussed below, the latter case referred to test results in *Reader's Digest*, but the brief published report contains virtually no facts, not even indicating which issue of the magazine was involved.

¹⁰³ *FTC v. P. Lorillard Co.*, 46 F.T.C. 735 (1950). Order modified: 46 F.T.C. 853 (1950). *Affirmed*, 186 Fed., 2d, (4th Cir.) 52 (Dec. 29, 1950.)

¹⁰⁴ Littell (1942).

¹⁰⁵ Old Gold's nicotine measure was 9% below the average for the five leading brands, and 17% below the worst of the five brands.

¹⁰⁶ Holmes (1982) at 385.

Consumer Reports published a partial set of tar and nicotine ratings. Late in 1952 Lorillard introduced Kent cigarettes with its highly effective "Micronite" filter, and advertised that Kent's filter removed "up to 7 times more nicotine and tar than other leading cigarettes."¹⁰⁷ In February 1953 *Consumer Reports* published tar and nicotine measures for almost all brands.¹⁰⁸ The results were approximately what one would expect in a market in which information on these numbers had long been absent. Except for Kent, the well-known brands were virtually identical in nicotine and the variance in tar was relatively small.¹⁰⁹ Moreover, most of the filter cigarettes (which were usually king-size) produced roughly 20% more nicotine than unfiltered cigarettes.

1953 and 1954 saw the introduction of more filter brands and a slight amount of tar and nicotine advertising. Liggett and Myers introduced L&M brand in 1953. Liggett soon advertised that L&Ms contained "much less nicotine" and that its non-filter Chesterfield brand was "found low in nicotine."¹¹⁰ In 1954, while the industry reeled under the cancer reports and its own negative advertising, only one manufacturer increased sales. This was Brown and Williamson, the only manufacturer with a long-established filter brand (Viceroy.) In that same year the two largest firms, Reynolds and American Tobacco, also introduced filtered brands: Winston and Herbert Tareyton, respectively. But as might be expected for the largest firms in the industry, both refrained from

¹⁰⁷ *Consumer Reports*, February 1953 at 66.

¹⁰⁸ *Consumer Reports*, February 1953. A more limited set of ratings appeared in the June 1952 issue.

¹⁰⁹ Among the five major brands, nicotine ranged from 1.9 to 2.1 mg per cigarette. Tar content (on a scale that differs from the one presently used by the FTC) ranged from 11 (for Chesterfield -- "Not a Cough in a Carload") to 16 for Lucky Strike ("Means Fine Tobacco.") Kent's figures were 1.0 for nicotine and 7 for tar. In July, 1953, the *Journal of American Medical Association* published tar and nicotine for measures for three filter and one unfiltered cigarette, all unnamed. One of the filters was effective in removing 40-50% of these ingredients. See "A Study of Cigarettes, Cigarette Smoke, and Filters" (1953). One suspects the effective filter was Kent's; see Miller and Monahan (1957) p. 37.

¹¹⁰ Federal Trade Commission, Bureau of Economics (1964), pp. PFA 3a and RA 3, respectively. Also see Brecher, et al, p. 15, for a 1954 ad claiming "proof of low nicotine."

advertising tar and nicotine content or other claims that might arouse fears of smoking.¹¹¹ They simply advertised taste and the mere presence of a filter.¹¹²

By the fall of 1954, however, almost the entire industry, with the active encouragement of the FTC, had eliminated health claims¹¹³ -- and tar and nicotine measures were then regarded as implied health claims. This situation was formally endorsed by the 1955 FTC Cigarette Advertising Guides, which explicitly prohibited tar and nicotine claims unless there was scientific proof both that the claims were true and that the differences among cigarettes were "significant."¹¹⁴ So far as I know, at the time the Guides were issued there had been no public tar and nicotine ratings since the February 1953 *Consumer Reports*¹¹⁵ and it was generally understood that scientific proof of the sort sought by the Commission did not then exist. Thus for the time being tar and nicotine advertising was held in check.

3. 1954-57: the "First Filter Derby"

In 1955, as we saw, the cigarette industry recovered strongly from the cancer scare and for two or three years no firm violated the 1955 Cigarette Advertising Guides. The market produced what might be called the "First Filter Derby." This arose from a combination of two irreducible facts: smokers remained worried about what they were smoking, and filters were known to be a possible barrier to the most harmful ingredients. Under the FTC Guides sellers

¹¹¹ It seems unlikely that these two firms were held in check merely by the FTC orders issued against them in 1950 and 1951, since the clauses prohibiting tar and nicotine claims were brand-specific. Lorillard was also operating under a similar order and advertised relative tar and nicotine content for a new brand, Kent, with impunity. Current press accounts of advertising strategies did not mention the FTC as a factor. See, for example, *Business Week*, June 19, 1954, p. 58, and Sept. 24, 1954, p. 124, and Wootten (1954) pp. 26, 29.

¹¹² Wootten (1954) pp. 26, 29.

¹¹³ The lone holdout late in 1954 was Brown and Williamson. *Business Week*, June 19, 1954, p. 58. Recall that Brown and Williamson was the only one of the Big Six to gain sales in 1954.

¹¹⁴ Federal Trade Commission (1955) "Cigarette Advertising Guides."

¹¹⁵ The February data were reprinted in the December 1953 Annual Buyers Guide published by Consumers Union.

could advertise the existence of a filter -- or the construction of the filter, or its appearance or the number of tiny traps it contained, or, especially, the taste of the smoke that passed through -- but could not advertise the filter's effectiveness.¹¹⁶

The result was that filters did well but did little good. Their share of the market grew from 10% in 1954 to 28% in 1956 and approximately 35% in 1957.¹¹⁷ But there was no way to know whether the filtered smoke was appreciably different from unfiltered smoke. When tar and nicotine measures began to appear in March 1957 (in that month's *Consumer Reports*) they would show, as the 1953 results had, that in many instances the filtered versions of popular cigarettes contained as much or more tar and nicotine as the unfiltered versions (which were usually shorter.) Even Kent had substantially weakened its filter in accordance with its post-1954 advertising emphasis on taste.¹¹⁸ Lorillard's filtered Kent now produced more tar and nicotine than Lorillard's unfiltered Old Gold and similarly for Reynolds' filtered Winston and unfiltered Camel.¹¹⁹

4. 1957-59: the "Great Tar Derby"

It is a little-appreciated fact that perhaps half the improvement in cigarette content during the past thirty years occurred in the brief period from 1957 to

¹¹⁶ The 1955 Guides noted at the bottom of the page that "nothing contained in these guides is intended to prohibit the use of any representation, claim or illustration relating solely to taste, flavor, aroma, or enjoyment." Non-filter cigarettes were often advertised as being superior precisely because they did not have a filter: for example, "fresh, unfiltered flavor," 1956 ad for Philip Morris, in Federal Trade Commission, Bureau of Economics (1964), p. RA 4.

¹¹⁷ Federal Trade Commission (1964c) "Staff Report . . ." at 34; their data were drawn from Wootten's annual reports in *Printer's Ink*.

¹¹⁸ Consumers Union later reported that by 1955, nicotine content in Kents was up four-fold and tar, six-fold. By 1957, Kent had changed filters to the type most widely used, which was less effective, and tar and nicotine were up even more. *Consumer Reports*, December 1962 at 40-41.

¹¹⁹ Wagner (1971), p. 89. *Consumer Reports*, December 1962 at 40-41.

1960.¹²⁰ Several factors converged in 1957 to change the cigarette market so quickly. As epidemiological studies of smoking and cancer continued to appear and to gain the public's attention,¹²¹ public health groups in the United States and Britain reached a consensus on the connection between smoking and lung cancer (recall that no such consensus existed in the early 1950s.)¹²² The consensus was now joined (apparently for the first time) by the U. S. Surgeon General.¹²³

Equally important, a great deal of publicity was given to the current state of filter cigarettes. *Consumer Reports* published new tar and nicotine ratings in March, 1957. These, the first since 1953, showed that for most brands filters

¹²⁰ Tar and nicotine data for the period 1961-66 are incomplete or not well-documented, and thus the statements here are couched in tentative terms. These data are discussed later in connection with the 1957-59 tar derby. An easily overlooked fact, worth mentioning here, is that tar and nicotine reductions of the past two decades are at least partly offset by "compensation" such as blocking the air holes that modern filters use to dilute the smoke before it reaches the smoker's mouth. (Compensation is discussed below in the section on the period after 1970.) Compensation was less important for the tar and nicotine reductions of the 1950s, which were achieved by reducing the tar and nicotine content of tobacco and using a filter to physically remove some of these ingredients from the smoke.

¹²¹ Doll and Hill (1954); Hammond and Horn (1954); Doll and Hill (1956); Hammond and Horn (1958); Dorn (1958); and Dorn (1959). For reviews of these and other studies, see Burney (1959), Royal College of Physicians (1962), U.S. Public Health Service (1964) and Federal Trade Commission (1964c). The 1958 Hammond and Horn results apparently became known publicly in June 1957; see U. S. House of Representatives (1958), p. 8. Also see Miller and Monahan (1957a).

¹²² See "Joint Report of the Study Group on Smoking and Health" (1957). The study group was formed by two private groups, the American Cancer Society and the American Heart Association, plus two federal research organizations, the National Cancer Institute and the National Heart Institute. Their conclusion, which actually became public in March 1957, was "the sum total of scientific evidence establishes beyond reasonable doubt that cigarette smoking is a causative factor in the rapidly increasing incidence of human epidermoid carcinoma of the lung." Miller and Monahan (1957a), p. 33. For the view in Britain, see British Medical Research Council (1957) ["... direct cause and effect ..."] between cigarette smoking and lung cancer.]

¹²³ Burney (1958) [reprint of a July 1, 1957 statement that 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."]

were of little effect. In July and August of that year *Reader's Digest* published two articles entitled "The Facts Behind Filter-Tip Cigarettes" and "Wanted -- And Available -- Filter-Tips That Really Work."¹²⁴ The articles contained more ratings, decried the fact that technologically feasible cleaner cigarettes had not been marketed, and highlighted the improvements that were already beginning to take place. The summer of 1957 also saw well-publicized Congressional hearings on cigarette advertising. These hearings, too, concentrated on the strange phenomenon of filter brands that produced more tar than their unfiltered versions, and noted that the two best-selling filter brands, Winston and L&M, had increased in tar and nicotine in recent years.¹²⁵ Also in those hearings, Dr. Wynder, head of the Sloan-Kettering Institute for Cancer Research and author of some of the earliest studies linking smoking and cancer, declared that a forty percent reduction in tar and nicotine was both feasible and likely to reduce the risk of cancer.¹²⁶ His advice and plea were regularly repeated in *Reader's Digest*.¹²⁷

Market reaction was swift. Tar and nicotine measures began to be published regularly by *Consumer Reports* and *Reader's Digest*. Brand-by-brand progress was duly registered and applauded.¹²⁸ Many sellers of lower tar and nicotine brands advertised accordingly. (Consumers Union predictably objected to any advertising use of its figures.¹²⁹) Kent, the most successful of the low-tar brands, improved

¹²⁴ Miller and Monahan (1957a, 1957b).

¹²⁵ See U. S. House of Representatives (1958), p. 14-15, apparently relying upon *Consumer Reports*, March 1957. The subcommittee chairman also published an article on what had transpired; see Blatnik (1958). The theme of the article and of the hearings was that advertising for filter cigarettes was deceptive because of the implied claim the filters were effective. The subcommittee itself was soon reorganized out of existence. On the hearings, including the ratings for Winston and L&M, see *Printer's Ink*, Feb. 28, 1958, p. 8-10.

¹²⁶ U. S. House of Representatives (1958), p. 18-19; also see Miller and Monahan (1957a), p. 39. July, 1957, p. 33, 39.

¹²⁷ Miller and Monahan (1957a), p. 34; Miller and Monahan (1957b), p. 43, 44; Miller (1958), p. 35, 36.

¹²⁸ *Reader's Digest*, July and August 1957, January and July 1958, and November 1959, and *Consumer Reports*, March and October 1957, and January, February, March, April and December 1958.

¹²⁹ *Advertising Age*, March 3, 1958, p. 10.

its filter in 1957 and advertised "significantly less tars and nicotine than any other filter brand," occasionally using bar graphs in its print ads.¹³⁰ Tar and nicotine advertising quickly proliferated: "Today's Marlboro -- 22% less tar, 34% less nicotine;"¹³¹ "less tar and nicotine," (Parliament, 1958);¹³² "lowest tar of all lo-tar cigarettes," (Duke, 1959);¹³³ and many others.¹³⁴ As fast as cigarettes were reformulated, ads appeared with the new results. As the Old Gold advertisements said, "dramatically reduced in tar and nicotine," and "... have the pleasure of 20 cigarettes -- and get as little tar and nicotine as in 15 of the previous blend."¹³⁵

There was virtually none of the "fear" advertising of the early 1950s, however; that had been eliminated permanently by the 1955 Guides. The FTC apparently tolerated the simple advertising of tar and nicotine content because the numbers were now scientifically based.¹³⁶ Consumers Union and *Reader's*

¹³⁰ *The quoted ad ran in 1957; see Consumer Reports*, Jan., 1960, p. 13. For ads with bar graphs comparing Kent to other leading filter brands, see Federal Trade Commission, Bureau of Economics (1964) p. PFA 5.

¹³¹ Federal Trade Commission, Bureau of Economics (1964) p. PFA 4a; the ad ran in 1959.

¹³² Federal Trade Commission, Bureau of Economics (1964) p. PFA 9a.

¹³³ Federal Trade Commission, Bureau of Economics (1964) p. PFA 13.

¹³⁴ For example, see Federal Trade Commission, Bureau of Economics (1964), containing ads for Life cigarettes, p. PFA 12; King Sano, p. PFA 10; Oasis, p. MFA 4a; L&M (1958: "Improved filter . . . less tars and more taste . . . they said it couldn't be done" p. PFA 3a; 1959: "truly low in tar," p. PFA 3c; also see p. PFA 3b.)

¹³⁵ The ads ran in 1958 and 1959, respectively. Federal Trade Commission, Bureau of Economics (1964) p. KA 6. Apparently Lorillard's advertising for Old Gold was immediately and successfully attacked by the FTC on the grounds that the Commission's 1950 order specifically prohibited tar and nicotine advertising for Old Gold. 6 F.T.C. Statutes and Court Decisions 490 (4th Cir. 1959), and *in re: P. Lorillard Co.* (CA-4; 1959) 1959 Trade Cases, par. 69,272; (FTC Dkt. 4922.)

¹³⁶ I have not been able to discover much about the FTC's attitude toward this advertising of 1957-1959. The 1957 Congressional hearings had strongly criticized the FTC for not challenging the filter cigarette advertising then taking place, which at that point said little about comparative filtration. *See Advertising Age*, February 24, 1958, p. 8, and *Printer's Ink*, February 28, 1958, p. 8. *Time* magazine, Feb. 15, 1960, p. 93, indicated that the Commission had felt satisfied

Digest used well-established laboratories. The major cigarette manufacturers had their own laboratories using similar or even improved methods and these companies sometimes validated their figures with the same laboratory employed by *Reader's Digest* or relied upon the numbers published in *Consumer Reports*.¹³⁷

With fear advertising eliminated and tar and nicotine advertising rampant, cigarette advertising had a dual effect: cigarettes continued to sell well but tar and nicotine content declined. The decline in sales-weighted average tar and nicotine content was rapid. For nicotine (the results for tar would be roughly proportional) per cigarette averages were later calculated to be: from 3.01 mg. in 1955 to 2.76 in 1957, 2.22 in 1958, 1.82 in 1959, and 1.93 in 1960.¹³⁸ If, as seems

with the accuracy of the measurements being advertised. The 1950-51 orders against Reynolds, American Tobacco and Lorillard were of limited power to prevent tar and nicotine advertising because they were brand-specific (recall that when the complaints were issued in the early 1940s most cigarette manufacturers were one-brand companies.) Reynolds and American Tobacco never engaged in significant tar and nicotine advertising, but of course Lorillard did for Kent, which had not existed at the time the orders were entered. As just noted, Lorillard also advertised tar and nicotine content for Old Gold, which was covered by the order in *FTC v. Lorillard*, and in 1959 Lorillard was held in contempt of that order.

¹³⁷ See Miller and Monahan (1958b), p. 41, which described a new and superior measurement method developed by American Tobacco. On the practice by cigarette manufacturers of citing *Consumer Reports* data, see *Advertising Age*, February 24, 1958, p. 8, and *Printer's Ink*, February 28, 1958, p. 8.

¹³⁸ A note on data is necessary. The cited figures are from Hammond and Garfinkel (1964), p. 51; they estimated nicotine yields only, assuming that tar yields would be roughly proportional. In general, data on trends in average tar and nicotine yield are of unknown quality. A particular problem is the period 1962-1967, during which almost no data on tar and nicotine yields by brand were published. The data just cited were the earliest published and virtually the only given in numerical form, so far as I am aware. Later, Wakeham (1975) produced figures for a longer period, from 1955 to 1975, and his numbers (the most widely cited of any so far) were roughly consistent with Hammond and Garfinkel's. Unfortunately, no information whatever was published in connection with Wakeham's data; all that originally appeared were two graphs, and the frequent citations to his data all refer to that source. Warner (1979), n. 6 and accompanying text, used unpublished data from Philip Morris. He estimated that between 1954 and 1960, tar declined about 25% and nicotine, more than 33% -- roughly similar to Hammond and Garfinkel's conclusions. Also frequently cited are data appearing as a graph in USPHS (1981). Taken from Tobacco Institute (1981), these data are similar to Wakeham's for the coinciding period and apparently are based on FTC data for 1967 and later. The FTC published sales-weighted

likely, the 1956 figure was relatively unchanged from that for 1955, nicotine content declined by roughly forty percent in less than four years, after decades of virtually no change at all.¹³⁹ This was a substantially greater reduction than would be accomplished in the next fifteen years, even though the latter period included years of active FTC encouragement of reductions in tar and nicotine. (See the two graphs on a separate page.) Even the mainstay unfiltered brands were substantially reduced in tar and nicotine during the 1957-60 tar derby.¹⁴⁰ This was notable because (as we saw earlier) as recently as 1951 the FTC had officially found after years of discovery and testimony that such reductions were technically impossible.

averages for the period 1968-1981.

¹³⁹ On tar and nicotine content before 1957, see *Consumer Reports*, July 1938; *Reader's Digest*, July 1942; *Consumer Reports*, February 1953; and, for British brands, Wald, Doll and Copeland (1981).

¹⁴⁰ For example, the figures in the July, 1958 *Reader's Digest* showed a reduction in tar and nicotine in Old Gold of over 40%, compared to the results for one year earlier. For a complete survey, see *Consumer Reports*, Jan., 1960. Hammond and Garfinkel (1964, p. 51) estimated that the average nicotine content of non-filter cigarettes declined from 2.9 mg in 1955 to 2.2 mg in 1958.

FIGURE 1
Sales-Weighted Average Tar Delivery

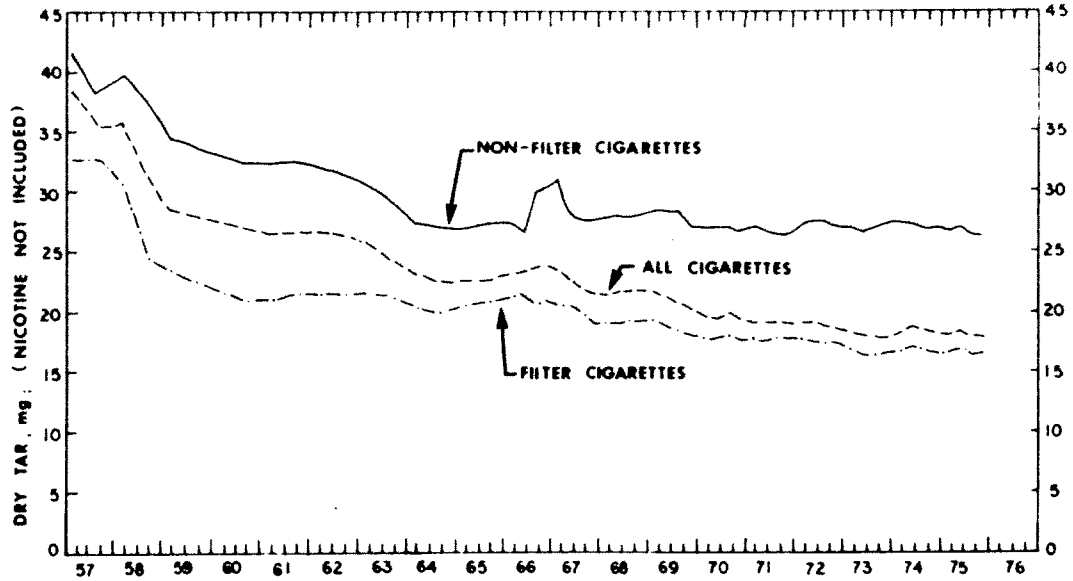
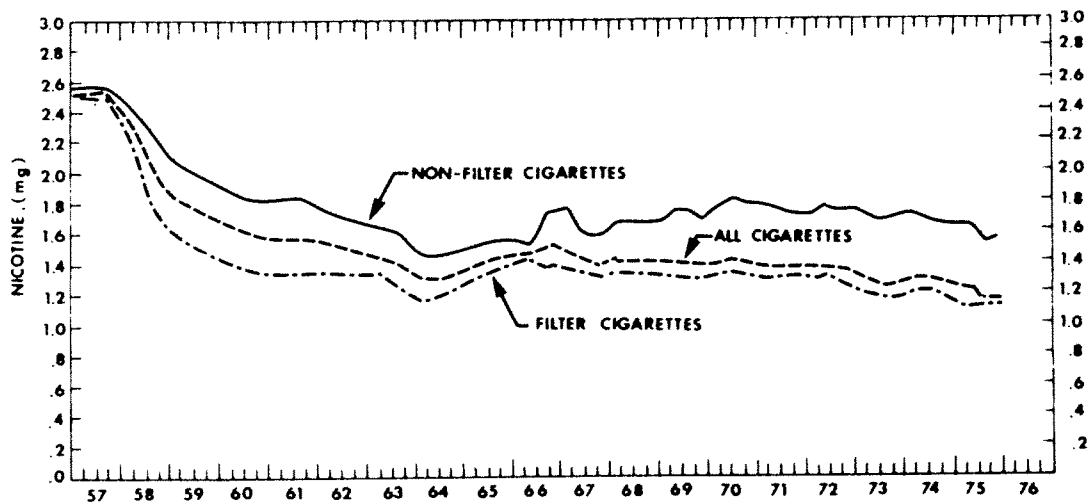


FIGURE 2
Sales-Weighted Average Nicotine Delivery



Source: Wakeham (1976)

At the same time, with no encumbrance from advertised appeals to fears of smoking, overall cigarette sales increased rapidly. As explained by *Printer's Ink*, "despite the vigorous revival of the health controversy that surrounded the product last summer, there was no visible let-up in consumer demand."¹⁴¹ In a striking contrast to what happened when adverse health information arrived in the early 1950s, per capita cigarette sales in 1957-59 increased rapidly. The composition of the average cigarette changed so much, however, that per capita consumption of nicotine declined during this period. In 1960, after tar and nicotine ads were banned, per capita nicotine ingestion increased.¹⁴²

The vigorous competition of 1957-59 to produce lower tar cigarettes occurred without the slightest government support or encouragement. No public officials encouraged the development or consumption of low-tar cigarettes and no official applauded the advertising of tar and nicotine content. Of course, no federally approved metric for tar and nicotine content existed. The question of a metric was investigated, however. In February 1958 the FTC hosted a two-day conference on the question of how to design a tar and nicotine metric. Contemporary press reports indicated agreement among scientists that existing methods were satisfactory, although some of the cigarette manufacturers objected to the exact smoking behavior the FTC proposed to imitate (it would have been the behavior of a smoker who inhaled a great deal.)¹⁴³ Nonetheless the Commission concluded later in the year that no reliable, uniform method existed and the project was dropped.¹⁴⁴ Thus the Great Tar Derby continued without any help from the FTC or other government agencies.

By 1959 competition in the normally placid cigarette market had become unusually intense. In that one year all the Big Six manufacturers (except Reynolds, the market leader) introduced new filter brands, most of them very low

¹⁴¹ Wootten, *Printer's Ink*, Dec. 27, 1957, p. 22.

¹⁴² Hammond and Garfinkel (1964), p. 52.

¹⁴³ *Wall Street Journal*, Feb. 27, 1958, p. 12.

¹⁴⁴ Despite the FTC's decision, Consumers Union began using the method the FTC had considered. The old and new methods were easily compared, and Consumers Union simply rescaled the old numbers when making historical comparisons. *Consumer Reports*, January 1960.

in tar and nicotine.¹⁴⁵ Advertising expenses were now exceeding previous records and the greatest amounts, both absolutely and on a per-cigarette basis, were for filter brands.¹⁴⁶ At this point the FTC abruptly stepped in.

5. 1960: The FTC ban on tar and nicotine advertising

Near the end of 1959 the FTC contacted each major cigarette manufacturer and suggested the tar derby should end. The FTC staff reiterated its view that tar and nicotine claims would be regarded as conveying the additional claim that lower levels of tar and nicotine reduced health risks.¹⁴⁷ (The Commission was legally free to infer claims without considering any evidence other than the advertising itself.¹⁴⁸) The staff also indicated it would now require scientific

¹⁴⁵ Some brands were: Life (a filtered version of which appeared late in 1959), Duke of Durham, Spring and Spud. In the *Reader's Digest* ratings published in November 1959, the three lowest were Duke, Life and Kent. Another entry about this time was Vanguard, from Bantop Products. Vanguard contained no tobacco at all. It immediately ran into problems because it could not legally be labelled a cigarette. *Consumer Reports*, January 1960, p. 16.

¹⁴⁶ In 1958, Viceroy and Winston had the largest expenses; in 1959, Kent led. [*Consumer Reports*, January 1960, p. 14]. All were filter cigarettes. For the industry as a whole, advertising expenses during those two years far exceeded previous records. *Advertising Age*, Sept. 19, 1960. The increase in cigarette advertising was more rapid than the increase in advertising overall, which was adjusting to the swift growth of television; in 1960, after the tar and nicotine advertising ban, cigarette advertising increased less rapidly than advertising overall. Federal Trade Commission, Bureau of Economics (1964), Table 3.

¹⁴⁷ Federal Trade Commission (1960) [letter to cigarette manufacturers], Dec. 17, 1960; quoted in Wagner (1971), p. 92: "We wish to advise that all representations of low or reduced tar or nicotine, whether by filtration or otherwise, will be construed as health claims. . . . Our purpose is to eliminate from cigarette advertising representations which in any way imply health benefits."

¹⁴⁸ Preston (1983), p. 6, refers to the fact that the Commission has "plac[ed] great reliance on its legal right to use no evidence other than the ads themselves." Also see Bailey and Pertschuk (1984) and references therein, and Muris (1982) at 701-702 and cites therein. The 1983 Deception Policy Statement (FTC, 1983) and the Commission's *Thompson Medical Products* opinion apparently raised the evidentiary standard for inferring implied claims; see Ford and Calfee (1985).

evidence that reduced tar and nicotine provided significant health benefits.¹⁴⁹ Since the 1955 Guides had only required proof of the *levels* of tar and nicotine, the new proposal represented a stronger requirement.¹⁵⁰

The FTC's new standard was stringent because it required evidence on the long-term effects of a type of cigarette (low-tar) that was still new. It was widely understood that such evidence did not exist and could be obtained only through lengthy epidemiological studies.¹⁵¹ The first empirical evidence of the benefits of low-tar cigarettes on the risk of lung cancer would not become available until the 1970s and even then analysts noted that further confirming evidence would be difficult to gather because of the slowness with which lung cancer develops.¹⁵² Today, twenty-five years after the tar and nicotine ban, the benefits of lower tar are generally granted only with respect to certain forms of cancer, including lung cancer.¹⁵³ There is still no consensus that benefits have

¹⁴⁹ *Newsweek*, February 15, 1960, p. 73-74.

Up to now, [FTC Chairman] Kintner explained, FTC "ground rules" had required only that a cigarette maker substantiate its tar and nicotine figures with a report from an independent research laboratory. Now, the advertiser couldn't mention tar and nicotine at all unless he could supply "physiological proof" that the filter really had something to do with his cigarette's effect on a smoker's health, something no one has been able to establish.

In his February 5, 1960 statement to the Advertising Federation of America, Kintner (1960) argued that tar and nicotine claims are

possibly misleading in view of the absence of a satisfactory uniform testing method and proof of advantage to the smoker. [*New York Times*, February 6, 1960 at p. 23; Kintner (1960)]

¹⁵⁰ *New York Times*, Feb. 4, p. 48, and Feb. 8, 1960, p. 8.

¹⁵¹ It was generally taken for granted at the time that epidemiological evidence on the effects of lower tar and nicotine did not exist. *Newsweek*, February 15, 1960 at 74, noted that no had been able to provide physiological proof that filters reduce risk.

¹⁵² Wynder and Hoffman (1972).

¹⁵³ On the relation between lung cancer and reduced yield cigarettes, see Wynder and Hoffman (1972); Hammond, et al. (1976); Hawthorne and Fry (1978); Hammond (1980); Garfinkel (1980b); Garfinkel and Seidman (1981); Lee and Garfinkel (1981); Wynder and Hoffman (1982); Vutuc and Kunze (1982); Higen-

been shown to exist for respiratory disease generally¹⁵⁴ or for non-respiratory illnesses such as coronary heart disease.¹⁵⁵ Relating cigarette content with heart disease is particularly difficult because good data are scarce,¹⁵⁶ the etiology of

bottam and Shipley and Rose (1982); Wynder and Hoffman (1982); the summary by Sparrow, et al. (1983); and Lubin, et al. (1984). Sparrow, et al. (1983 at 56) note, "available data suggest that [smoking low tar cigarettes will reduce health hazards] for a variety of cancers, including lung, larynx, esophagus, and bladder. Data for respiratory symptoms and disease are less clear-cut."

¹⁵⁴ On the effect of low-tar cigarettes on respiratory disease other than lung cancer see the mixed evidence in Auerbach, et al (1979); Garfinkel (1980b); Lee (1980); Lee and Garfinkel (1981); Higenbottam, Shipley, Clark and Rose (1980); Schenker, Samet, and Speizer (1982); Sparrow, et al. (1983); and U.S. Public Health Service (1984), chapter 6. U.S. Public Health Service (1981 at 11) notes that chronic obstructive lung disease kills relatively few persons compared to lung cancer, and that the time between onset of symptoms and death is long. This limits the usefulness of mortality data in assessing the value of lower tar; hence the reliance in some of the cited studies on symptoms and reductions in measured air flow.

¹⁵⁵ On the relation between overall mortality and reduced tar and nicotine, see Hammond, Garfinkel, Seidman and Kew (1976); Todd, Lee and Wilson (1976); Garfinkel (1980b); Wynder (1980a and 1980b); and Garfinkel and Seidman (1981 at 8) [the data "gives evidence of small but distinct drop in mortality from all causes, coronary heart disease and lung cancer associated with reduction in tar/nicotine content of cigarettes."] On the more specific relation between coronary heart disease and reduced yield, the evidence is inconclusive and (by any standard) incomplete. Hammond, Garfinkel, Seidman and Kew (1976; see summary table in U.S. Public Health Service, 1983 at 120), Lee and Garfinkel (1981), Garfinkel and Seidman (1981), and Higenbottam, Shipley and Rose (1982; summarized at U.S. Public Health Service, 1983 at 120-121) found small, often insignificant reductions in coronary heart disease mortality. Hawthorne and Fry (1978) and Castelli, et al. (1981) found no significant differences between smokers of filter and non-filter cigarettes. Kaufman, et al. (1983) and Wald (1985) found no differences in rates of heart attacks as a function of either nicotine or carbon monoxide content. The 1981 FTC staff report on proposals to alter the cigarette health warnings refers to "the lack of empirical evidence on the beneficial health effects of lower 'tar' and nicotine cigarettes," and the need for more research. Federal Trade Commission (1981), pp. 1-52 and 1-56.

¹⁵⁶ Often in epidemiological studies, little is known of the smoking history of the subjects or the contents of the cigarettes (which of course changed over time.) For example, the data used in Hawthorne and Fry (1978) and Castelli, et al. (1981) indicated only whether cigarettes smoked were filter or non-filter. The effects of the very low-tar cigarettes (less than 5 mg.) popular in recent years are simply unknown. See U.S. Public Health Service (1983) at 120, and Lee and Garfinkel (1981), who also note the sparseness of data on lifetime smokers of filter cigarettes.

heart disease is more confounded than that of lung cancer,¹⁵⁷ the exact ingredients in cigarette smoke that cause heart disease are not yet known with certainty,¹⁵⁸ and low-tar cigarettes, as presently constructed, may not greatly reduce smokers' intake of the crucial ingredients.¹⁵⁹ The result is that statistical tests carried out thus far appear to be of relatively low power.

The FTC's intention to infer health claims from tar and nicotine advertising placed cigarette manufacturers in a dilemma. They had never claimed that reducing tar would reduce risk; in fact they claimed there was no risk to reduce.¹⁶⁰ But various authorities suggested publicly there would be a reduction in risk and these suggestions created consumer demand for tar and nicotine claims.¹⁶¹ When tar and nicotine numbers were advertised, consumers would tend to combine these numbers with the "ambient" information provided by other

¹⁵⁷ For example, predictions of reduction in mortality from heart disease, based upon epidemiological studies comparing smokers with non-smokers and quitters with non-quitters, have not held up well in controlled intervention studies that reduced smoking. See Rose, et al. (1982) and "Multiple Risk . . ." (1982), where it is suggested that ineffective treatment for some hypertensive subjects may have confounded the effects of reduced smoking. Also see the review in U.S. Public Health Service (1983) at 300 ff.

¹⁵⁸ See, for example, Wald, et al. (1981) on the role of nicotine in heart disease, and U.S. Public Health Service (1981 at 10-11) on the uncertainty about the role of carbon monoxide and other agents in the etiology of coronary heart disease.

¹⁵⁹ Epidemiological studies show a relatively clear dose-response relation between coronary heart disease and the quantity of cigarettes smoked, depth of inhalation and other factors. [U.S. Public Health Service, 1983 at 114 ff. and 120 ff.] What remains unclear is the extent to which low-tar cigarettes actually reduces dosage (the reduction may be small, because of compensating behavior by smokers,) and whether smoking low-tar brands in fact does reduce risk of coronary heart disease. On compensation when smoking low-tar cigarettes, see the discussion below on the period since 1971.

¹⁶⁰ At the height of the tar derby, the president of R.J. Reynolds declared, "we attach no significance to the measurable quantities of solids (tars) and nicotine reported to have been found in the smoke of cigarettes." *Advertising Age*, February 24, 1958, p. 8. In the 1970 voluntary agreement with the FTC to advertise tar and nicotine numbers, the tobacco companies noted that their adherence to the testing program did not "constitute an admission by any company that 'tar' and nicotine have any significance in relation to human health." Brown and Williamson Tobacco Corp., et al. (1970).

¹⁶¹ See, for example, Miller and Monahan (1957a and 1957b.)

authorities and infer that the lower tar cigarettes might be safer. Thus there was no way to advertise tar nicotine data without consumers inferring health claims unless the ads also disclaimed any connection between tar levels and health, and of course any such disclaimer would also have to be substantiated.

Intense negotiations followed the FTC's initiative. Early in February 1960 the FTC announced that the Bureau of Consultation had negotiated an industry-wide agreement to ban all tar and nicotine claims.¹⁶² Press accounts suggested that at least one firm (Brown and Williamson, which was greatly dependent on sales of filtered cigarettes) strongly resisted before giving in.¹⁶³

The impetus for the 1960 tar and nicotine advertising ban is unclear, at least to me, and this paper will not test any hypotheses regarding which parties gained or lost. One apparent factor was a recent statement by the U. S. Surgeon General recommending against encouraging the smoking of low-tar cigarettes.¹⁶⁴ But other, equally respected authorities apparently disagreed with the Surgeon General; within a few months, for example, the American Cancer Society would

¹⁶² The agreement was announced by the FTC chairman at the February 1960 meeting of the Advertising Federation of America. *New York Times*, February 8, 1960 at 48; Kintner (1960). The six major cigarette manufacturers filed an affidavit with the FTC pledging to omit all references to health benefits from smoking, including all references to tar and nicotine content. *Advertising Age*, January 13, 1964 at 103.

¹⁶³ *New York Times*, Feb. 5, 1960, p. 44; Feb. 8, 1960, p. 48; and Feb. 10, 1960, p. 60. These accounts emphasized the differential effects the ban would have on different firms. Brown and Williamson continued for a short while to advertise tar and nicotine filtration for Life (one of the very lowest in tar of all cigarettes then on the market) and Viceroy. Brown and Williamson's advertising for Life had been unusually aggressive, emphasizing its use of the "United States Testing Service." In December 1959 the FTC issued a complaint, and on Feb. 24, 1960, B&W signed a consent order. The order dealt with the narrow issue of graphic demonstrations of filter power and misrepresentation of the status of the testing laboratory, but not with the larger issue of tar and nicotine advertising in general. *FTC v. Brown and Williamson*, 56 FTC 956 (Feb. 24, 1960).

¹⁶⁴ Burney (1959). ["No method of treating tobacco or filtering the smoke has been demonstrated to be effective in materially reducing or eliminating the hazard of lung cancer." p. 1836.]

ask the FTC to reverse policy and encourage the tar derby.¹⁶⁵ Possibly another influence on Commission action at this time was a desire to establish a general requirement that implied health claims be substantiated.¹⁶⁶

It was widely anticipated that much advertising would change immediately,¹⁶⁷ which in fact happened. Tar and nicotine claims were eliminated in favor of yet more ways to describe the flavor of a filtered cigarette, just as in 1955 appeals to health had been replaced by appeals to taste. Lorillard's ads for Kent changed from "filters best for the flavor you like" to "a cigarette that satisfies your appetite for a real good smoke" and the new low-tar brand Duke (Liggett and Myers) switched from "lowest in tars" to "designed with your taste in mind."¹⁶⁸

¹⁶⁵ Brecher, et al. (1963). In 1962 came the well-publicized report from the Royal College of Surgeon in England. It recommended low-tar cigarettes for those who could not quit, and suggested government testing and publication of tar and nicotine content. Royal College of Physicians (1962) at S7 and S8.

¹⁶⁶ In December 1959 the Commission let it be known that it would coordinate actions with the Food and Drug Administration in order to halt advertising of the cholesterol of foods on the grounds that there was no substantiation for the implied claim that lower cholesterol reduced the risk of coronary heart disease. [*Printer's Ink*, Dec. 18, 1959, p. 12-13.] In 1964 the press would report that the Commission had issued a ruling that effectively prohibited use of the word cholesterol in ads for a product that replaced egg yolks with synthetic yolks in order to make the product cholesterol-free. See *Advertising Age*, Feb. 3, 1964, p. 3, reporting the reactions of advertising executive Fairfax Cone, who dealt with clients affected by both the cholesterol and tar/nicotine advertising bans. As would be the case with the connection between lung cancer and tar reductions, conclusive substantiation for the cholesterol claim would not be available for many years. Thus we have in 1982:

In the area of lipid-lowering [i.e., cholesterol-lower] diet, some controversy has existed for years as to precise benefits, although most scientific including public health groups have concluded that benefits do indeed exist.

"Multiple Risk . . ." (1982), p. 1475.

¹⁶⁷ E.g., *New York Times*, Feb. 4, p. 48; *Printer's Ink*, Feb. 5, 1960, p. 13. Much advertising had already changed as a result of private negotiations with the FTC. *Printer's Ink*, February 5, 1960, p. 13.

¹⁶⁸ *Newsweek*, February 15, 1960, p. 74.

Lorillard even reintroduced the unfiltered king-size Old Gold and planned to emphasize its virtue of being "tender to your taste."¹⁶⁹

The new low-tar brands -- all from smaller firms -- were expected to suffer under the ban since it would not be easy to launch these brands without being able to advertise their one advantage. As one advertiser was quoted, "you build a better mousetrap and then they say you can't mention mice or traps."¹⁷⁰ The same point was noted elsewhere.¹⁷¹

On the other hand the two leading firms seemed likely to gain from the ban.¹⁷² Reynolds and American Tobacco had never advertised tar and nicotine content and therefore had no need to alter their basic campaigns.¹⁷³ Also unaffected were the same companies' ads that emphasized the disadvantages of filters: "No flat filtered-out flavor" (Pall Mall, 1958), "Taste too fine to filter" (Lucky Strike, 1959), and others. There also remained room for Camel's slogan, "Are you smoking more now but enjoying it less?," which played on the

¹⁶⁹ *Newsweek*, February 15, 1960, p. 74.

¹⁷⁰ *Newsweek*, February 15, 1960, p. 74. The story continued,

Furthermore, the action plainly worked economic hardship on companies which had spent millions precisely to build up low tar and nicotine brands, while favoring competitors who relied on other pitches.

Yet most tobacco men, tired of quibbling about milligrams of tar, seemed almost relieved by the decision. For many an advertising copywriter, it promised a return to the broad, happy areas of "taste" and "flavor," an end to dancing on the heads of scientific pins.

¹⁷¹ Wootten, in *Printer's Ink* annual review of the cigarette market (see Wootten, 1960), noted that the agreement did not affect established "hi-fi" (high filtration) brands as much as it affected the new entries such as Duke of Durham (L&M). He quotes one seller: "This agreement jerked the rug from under our feet and knocked our sales (hi-fi) into a cocked hat." Nonetheless, FTC Chairman Earl Kintner, noting the substantial amount of advertising that had to be changed in a very short time, proclaimed, "This is a landmark example of industry-government cooperation in solving a pressing problem." *Newsweek*, February 15, 1960, p. 74.

¹⁷² The *New York Times*, February 8, 1960 at 8, noted that the industry generally thought that American Tobacco and Reynolds would gain from the ban, while Liggett and Myers and Brown and Williamson were especially vulnerable because of their recently introduced low-tar brands.

¹⁷³ "It what's up front that counts" (Winston) and so on.

widespread belief that some smokers smoked more when they switched to filters.¹⁷⁴

Printer's Ink summed up the changes that took place in 1960:

The pendulum swung back again in cigarette advertising during 1960. Completely erased, at the "urging"[!?] of the Federal Trade Commission, are the boxscores on tar and nicotine. Once more the industry is back to its traditional and usually successful course -- advertising flavor, taste and pleasure against a backdrop of beaches, ski slopes and languid lakes. It is a formula that works, as all-time high sales show in the Wootten Report. And this new mood in advertising will probably prevail for some time, now that the FTC has insisted that wildly competitive copy is generally distasteful.¹⁷⁵

One notes that *Printer's Ink* put the word "urging" in quotes. The reason is simple: current observers seemed confident that at least the largest cigarette manufacturers would benefit from the new rules.¹⁷⁶

6. 1960-66: the "Second Filter Derby"

Cigarette advertising after 1960 can conveniently be broken into two periods. From 1960 to 1966 the conditions were similar to those prevailing immediately after the 1955 Guides were issued. Advertisers again promoted taste and, where appropriate, the existence of a filter. As in the first filter derby of 1955-57, sales of filtered brands increased substantially (although more slowly

¹⁷⁴ On the apparent increase in smoking by smokers of filter cigarettes, see Wootten (1960), which quoted the Department of Agriculture's annual "Tobacco Situation." Later studies showed that the number of cigarettes smoked generally does not vary significantly with tar and nicotine content; see Garfinkel (1980a); Russell, et al. (1980); and Wald, Idle, Boreham, and Bailey (1981); for a somewhat contrasting view, see Harris (1980). Also important, however, are other forms of smoker "compensation" for lower tar and nicotine; relevant studies are cited below in the discussion of the FTC's tar and nicotine testing program.

¹⁷⁵ "Cigarette Ads Back on Old Path," *Printer's Ink*, Dec. 23, 1960, p. 37.

¹⁷⁶ The *New York Times* quoted a cigarette manufacturer spokesman as saying, "Whether people like it or not, it's going to be a lot easier on the cigaret business." Feb. 8, 1960, p. 8. The story noted that some observers expected that Reynolds and American Tobacco would directly benefit from the ban, but the same would not be true for Liggett and Myers and Brown and Williamson, who had been counting on success for new low-tar brands like Duke and Life. Nonetheless, according to the *Times*, FTC Chairman Kintner argued that "because all companies have agreed," the ban "will not put individual ones at a disadvantage."

than before.)¹⁷⁷ But the rapid decline in tar and nicotine content in cigarettes was drastically curtailed, as *Reader's Digest* noted with dismay when it continued its series of tar and nicotine measurements. Its analysis in August 1963 is so simple and to the point as to merit quoting in full:

What Happened to Filter-Tips in 1961-63? The question can be answered in one word: Nothing. The latest laboratory tests . . . show the tar and nicotine in the smoke of current filter-tip cigarettes to be substantially the same as when the last report was published in July 1961. (The same is true of most popular plain-tip brands--no significant change.)

The reason for this is the Federal Trade Commission "black-out" of facts and figures in cigarette advertising in 1961. Since no claims of superior or improved filtration can be made, cigarette manufacturers have quit trying to produce "safer" cigarettes lower in tar and nicotine. Between 1957 and 1960, such competition reduced the tars in American cigarette smoke by 60 percent. When the 'tar derby' ended, so did research for safer cigarettes.¹⁷⁸

Their conclusions were echoed elsewhere.¹⁷⁹ Sales-weighted averages of tar and

¹⁷⁷ Maxwell (1979).

¹⁷⁸ "Report to Consumers", *Reader's Digest*, Aug., 1963, p. 99. The 60% decrease was apparently not the result of sales-weighted calculations. Later analysts calculated a smaller decline, on the order of one-third. Hammond and Garfinkel (1964), p. 51. For the *Digest's* earlier reaction to the FTC ban, see Miller and Monahan (1961).

¹⁷⁹ See Brecher, et al (1963), p. 155, where it reported that within a few months of the ban, the American Cancer Society asked the FTC to reconsider. Senator Maurine B. Neuberger, a leading Congressional crusader against smoking, said in her 1963 book,

The unhappy result [of the 1960 ban] was that sales of nonfilter cigarettes actually stopped declining the high-filtration cigarettes, unable to advertise their relative safety, either sank from view or barely held their own. [p. 97.]

Perhaps worse, there was much less incentive for the cigarette manufacturer to commit great sums of money toward the development of more efficient or selective filters since he had little promise of being able commercially to exploit his development. [p. 98.]

As noted below, the 1962 report from the British Royal College of Physicians suggested governmental action to make tar and nicotine measures available.

nicotine apparently continued to decline, presumably because of brand-switching, but the decline was much less rapid than before.¹⁸⁰

The radically changed nature of the cigarette market, now that both health-related and tar and nicotine advertising had been eliminated, can be seen in a remarkable train of events starting in 1962. That year saw a dramatic coalescing of scientific, public health, and governmental opinion. The most remarkable reports came from governments, first from the U. K. in 1962,¹⁸¹ then from the U. S. Surgeon General in 1964.¹⁸² Both reflected widespread scientific consensus on the effects of smoking on lung cancer and other related illnesses, plus a great deal of scientific suspicion on the relation between smoking and a much more common set of illnesses, coronary heart disease.

The 1962 British report concluded that smoking causes lung cancer and chronic bronchitis and probably contributes to heart disease. The report also suggested the effects of smoking might be reduced by filters and modified tobacco, and among possible government actions it listed the publication of tar and nicotine content.¹⁸³ Considerable reaction followed: a June 1962 *Reader's Digest* article that described the Royal College report and endorsed its suggestions, numerous public seminars, a ban on cigarette advertising in Italy, various reports from United State medical societies, elimination of free cigarettes in Air Force hospitals, and, in October of 1962, the convening of the U.S. Surgeon General's Advisory Committee on Smoking and Health.¹⁸⁴

The carefully orchestrated release of the Surgeon General's report in January 1964 was surrounded by intense publicity.¹⁸⁵ Like the 1962 British report, it concluded that lung cancer and chronic bronchitis are causally connected to

¹⁸⁰ Again, see the graphs in Figure 1 and 2, above. Note that the content of filter cigarettes remained relatively constant from 1960 to 1968.

¹⁸¹ Royal College of Physicians (1962.)

¹⁸² Royal College of Physicians (1962) and U.S. Public Health Service (1964.)

¹⁸³ Royal College of Physicians (1962) at S7 and S8.

¹⁸⁴ Miller (1962), Miller and Monahan (1963), Wagner (1971), chapter 8.

¹⁸⁵ On the publicity surrounding the 1964 report, see Wagner (1971), chapter 8, and Wooten (1964).

smoking and that evidence suggested, but did not demonstrate, a causal relation between smoking and heart disease.

The cigarette industry and others apparently expected a renewal of the tar derby. When American Tobacco introduced a new very low-tar brand on the eve of the Surgeon General's report, it listed tar and nicotine content on the label.¹⁸⁶ But the FTC quickly proposed a trade rule that would continue the ban on tar and nicotine claims (unless they were based on a testing procedure approved by the FTC, which had not approved any method,)¹⁸⁷ and maintain the virtual ban on claims "that smoking one brand is less harmful than smoking

¹⁸⁶ The brand was Carlton; the FTC said the label information would not be considered a violation of the 1960 ban. On this, and on the fact that the FTC was then considering "dumping" the ban in order to stimulate the development of better filters, see "Cigarette Tar Derby May Be On Again," *Business Week*, Jan. 11, 1964, p. 25, and *Printer's Ink*, Feb. 14, 1964, p. 32. The latter story said it was expected that in the coming year cigarette as would emphasize tar and nicotine numbers, and noted that some competitors were "annoyed" at the prospect of a new tar derby. On the tar and nicotine labels for Carlton and, later, Montclair cigarettes, see *Printer's Ink*, June 10, 1964, p. 28. Just before the Surgeon General's report was released, Senator Maureen Neuberger, a long-time advocate of governmental action against smoking, sent a public letter to the chairman of the FTC asking that the Commission foster a new tar derby. She noted that "relative safety claims can only serve as a constant reminder of the hazards of smoking and will inevitably induce most smokers to seek out the least hazardous brand." *Advertising Age*, January 3, 1964.

¹⁸⁷ Federal Trade Commission (1964a, 1964b, 1964c) and *Printer's Ink*, Feb. 14, 1964, p. 32. The staff report (1964c) noted in appendix C that the Commission was considering using the "cambridge filter method" for assaying tar and nicotine content, but this did not happen for another three years.

another brand."¹⁸⁸ The trade press noted that "cigarette companies, heeding FTC warnings, will [probably] push taste as the main selling point."¹⁸⁹

Advertising therefore changed little in the face of the tumultuous events of 1964 and 1965. The FTC's 1955 and 1960 guides remained in force and were enhanced in 1965 by an officially encouraged, self-imposed industry advertising code that also prohibited references to tar and nicotine.¹⁹⁰ Taste continued to be the central theme in the cigarette market and references to health did not reappear.¹⁹¹ A new generation of filters (using charcoal) was introduced shortly before or after the Surgeon General's report. What was advertised, however, was

¹⁸⁸ *Advertising Age*, Feb. 3, 1964, p. 3. The staff commentary to the proposed rule made clear that virtually any competitive claims -- "improved filter," for example, would be regarded as a competitive safety claim. Such a claims would require both scientific substantiation and a full disclosure of the health hazards that remained. [Federal Trade Commission, 1964c, appendix X.] The FTC's draft rule must have been motivated partly by the fact that the Surgeon General's committee had not found that any type of cigarette was safer than another. See Federal Trade Commission, 1964c at 21. At this point, advertising executive Fairfax Cone objected to both this ban and the recently announced ruling against advertising low cholesterol content. See same story in *Advertising Age*. The FTC's proposed rule would have added a new requirement, namely, that advertisements and labels contain a health warning; this was prevented later in the year when Congress passed a law requiring warning on labels but placing a four-year moratorium on the FTC rule-making. See Drew (1965), p. 77. In the Congressional hearings that led to new legislation in 1965, the FTC testified against a proposal to encourage tar and nicotine ratings.

¹⁸⁹ *Printer's Ink*, Feb. 14, 1964, p. 32.

¹⁹⁰ For the text of the industry code, see "Cigarette Advertising Code," *Advertising Age*, May 4, 1964. The code allowed filtration claims if health benefits were substantiated or disclaimed and if an accepted measuring technique were used. It formally took effect on Jan. 1, 1965, but it was widely conceded to have been followed in most respects almost from the time it was published. The FTC's proposed trade regulation rule would have required health warnings in ads, but the 1965 legislation that placed warnings on packages also postponed the FTC rule-making. Advertised warnings did not come until 1972 as a result of an FTC consent order signed by the six major manufacturers. *FTC v. P. Lorillard Co.*, et al, 80 F.T.C. 455 (1972).

¹⁹¹ On the predominance of the taste theme, see *Printer's Ink*, Dec. 18, 1964; *Business Week*, Dec. 17, 1965, p. 65 [". . . taste and flavor claims have come to be nearly the only area covered by advertising campaigns"]; and *Time*, April 8, 1966 and *Printer's Ink*, Dec. 10, 1965, p. 25 and 31.

their taste rather than their filtering powers.¹⁹² The infrequent labelling of tar and nicotine content was dropped when the industry code went into effect and -- a final twist -- the industry code even abolished those filter trade-names (such as Kent's venerable "Micronite") that suggested unusual effectiveness.¹⁹³ As *Time* magazine put it in April 1966, when doubts about this approach were growing, "between the Federal Trade Commission and their own industry's self-imposed Cigarette Advertising Code, cigarette salesmen have just about been reduced to saying that a smoke is a smoke."¹⁹⁴ Indeed, the FTC staff would note many years later that "in the fifteen years since [the Surgeon General's report] there has been little change in the character of cigarette advertising."¹⁹⁵

The contrast between the closely regulated cigarette market of the 1960s and the more free-wheeling market of the 1950s is striking. The market effects of the 1962-65 health shocks were noticeably weaker than those in the 1950s, when advertising had vigorously reminded smokers of health problems and the importance of tar and nicotine content. Sales suffered much less in the 1960s than during the "fear advertising" of 1952-54¹⁹⁶ and there was no decrease in tar and nicotine content to compare with what occurred in the 1957-59 tar derby. This was not for lack of public information or emphasis in the 1960s. The events

¹⁹² Some of the new or modified brands were Tareyton and Carlton from American Tobacco, Lark from Liggett and Myers, and other brands from Philip Morris, R.J. Reynolds, and Brown and Williamson. *Printer's Ink* noted (Dec. 18, 1964, p. 26-27), "As almost every brand, regardless of type is currently stressing taste in its advertising, there is a danger that some of the different-tasting charcoals will fall victim to their own advertising." There were minor exceptions to the absence of tar and nicotine claims during 1964. *Printer's Ink*, February 14, 1964, p. 32, reprints an ad for Carlton that pictures the package label containing tar and nicotine figures. The numbers disappeared from both the label and the ad before the voluntary cigarette advertising code formally took effect in January 1965.

¹⁹³ *Business Week*, Dec. 26, 1964, p. 14.

¹⁹⁴ *Time* magazine, April 6, 1966, p. 90.

¹⁹⁵ Federal Trade Commission, 1978 report on cigarette advertising, p. 5.

¹⁹⁶ Per capita sales dropped 3.5% in 1964 but increased 1.5% in 1965 even though advertising expenditures declined 7% in 1965 and cigarette taxes increased. Recall that sales dropped 2.8% and 6.1% in 1953-54. On sales and taxes, see Maxwell (1979); on advertising costs, see *Advertising Age*, July 25, 1966, pp. 56-58.

of 1964-65 featured a broader scientific consensus, a wider range of diseases suspected of being caused by smoking,¹⁹⁷ far greater publicity by both public health advocates and government health authorities,¹⁹⁸ vigorous Congressional debate, an industry advertising code that halted such familiar tools as testimonials by athletes and other celebrities, higher state and local taxes,¹⁹⁹ and in July 1965, legislation requiring health warnings on cigarette packages.²⁰⁰

7. 1966-71: the FTC reverses policy on tar and nicotine advertising

By 1966 the American Cancer Society, the Public Health Service and other public health figures were recommending that smokers switch to lower-tar cigarettes even though there still was no epidemiological evidence that doing so was likely to reduce risk. Most of these same authorities also wished to see advertising of tar and nicotine levels as a means for encouraging development of better cigarettes.²⁰¹

¹⁹⁷ Regarding the influence of smoking on heart disease, which is now assumed to account for far more deaths than those from smoking-related cancer, the Surgeon General's July 1957 statement said, "there is no convincing biological or clinical evidence to date to indicate that smoking per se is one of the causative factors in heart disease." Burney (1958.) (Before 1957, the federal government took no position at all on smoking and health.) The 1962 British report and the 1964 U.S. Surgeon General's reports, as noted above, were much stronger than the 1957 statement, saying evidence indicated that smoking probably helped cause heart disease.

¹⁹⁸ Also, some well-known publications stopped accepting cigarette advertising: *Saturday Review* (see *Advertising Age*, January 27, 1964, p. 3) and *New Yorker* (*Advertising Age*, February 3, 1964, p. 3).

¹⁹⁹ On cigarette taxes, see *Advertising Age*, July 25, 1966, pp. 56-58.

²⁰⁰ See Wagner (1971), chapter 10. The legislation also imposed a four-year moratorium on FTC trade regulation rules on cigarette advertising (the moratorium was later extended to 1971) and a ban on state and local regulation of cigarette labels and advertising.

²⁰¹ See *The New Republic*, May 7, 1966, p. 7 [the American Cancer Society and the National Interagency Council on Smoking and Health, a private and governmental group of cancer experts, had requested the FTC to lift its ban on tar and nicotine advertising]; *Time* magazine, April 8, 1966, p. 90; and Miller and Monahan (1966), p. 56-65. Tar and nicotine ratings published in the latter article revealed, among other things, that the filtered versions of Pall Mall, Chesterfield and Lucky Strike produced more tar and nicotine than the unfiltered versions. As

In the face of this pressure the FTC reversed its attitude and began to encourage tar and nicotine advertising. This about-face was not easily accomplished, however. The Commission had placed itself in a dilemma when it engineered the 1960 ban. At that time the Commission had assumed that ads containing tar and nicotine levels claimed by implication that lower levels were associated with lower health risk. Having inferred such a claim, the Commission had said that it expected substantiation despite general agreement that substantiation by accepted scientific means could not be produced for many years. Now, in 1966, the FTC apparently could countenance tar and nicotine advertising only by forsaking the requirement that health claims be substantiated.

The Commission escaped this dilemma by simply announcing it would no longer regard tar and nicotine advertising as deceptive -- that is, it would no longer infer health claims from tar and nicotine advertising (unless an explicit health claim were appended, of course.)²⁰² This was ironic in the extreme. Consumers were at least as likely in 1966 as in 1960 to adduce health claims from tar and nicotine information. Moreover, the Commission explicitly justified the new policy of encouraging tar and nicotine advertising by saying it favored giving consumers "as much information about the risks involved in smoking as is possible."²⁰³ This amounted to saying that tar and nicotine information provides risk information. Thus the FTC itself seemed to take for granted that as a

noted earlier, the 1962 report by the Royal College of Physicians [1962 at S7-S8] had suggested government publication of tar and nicotine figures, and in 1964 Senator Neuberger had asked the FTC to encourage a new tar derby. In England, the Tobacco Advisory Council began publishing tar and nicotine yields in 1965. [Wald, Doll and Copeland, 1981 at 765. Data for 1965-75 are printed in Lee, ed., 1976.] Finally, in 1966 a new Surgeon General's report on smoking concluded that "The preponderance of scientific evidence strongly suggests that the lower the tar and nicotine content of cigarette smoke, the less harmful would be the effect," and advised smokers who could not quit to switch to lower-yield cigarettes. U.S. Public Health Service (1981), p. v.

²⁰² Federal Trade Commission (1966), Letter to Cigarette Manufacturers. Also see *Advertising Age*, July 25, 1966, p. 58, *The New Republic*, May 7, 1966, p. 7, and Federal Trade Commission (1968), p. 18.

²⁰³ Federal Trade Commission (1967b) "Letter to National Association of Broadcasters," quoting from Federal Trade Commission (1967a), which in turn had borrowed language from the most recent Surgeon General's report. The letter also said the FTC "would like to stress the relative advantages of low tar and nicotine yield cigarettes."

factual matter tar and nicotine information communicated health claims and that the level of tar and nicotine did influence the risk from smoking. Nonetheless, the connection between tar and nicotine levels and health was precisely what would continue to be forbidden.²⁰⁴ The confusing result was succinctly described by one legal scholar:

If you must, the PHS [Public Health Service] urges you to smoke filter cigarettes; however, a tobacco company caught advertising that filters are safer than nonfilters will be prosecuted by the FTC for false and deceptive selling.²⁰⁵

Industry reaction to the new policy was remarkable. The advertising self-regulation authority stuck with exactly the position the FTC had forsaken, arguing that tar and nicotine claims should be banned because there still was no scientific proof of the benefits of lower tar and nicotine.²⁰⁶ On the other side was Lorillard, whose Kent brand had been hurting under the ban and who was about to introduce a new low-tar brand. Immediately upon receiving the FTC letter Lorillard informed the code administrator that it would no longer consider itself bound by the code.²⁰⁷ American Tobacco, which had introduced two low-

²⁰⁴ The Commission noted that no evidence indicated that any cigarette was completely safe, and on these grounds opposed advertising that suggested any cigarette was "safe" or "safer." Federal Trade Commission (1967b), "Letter to National Association of Broadcasters"

²⁰⁵ Gellhorn (1969), p. 146.

²⁰⁶ Thus Robert Meyner, administrator of the industry code, reacting to the FTC's proposal to allow tar and nicotine advertising:

There is no adequate, relevant and valid scientific data demonstrating that any specific amount of tar and nicotine is significant in terms of health, and in the absence of an adequate disclaimer of such significance to health such representations would reasonably be regarded as false and misleading. [*New Republic*, May 7, 1966, p. 7.]

This must have been cribbed from some FTC attorney's brief written a few years earlier. Indeed, as late as 1981, FTC staff reports continued to refer to "the lack of empirical evidence on the beneficial health effects of lower 'tar' and nicotine cigarettes." Federal Trade Commission (1981) at 1-52.

²⁰⁷ The new brand was True. [*New Republic*, May 7, 1966 at 6.] The industry code administrator quickly obtained commitments from eight other cigarette manufacturers to stick with the code despite the FTC. [*Time* magazine,

tar brands about the same time the 1964 Surgeon General's report appeared, soon followed suit.²⁰⁸

In 1967 the FTC began producing its own tar and nicotine ratings.²⁰⁹ By 1970 the policy reversal was complete: in that year the major cigarette firms signed a non-binding pledge to use FTC tar and nicotine ratings in all advertising.²¹⁰

8. 1971-present: the "Little Tar Derby."

The 1970 tar and nicotine advertising agreement was not the final regulatory action at the federal level. Also in 1970 came a legislative ban on cigarette

April 8, 1966, p. 90.]

²⁰⁸ Miles (1981) p. 89. This episode can be seen as an example of different firms having contradictory opinions as to consumer reaction to advertising. The self-regulation authority seemed to take the view that the tar derby was dangerous to the industry because it reminded smokers of the evidence against smoking. American Tobacco, which had long resisted filter-tips and in the 1950s had forgone "fear" advertising as well as tar and nicotine advertising, may have felt by 1966 that the harm had already been done, and that further tar and nicotine advertising would be beneficial to the industry. At any rate, by 1966 American's market share was slipping to a more distant second, and its new management had embarked upon a policy based upon the introduction of new brands, some of them low in tar. See "American's Revival Plan: Brand Proliferation," *Printer's Ink*, December 10, 1965, p. 25.

²⁰⁹ Federal Trade Commission (1981), p. 4-3, and Federal Trade Commission (1967a) at n. 30. The method is described in Pillsbury, et al (1967.)

²¹⁰ Brown and Williamson Tobacco Corp., et al. (1970,) and Federal Trade Commission (1981 at 4-4, 4-5.) The industry agreement was partly prompted by an FTC rulemaking then underway that would have required the tar and nicotine ratings in ads. See FTC (1981), p. 4-4; the proposed trade rule can be found in 35 *Federal Register* 12671 (1970). The FTC has taken the position that this agreement does not have the force of law and thus far the courts have agreed. *FTC v. Brown and Williamson* at 9. In fact, individual firms have occasionally used alternative measures of tar and nicotine in their advertising and, until the ads for Brown and Williamson's Barclay brand, the Commission declined to challenge this practice as unfair or deceptive. *FTC v. Brown and Williamson* at n. 29. The Barclay case is discussed below.

advertising on TV and radio,²¹¹ and in 1972 the FTC obtained a consent agreement providing for health warnings in advertising.²¹²

The combined effect of these and earlier measures was to inaugurate an "Age of Purity" in cigarette advertising. The homogeneous nature of present cigarette advertising, described briefly at the beginning of this article, is apparent to even the most casual observer. References to health and to specific cigarette components and their effects are absent except for the use of FTC tar and nicotine numbers.²¹³

With health references gone, changes in the ways cigarettes are advertised no longer reflect changes in information about smoking. Thus it is difficult for cigarette advertising to exploit possible changes in the safety of cigarettes themselves. The single exception, of course, is the emphasis on reductions in tar and nicotine content as measured by the FTC. Since 1970 FTC-measured tar and nicotine content has been advertised consistently and has declined substantially.²¹⁴

²¹¹ The 1970 TV ban on cigarette advertising has been widely criticized on the grounds that its net effect may have been to encourage smoking, since the ban also stopped anti-smoking messages that had been broadcast since 1967. See, for example, Hamilton (1972), Warner (1979), and Schneider, Benjamin, and Murphy (1981). Warner, p. 439-440, reviews evidence that the cigarette industry favored the ban and was likely to gain from it. Miles (1982 at 83) makes the same point. In 1977 an HEW task force recommended that the ban be lifted, at least for low-yield brands. [Warner, p. 435.] Gellhorn (1969 at 148-149), writing while the law was being passed, pointed out its likely effects, noted that similar bans in England had failed to stem consumption, and argued that the ban was likely to discourage development of safer cigarettes.

²¹² The consent agreement on warnings in ads is *FTC v. P. Lorillard Co., et al.*, 80 F.T.C. 455 (1972). The warning was identical to the modified warning required on labels by Section 4 of the Public Health Cigarette Smoking Act of 1969 (Public Law 91-222.)

²¹³ The FTC has occasionally restricted, on questionable grounds, tar and nicotine advertising based on FTC measurements. An example is *FTC v. American Brands, Inc.*, a 1969 case that attacked ads claiming Pall Mall cigarettes were lower in tar and nicotine than before and lower than the best-selling filter kingsize brand. All the claims were true, but the Commission found them deceptive because Pall Mall did not have the lowest measures of any king-size cigarette. See Commissioner Elman's vigorous dissent.

²¹⁴ The last year for which the FTC published data on sales-weighted tar and nicotine content is 1981, when levels were about one-third less than in 1970.

But there are problems with the use of FTC measures. As of the end of 1985, the FTC's method for measuring tar and nicotine was virtually unchanged from the technique first implemented in the late 1960s.²¹⁵ A number of critics have claimed in the past five years that the FTC's smoking machines no longer reflect usual smoking habits. Much of the recent decline in overall tar and nicotine content is due to the popularity of filters that use various arrangements of holes or porous coverings to dilute the smoke so as to produce very small amounts of tar and nicotine in the standard measuring devices. Some smokers of these low-yield cigarettes, however, may inhale differently or more deeply than when smoking traditional cigarettes and some smokers may occlude the holes that dilute the tar and nicotine with air. Such "compensating" behavior can cause FTC data to give an inaccurate impression of the relative merits of different cigarette, thus casting doubt on the effects of the recorded reductions in tar and nicotine.²¹⁶ This is one reason why the question of whether public policy should

²¹⁵ Hoffman, et al. (1983) at 1050. As noted earlier, the FTC has announced plans to modify the testing program to take into account some of the problems discussed here.

²¹⁶ Compensation takes many forms: smoking more cigarettes, inhaling deeper, puffing more frequently (some brands improve their ratings simply by burning faster since the FTC machines smoke at a constant rate,) leaving a shorter butt, and (depending on filter type) hole-blocking and channel-blocking. Evidence on the extent and nature of compensation is mixed. See Kozlowski, Frecker, et al. (1980) [Hole blocking can increase tar and nicotine yields by 59-293%]; Kozlowski, Rickert, et al. (1980); Kozlowski (1981); Wald, et al (1980) [on compensation by inhaling]; U.S. Public Health Service (1981), p. vi and 185; Wald, Idle, Boreham and Bailey (1980 and 1981); Prue, et al (1981); Loupekine (1982); Benowitz, et al. (1983); Gori and Lynch (1983) [found that up to seven-fold difference in FTC nicotine ratings produced only 30-40% difference in nicotine intake]; Hoffman, Adams and Haley (1983); Rickert, et al. (1983); U.S. Public Health Service (1984), chapter six of which thoroughly reviews the literature on compensation; and Kozlowski (1985) at 8 and references therein and later at 22. Several points emerge from this research. Compensation affects many low-tar brands (not just Barclay, which is the subject of a dispute discussed below.) The effects are not always proportional (that is, two brands with identical ratings may induce different degrees of compensation), so that rankings and relative ratings may be changed. Compensation is usually incomplete, so there may remain a two or three-fold difference in yield between high- and low-yield brands. Compensation varies substantially across individual smokers. Finally, the degree of compensation may be different for different ingredients (for example, Hoffman, et al., 1983, found that Barclay-style filters affected carbon monoxide yield relatively little.)

encourage sales of low-yield cigarettes remains unsettled in at least some minds, and is likely to remain so until more conclusive evidence becomes available on the effects of low-yield cigarettes on mortality.²¹⁷

In 1981 the problems with FTC tar and nicotine measures became the subject of litigation. In that year Brown and Williamson introduced Barclay, whose innovative filter yielded very low levels of tar and nicotine. Objections from competitors required the FTC to consider the issue of how cigarette yield varies with smoker behavior. The Commission eventually obtained an injunction preventing use of the FTC figures in ads for Barclay, on the grounds that smokers were very unlikely to obtain a yield close to that recorded by the machines.²¹⁸ As of this writing, the Commission has just voted to solicit public comments on a proposal to change the FTC's testing method to take into account some of the difficulties posed by newer types of filters.²¹⁹

There are other notable problems in how cigarette advertising presently relates to health information. Carbon monoxide levels are not advertised at all, even though ratings have been published by the FTC since 1981 and carbon monoxide may be as important as tar and nicotine in for many illnesses. The lack of explicit carbon monoxide information in advertising could be significant, since carbon monoxide content may not correlate closely with other ingredients for some kinds of low-tar cigarettes. A separate problem is that other gases in cigarette smoke may also be toxic. For example, researchers have speculated that ozone or oxides of nitrogen may be responsible for much chronic obstructive lung disease.²²⁰ Cigarette advertising has nothing to say on this, either.²²¹ Finally,

²¹⁷ For several points of view, see Wynder and Hoffman (1975), Gori and Lynch (1978), Marx (1978), Gart and Schneiderman (1979), Wynder (1980a and 1980b), Kozlowski (1982), Lenfant (1983), and Kozlowski (1985) at 12 ff. and 18.

²¹⁸ See *FTC v. Brown and Williamson* (1983). The district court's ruling has been appealed to the U.S. Court of Appeals, District Circuit. Oral arguments were heard October 2, 1984 but no ruling has yet been made.

²¹⁹ *Wall Street Journal*, October 9, 1985, p. 41, and 49 *ATRR* 632 (Oct. 10, 1985.)

²²⁰ See Higenbottom, Shipley, Clark, and Rose (1980).

some have argued that the most efficient improvement in cigarettes would be development of a low-tar medium-nicotine variety, since tar appears to be far more dangerous than nicotine and smokers appear to seek mainly the effects of nicotine.²²² The market has yet to see a product or advertising that seeks to exploit this fact.

Some things may change now that new cigarette package warnings have been established. The warnings include the statements, "cigarette smoke contains carbon monoxide" and "smoking causes lung cancer, heart disease, emphysema, and may complicate pregnancy."²²³ Economic theory and past experience suggest that cigarette advertising changes most rapidly when it can exploit information provided by outside "shocks." Renewed public attention to the connection between cigarettes and coronary heart disease and the possible effects of carbon monoxide could provide incentives for some firms to gain private advantages through health-related advertising, much as occurred in the 1950s.

Nonetheless, cigarette advertising as presently regulated could not easily take these various missing factors into account. The FTC only encourages use of its own measurements and it is not clear whether a firm could easily establish an alternative measuring scheme that corrects for smokers' compensation for certain kinds of filters and makes the correction in a manner that meets FTC approval. Effective advertising of new information -- carbon monoxide content, for example, or the differential importance of tar and nicotine -- would probably require that the advertising also heighten consumer awareness of the effects of these various ingredients. This would be difficult under the 1955 Cigarette Advertising Guides

²²¹ U.S. Public Health Service (1981 at vii) notes, "a common thread running through the sections of this Report is that too much reliance in the past has been placed on the nonselective measure of 'tar' as a measure of risk to the neglect of other constituents and approaches to risk assessment."

²²² See, for example, Russell (1976), Jarvis (1981), Stepney (1981) and Gerstein and Levison (1982). A much different approach is the use of chewing gum containing nicotine. [U.S. Public Health Service, 1984 at 476-478, and Kozlowski, 1985 at 24.] This has achieved some clinical success but its use is limited by the fact that nicotine gum, unlike cigarettes, is available only by prescription. Thus nicotine from chewing gum is far more expensive than nicotine from cigarettes. Moreover, FDA policy has generally discouraged advertising of prescription drugs directly to consumers; see Masson and Rubin (1986).

²²³ 49 *ATRR* 535 (September 26, 1985.)

and the FTC's ad substantiation doctrine, given the tenuous connection between levels of carbon monoxide or nicotine and heart disease.²²⁴

V: CONCLUSIONS

The events described here suggest that what is widely regarded as an inevitable market failure is nothing of the sort. Unrestrained advertising in the cigarette market responded spontaneously to adverse health information on smoking. In fact, market reaction was often amazingly rapid. Responsive advertising appeared within months of the first reliable cancer reports and equally rapidly after public criticism of filter cigarettes. In both cases the advertising changes apparently brought rapid improvements in cigarettes and induced smokers to moderate their behavior substantially. Most remarkable is the fact that the informational shocks that struck the market in the 1950s, when government activity was minimal, apparently provoked a greater market response than the shocks of the 1960s, when far more comprehensive and persuasive health information appeared and federal and state action was substantial. Dividing the history of cigarette advertising into two periods -- before 1960 and after -- it is entirely possible that a relatively unregulated advertising market in the latter period would have discouraged smoking more effectively than did the regulatory regime that actually emerged. Or to view these events from the perspective of

²²⁴ The 1981 Federal Trade Commission staff report (at 1-31 and 1-34) notes that carbon monoxide in cigarette smoke has not been shown to be harmful except to pregnant women or persons with heart problems. As noted earlier, studies relating heart disease with carbon monoxide yield have been inconclusive. U.S. Public Health Service (1981 at 10-11) notes the "existence of gaps in our understanding of the etiologic agents in smoke that cause coronary heart disease" and suggests that estimating the effect of differences in levels of tar (and associated components such as nicotine and carbon monoxide) is likely to be difficult. After remarking upon the problems of "compensation" in the smoking of low-yield cigarettes, U.S. Public Health Service (1983 at 121-122) concludes, "the available data are conflicting concerning a possible reduction in risk of [coronary heart disease] for those smoking the lower yield cigarettes; further evidence is needed before this question can be definitely answered." Indeed, the fundamental question of what ingredients in cigarette smoke cause heart disease remains open. See U.S. Public Health Service (1981) at 10 and 125-126 and U.S. Public Health Service (1983) at 229.

cigarette sellers, the cigarette market seemed fragile in the unregulated 1950s but surprisingly robust in the regulated 1960s and 1970s.

The market generally moved ahead of, rather than behind government recognition of the health effects of smoking. The most abrupt decline in smoking took place before the first federal report on smoking and health. The most rapid decreases in tar and nicotine content occurred during the few years in which the FTC sought neither to restrain nor to encourage tar and nicotine advertising. In no sense, however, was the force behind these changes an admission by tobacco companies that cigarettes were unsafe. The motivation was competitive pressure combined with the fact that consumer fears were easily tapped through advertising. One can even argue that at times advertising exaggerated the dangers of smoking beyond what could be scientifically verified. In effect, cigarette sellers spontaneously provided health warnings that had not yet achieved a consensus within the medical profession, and provided cigarette improvements that official bodies (such as the FTC) had argued were impossible. Thus competitive forces improved cigarettes and discouraged smoking years before government pressure to do so began.²²⁵

These patterns arose from the nature of competitive markets where information dissemination is crucial. Many of the most significant events in the history of cigarette advertising fit a pattern in which self-interested actions of smaller firms made it impossible for larger firms to maintain the kind of behavior that would have most benefitted the cartel as a whole. Smaller firms advertised health effects more aggressively than large firms until such ads were prohibited, and smaller firms then introduced low-tar cigarettes and advertised tar and nicotine content until that, too, was prohibited. It is no surprise, therefore, that the FTC was successful in causing broad changes -- as it did in 1955 and 1960 -- only when it provided the means for closely coordinated action by the entire market.

The most prominent patterns in the history of the cigarette market were consistently and strongly governed by the nature of advertising, which in turn

²²⁵ See, for example, Greenberg (1962, p. 638), who noted in 1962 (when government action on smoking and health was still in the talking stage) that the only government action on smoking had been "banning health claims, but sales have not been affected."

reflected the state of health information and regulation. When health information pertained mainly to irritation and other obvious effects, cigarettes were advertised as being flavorful, smooth and relatively free of irritants, and the product itself was designed only to provide the optimal trade-offs between flavor, nicotine and irritation. When questions arose in the early 1950s about the connection between smoking, tar, and lung cancer, the market responded with "fear" advertising and reduced-tar filter cigarettes. Consumers responded by smoking less and by beginning the switch to filters. The 1955 Guides eliminated fear advertising, after which sales resumed their customary rapid rate of increase and the shift to filter brands continued. In the late 1950s came public reports on tar and nicotine content and medical recommendations that smokers switch to less potent cigarettes. This prompted widespread tar and nicotine advertising, even while the 1955 Guides continued to hold fear advertising in check. The result was that tar and nicotine content of cigarettes declined rapidly, while sales continued upward and filters continued to increase their market share. In 1960 came the FTC-negotiated voluntary ban on tar and nicotine advertising. Filters continued to sell well, but the decline in tar and nicotine yield was greatly abated, only to resume after tar and nicotine advertising was welcomed in the late 1960s. Thus every major turning point in the content of cigarettes and in the behavior of smokers was marked by basic changes in advertising and advertising regulation.²²⁶

The danger now is that regulatory forces may inhibit the cigarette market from adapting competitively, even self-destructively, to changes in science and technology. Missing from the market are catchy, vivid reminders of the importance of cigarette content for health. Absent, too, are opportunities for consumers to compare cigarettes of various combinations of tar, nicotine, carbon monoxide, and filtering techniques, along with other alternatives such as nicotine gum.

The most significant FTC actions (the 1955 Guides and the 1960 tar and nicotine advertising ban) were founded on the allegation that certain inferred advertising claims were misleading, not because they were false, but because they

²²⁶ This includes even the revolution in tobacco use that occurred in the early decades of the twentieth century, when advertising was widely credited with helping the newly developed cigarette eclipse snuff and chewing as the preferred use of tobacco.

could not be *substantiated*. These events therefore provide an early example (possibly the largest to date in economic terms) of the advertising substantiation program, which today forms the centerpiece of FTC regulation of advertising. In the cigarette market the effect of requiring conclusive scientific substantiation for inferred advertising claims was to discourage the use of emerging health information. What was suppressed was not, of course, the precise, dispassionate prose that emerges from government-sponsored conferences on smoking and health. On the contrary, the raucous advertising of the early 1950s bore no obvious resemblance to the health warnings now required by regulation. But the effect of that advertising was to rapidly shift consumer information in the right direction. Imposition of the FTC's 1955 cigarette advertising guides, as contemporary accounts made vividly clear, abruptly introduced the modern era of "pollyanna prose" and "soft, gentle phrases" which are now so roundly criticized.²²⁷ Similarly, the 1960 tar and nicotine advertising ban removed the means for informing consumers of the contents of cigarettes and therefore removed much of the incentive to improve them. If, as events suggest, this application of the substantiation doctrine brought deleterious consequences for consumers, retention of the substantiation doctrine today deserves continued scrutiny, especially when applied to claims made in markets where new and uncertain information is emerging.²²⁸

²²⁷ The quoted phrases, which were cited above, are taken from *Printer's Ink*, Dec. 30, 1955, p. 15, which reviews cigarette advertising for the year 1955.

²²⁸ In its discussion of how much substantiation to require when the truth of a claim cannot easily be ascertained, the FTC's 1983 policy statement on ad substantiation takes into account the theoretical problem just described by emphasizing the importance of considering the value of a claim to consumers if the claims turns out to be true, the costs if it turns out to be false, and so on. Federal Trade Commission (1984a) "Advertising Substantiation Policy Statement."

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