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Loi sur le tabac

Compilation of Selected Evidence Regarding the Impact of Tobacco Advertising and Promotion

A Submission to Parliamentarians
for Use During Consideration of Bill C-42,
An Act to amend the Tobacco Act

CANADIAN CANCER SOCIETY | SOCIÉTÉ CANADIENNE DU CANCER

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Influence of Tobacco Marketing and Exposure to Smokers on Adolescent Susceptibility to Smoking

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Background: Today the uptake of smoking is primarily an adolescent pursuit. Awareness of tobacco advertising and promotion is high, and evidence suggests that it plays a role in adolescent smoking uptake. *Purpose:* We evaluated the influence of tobacco advertising and promotion and exposure to smokers on never-smoking adolescents' susceptibility to smoking. *Methods:* We used data on 3536 adolescent never smokers (those who had never even puffed on a cigarette) from the 1993 California Tobacco Survey. That survey questioned adolescents about smoking history and inclinations. For this analysis, we defined as susceptible to smoking those never smokers who said on the survey that they could not rule out independently deciding to try a cigarette soon or smoking one offered by a friend. Also for this analysis, we devised two indices: 1) a 5-point index of an individual's receptivity to tobacco advertising as determined by the number of positive responses to five survey items (recognition of advertising messages, having a favorite advertisement, naming a brand he/she might buy, owning a tobacco-related promotional item, and willingness to use a tobacco-related promotional item) and 2) an index classifying an individual's reported exposure to family and peer smoking into one of four levels. Using logistic regression, we assessed the independent importance of our indices in predicting susceptibility to smoking after adjustment for sociodemographic variables, including age, sex, and race/ethnicity, and for perceived school performance. Tests of statistical significance were two-sided. *Results:* Receptivity to tobacco advertising and exposure to smokers were independently associated with susceptibility to smoking, but the relationship appeared stronger for receptivity to advertising. Adolescents exposed to family members and peers (n = 489) who smoked were 1.89 (95% confidence interval [CI] = 1.30–2.74) times as likely to be susceptible, whereas adolescents who scored 4 or more on the Index of Receptivity to Tobacco Marketing (n = 361) were 3.91 (95% CI = 2.38–6.42) times as likely to be susceptible as those who scored 0. Even adolescents who scored 2 (n = 1090) were 2.03 (95% CI = 1.31–3.15) times as likely to be susceptible. There was no interaction effect between score on the Index of Receptivity to Tobacco Marketing and exposure to smokers. *Conclusion:* Our results support the hypothesis that tobacco marketing may be a stronger current influence in encouraging adolescents to initiate the smoking uptake process than exposure to peer or family smokers or sociodemographic variables including perceived school performance. [J Natl Cancer Inst 1995;87:1538-45]

After 30 years of sustained public education about the health effects of smoking, adolescents are the only age group who continues to take up smoking in significant numbers. In the United States, more than one quarter of 17- and 18-year-olds are current smokers (*1*). Furthermore, recent research shows that smoking prevalence among adolescents in the United States declined through the mid-1970s to mid-1980s but has remained level in the last decade among whites, in contrast to blacks, among whom prevalence still appears to be declining slightly (*2*). A growing body of research suggests that tobacco advertising is a contributing factor to adolescent smoking uptake. Studies have consistently documented high awareness and recall of tobacco advertising among adolescents and even among young children (*3-5*). Adolescents are known to be highly adept at decoding cigarette advertisements, and awareness of brand imagery and covert messages is already present in the preteen years (*6*). Furthermore, analyses of trends in the age of smoking initiation have demonstrated high correlations between the timing of particular advertising campaigns and increases in the rates at which adolescents take up smoking (*1,7*).

The tobacco industry asserts that their marketing effectiveness is limited to maintaining brand loyalty and that it has no role in encouraging adolescents to experiment with smoking (*8-10*). They argue that incentives to start smoking come mainly from exposure to other smokers in the peer and family network. This article addresses the relative influence of tobacco marketing and exposure to other smokers on the susceptibility to take up smoking in adolescents who have never smoked.

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See "Notes" section following "References."

Theories concerning the process of becoming a smoker identify a state prior to experimentation during which the never smoker is susceptible to take up smoking (*1,11-13*); we focus on susceptibility as a marker of which adolescents have started the uptake process. In previous research, we defined an adolescent as susceptible to smoke if he or she cannot definitely rule out the possibility of future smoking (*14-16*). Data from the longitudinal component of the national Teenage Attitudes and Practices Survey indicate that never-smoking adolescents who could be classified as susceptible to smoking in 1988 or 1989 were two to three times more likely to have used cigarettes in the interim when surveyed again in 1993 than those who were originally classified as not susceptible.[1]

This article analyzes data that we collected from the 1993 California Tobacco Survey (*14*) regarding the extent of any possible association between 1) receptivity to marketing and 2) exposure to family and peer smokers on the susceptibility to smoking of adolescents who have never experimented with cigarettes. The present analysis is restricted to adolescents who never smoked, since any behavioral experience with cigarettes could introduce additional factors not sufficiently measured that might make such an association difficult to detect. Our assessment of the influence of tobacco marketing extends previous research to include information on adolescent response to products promoting tobacco use, such as clothing and toys bearing the brand logo. Questions about the use of such items were included on the 1993 California Tobacco Survey to reflect recent changes in the marketing strategies of the tobacco industry that increasingly focused on promotional activities, rather than advertising alone, to sell tobacco to the consumer (*10*).

Subjects and Methods

Survey Sample

The data for this analysis were drawn from the 1993 California Tobacco Survey (*14*). Telephone interviews were conducted with 30 910 households in California using a modified Mitofsky–Waksberg (*17*) random-digit-dialing methodology (response rate, 70.0%). A screener interview with an adult in each household identified 6892 adolescents (aged 12-17 years), all of whom were scheduled for in-depth interviews lasting approximately 25 minutes. Completed interviews were obtained from 5531 adolescents, 80.3% of those identified in the responding households. The 1993 California Tobacco Survey was designed to provide representative estimates for the population of California. Household level base weights were assigned according to the probability a household was selected and an adjustment made for more than one telephone line as appropriate. The base weights were then ratio adjusted for age, education of head of household, race or ethnicity, and geographic region.

Sociodemographic and Smoking Experience Variables

All adolescents were asked questions on age, sex, and race or ethnicity. In addition, we asked them to rate their performance in school as "very much above average," "above average," "average," or "below average." The last two categories were combined for analytic purposes, since few respondents reported below average performance.

Adolescents were included in the analysis if they responded "no" to the following questions: "Have you ever smoked a cigarette?" and "Have you ever tried or experimented with cigarette smoking, even a few puffs?" Of adolescents surveyed, the majority (65.4% ± 1.5%, mean ± 95% confidence interval [CI]) reported that they had never smoked or even puffed on a cigarette before.

To determine if adolescents were susceptible to smoking, all those with no smoking experience were asked two questions designed to probe the likelihood of future smoking: "Do you think you will try a cigarette soon?" and "If one of your best friends were to offer you a cigarette, would you smoke it?" Following previous research, any answer other than "no" or "definitely not" to both questions was sufficient to classify an adolescent as susceptible to smoking (*11-13*).

The demographic distribution (unweighted) of the study sample of 3536 adolescent never smokers was 51.3% female (n = 1813) and 48.7% male (n = 1723); 43.9% 12- to 13-year-olds (n = 1550), 33.0% 14- to 15-year-olds (n = 1167), and 23.1% 16- to 17- year-olds (n = 819); 54.2% non-Hispanic white (n = 1918), 26.2% Hispanic (n = 925), 6.7% black (n = 238), and 12.9% Asian or other race/ethnicity (n = 455).

Index of Receptivity to Tobacco Marketing

For the current study, the influence of tobacco marketing on adolescents was investigated on a number of dimensions. These dimensions were then combined, as described below, into an Index of Receptivity to Tobacco Marketing.

First, to ascertain whether adolescents cognitively attend to and interpret the messages communicated by tobacco advertising, all adolescent never smokers who had seen a tobacco advertisement (87.9% ± 1.6%) were asked whether any of the following nine messages were contained in the advertising: 1) Smoking is enjoyable, 2) it helps people to relax, 3) it helps people feel comfortable in social situations, 4) it is a pleasurable pastime, 5) it helps people stay thin, 6) it helps reduce stress, 7) it helps people when they are bored, 8) the "in" crowd are smokers, and 9) successful people smoke. For our index, any affirmative response was taken as a positive indication of at least a basic level of cognitive awareness of tobacco advertising.

Second, the existence of affective responses to cigarette advertisements was assessed by asking all adolescents, "What is the name of the cigarette brand of your favorite cigarette advertisement?" Those who could not name a brand were asked, "Of all the cigarette advertisements you have seen, which do you think attracts your attention the most?" For our index, being able to give a brand name was considered a positive response.

Third, to ascertain whether adolescents form preferences for brands before experimenting with cigarettes, we asked, "If you wanted to buy a pack of cigarettes tomorrow, what brand do you think that you would buy?" Again, for our index, naming a brand was considered a positive response.

As the fourth and fifth components of our index, we used two items from the California Tobacco Survey that assessed adolescent response to products promoting tobacco. We asked all adolescents, "Have you ever bought or received for free any product which promotes a tobacco brand or was distributed by a tobacco company?" We then asked, "Do you think that you would ever use a tobacco industry promotional item such as a T-shirt?." We considered an answer of "yes" to either of these questions to be a positive response.

We combined all five of the above items into a single Index of Receptivity to Tobacco Marketing. Scores ranged from 0 to 4+ based on the number of positive responses given to the five items.

Index of Exposure to Smokers

In accordance with extensive previous analyses, we constructed a second index designed to measure adolescent exposure to family and peer smokers.[1] All adolescents in the California Tobacco Survey were asked about the use of tobacco by parents, stepparents, guardians, older siblings, and best male and best female friends. For the current study, we used the responses to these questions to classify adolescents into four levels of exposure: 1) minimal exposure, 2) exposure only to family users, 3) exposure only to best friends (peers) who are users, and 4) exposure to both peers and family members who are users. The category for minimal exposure may include adolescents with acquaintances (but not best friends or family members) who used tobacco.

Statistical Analysis

All percentages are weighted and presented with 95% CIs that were derived using the jackknife procedure (*18*). This procedure is one method for variance estimation in the setting of large-scale population surveys that are not completely random. Chi-squared statistics were computed using Satterthwaite's approximation, another jackknife-based procedure (*19,20*). We used logistic regression to identify the independent predictors of susceptibility to smoking among adolescents who had never tried a cigarette. Included in the regression were all variables analyzed univariately: sociodemographic factors, variables for each positive score versus a score of 0 on the tobacco-advertising index, and variables for each category of exposure to smokers versus minimal exposure.

Again, we used the jackknife procedure to compute variance estimates for computation of 95% CIs for the risk ratios derived from the regression coefficients. All analyses were performed using the SAS system (*21*). All *P* values are from two-tailed statistical tests.

Results

Adolescent Susceptibility

Overall, one quarter (25.4% ± 2.1%) of adolescent never smokers were susceptible to smoking. The distribution by age and sex is presented in Fig. 1. In each age group, more than one fifth of adolescent never smokers were susceptible to begin smoking. Although older never smokers of both sexes appeared less susceptible, this difference did not attain statistical significance ($P<.07$). Boys 12-13 years old were more likely to be susceptible to smoking than girls in this age group ($P<.04$), but this sex difference disappeared among older adolescents, among whom approximately 21% of both boys and girls aged 16-17 years were susceptible.

Tobacco Advertising and Promotion

Fig. 2 presents the interpretation of cigarette-advertising messages by California adolescents. The figure shows the six messages most frequently identified as contained in cigarette advertising, although all nine messages mentioned (*see* "Subjects and Methods" section) were cited by large percentages. Overall, four fifths (84.0% ± 1.7%) of adolescent never smokers agreed that cigarette advertisements promote at least one benefit of smoking. Although older adolescents agreed more than younger adolescents ($P<.005$), a high percentage (81.0% ± 2.8%) of 12- to 13-year-olds believed that cigarette advertisements promote at least one benefit of smoking. Adolescents were most likely to agree that cigarette advertisements depict smoking as enjoyable and as helping people to feel comfortable in social situations, although 40% indicated that cigarette advertisements also promote smoking as helping people stay thin. The latter view was held by 43.9% ± 3.3% of females and 39.0% ± 3.2% of males.

Across all age groups, approximately 40% of adolescents who had never tried a cigarette could name a brand of cigarettes that they would prefer to purchase (Table 1). Marlboro was the brand most often nominated in all age groups. Two thirds more 12- to 13-year-olds named Marlboro than Camel, and this number increased substantially with age. By age 16-17 years, four times as many nonsmokers named Marlboro than Camel. Around 60% of adolescent never smokers could name a favorite cigarette advertisement. Across all ages, Camel advertisements were the most frequently nominated as favorite. Two and a half times as many 12- to 13-year-olds named Camel than Marlboro. This difference decreased markedly across age, however, so that by age 16-17 years, there was only a 35% difference in the rate of nomination of the advertisements as favorite. The popularity of the Marlboro advertisement and the Marlboro brand as the brand to buy increased with age ($P<.06$ and $P<.004$, respectively), whereas nomination of Camel as the favorite advertising or preferred brand to buy decreased with age ($P<.003$ and $P<.018$, respectively).

Fig. 3 shows the percentage of adolescent never smokers who had received a product promoting tobacco use and the percentage of those who would be willing to use such a product. Few of the 12- to 13-year-olds had received a promotional product, although 12.6% ± 2.9% of this age group were willing to use one. Both product ownership and willingness to use promotional items increased with age ($P = .001$ and $P = .02$, respectively). Overall, 5.9% ± 1.1% of adolescents who had never smoked had a product promoting tobacco use, and 15.2% ± 1.8% of adolescent never smokers were willing to use a promotional product.

Of the 211 adolescent never smokers who had received a tobacco promotional item, 41.7% ± 10.1% had received an item promoting Camel cigarettes, 17.3% ± 7.3% had received an item promoting Marlboro cigarettes, and 10.5% ± 5.2% had received an item promoting smokeless tobacco. The type of product most often received was a T-shirt or other clothing item, which accounted for 50.9% ± 7.9% of the items. The second most common item was a cigarette lighter (16.5% ± 5.7%).

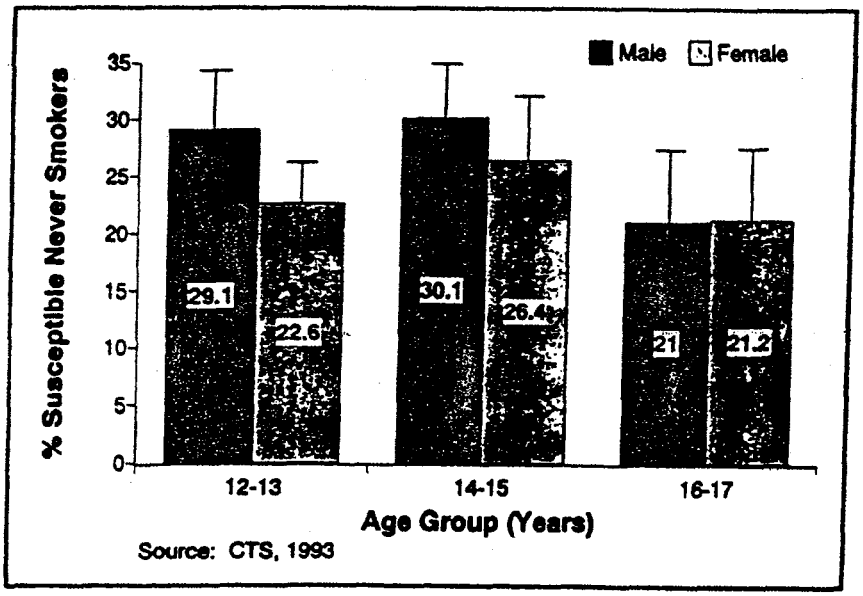


Fig. 1. Percentage of male and female adolescent never smokers in California who were susceptible to begin smoking, stratified by age group: 12-13 years (n = 1550), 14-15 years (n = 1167), and 16-17 years (n = 819). Numbers in the bars give weighted percents, and the upper limits of the 95% confidence intervals are shown. CTS = California Tobacco Survey.

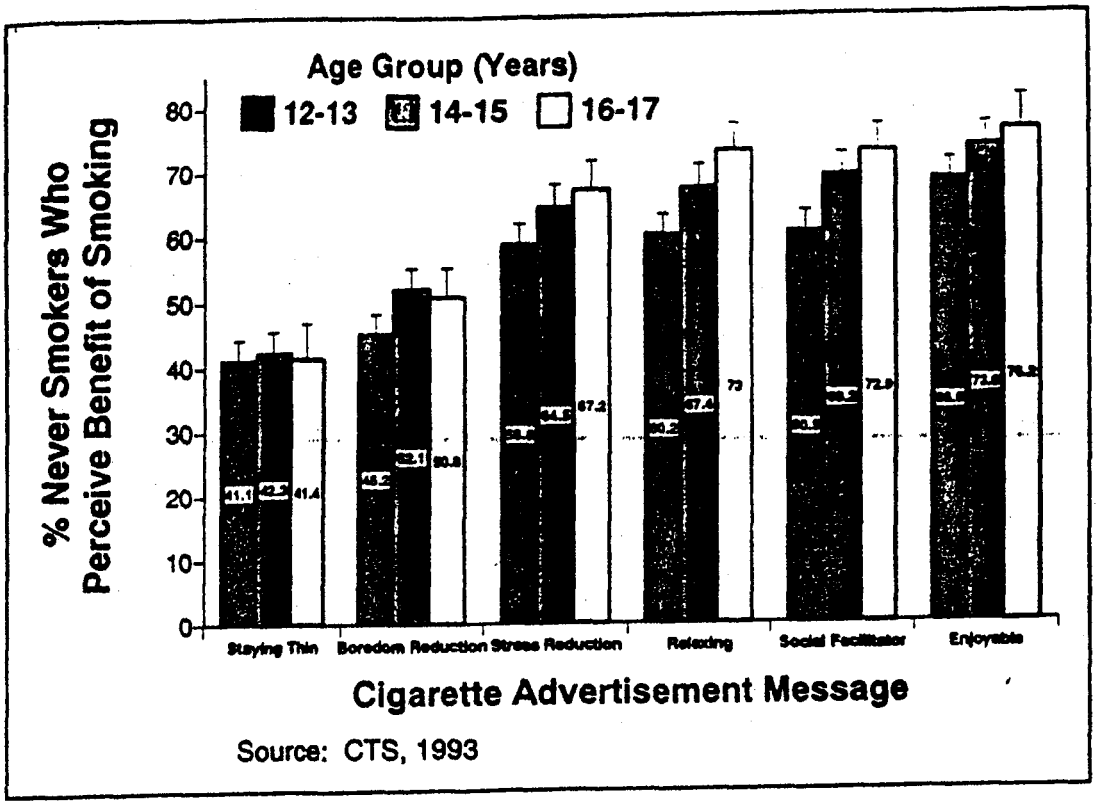


Fig. 2. Percentage of California adolescent never smokers aged 12-13 years (n = 1550), 14-15 years (n = 1167), and 16-17 years (n = 819) who perceived a benefit of smoking as being promoted by cigarette advertisements by the six messages most frequently identified: staying thin, boredom reduction, stress reduction, relaxing, social facilitator, and enjoyable. Numbers in the bars are weighted percents, and the upper limits of the 95% confidence intervals are shown. CTS = California Tobacco Survey.

Fig. 4 shows, for each age group, the distribution of responses on the Index of Receptivity to Tobacco Marketing, which was produced from the above items. There were some similarities across age in this distribution, with more than half of adolescent never smokers in each age group scoring 2 or higher. Significant age differences, however, were noted at both extremes of the continuum (overall $P<.003$), with 12- to 13-year-olds being more likely to have a score of 0 (13.4% versus 8.7% for 16- to 17-year-olds) and less likely to have the higher score of 4 or more (7.8% versus 12.6%).

Exposure to Smokers

The percentage of adolescent never smokers exposed to smokers who were family members and/or best friends is presented in Fig. 5. Exposure to smokers differed markedly with age (overall $P<.0001$). More than half (54.6% ± 3.6%) of 12- to 13-year-olds had no peer or family exposure to smokers, compared with only 37.1% ± 4.4% of 16- to 17-year-olds. Among younger adolescents, exposure to smokers was most likely to occur in the family (35.6% versus 18.5%). The reverse was true for those older than 13 years, among whom best friends were a more common source of contact with smokers (37.0% versus 39.9%). Overall, 13.9% ± 1.5% of those who had never smoked were highly exposed, having both best friends and family members who smoked; these adolescents were 1.9 (95% CI = 1.3–2.7) times as likely to be susceptible to smoking as adolescents with minimal exposure.

Predicting Susceptibility to Smoking Among Adolescent Never Smokers

To determine which variables increase the likelihood of smoking for adolescent never smokers, we performed a logistic regression with susceptibility as the dependent variable. The results are presented in Table 2. After adjustment for other sociodemographic factors, neither age nor sex was a statistically significant predictor of susceptibility to smoking. Black adolescents were less likely to be susceptible than non-Hispanic white adolescents, although this difference was not statistically significant. Hispanic adolescents were 70% more likely to be susceptible to smoking than non-Hispanic whites. Perceived

Table 1. Cigarette brand preferences and favorite advertisement by brand, by age (never puffers)*

	Aged 12-13 y		Aged 14-15 y		Aged 16-17 y	
Cigarette brand	Would buy, %	Favorite advertisement, %	Would buy, %	Favorite advertisement, %	Would buy, %	Favorite advertisement, %
Marlboro	20.1 ± 3.2	13.9 ± 2.8	24.4 ± 3.3	16.4 ± 3.2	30.1 ± 5.2	20.0 ± 4.7
Camel	12.3 ± 2.5	35.9 ± 2.8	8.8 ± 2.0	33.9 ± 3.8	7.2 ± 3.0	27.5 ± 3.7
Other	8.1 ± 2.4	8.3 ± 2.3	13.0 ± 3.4	9.6 ± 2.3	8.0 ± 2.1	9.9 ± 2.6
None	59.6 ± 3.6	41.9 ± 3.5	53.9 ± 3.9	40.0 ± 3.8	54.7 ± 5.4	42.7 ± 5.3

*Values = means ± 95% confidence intervals.

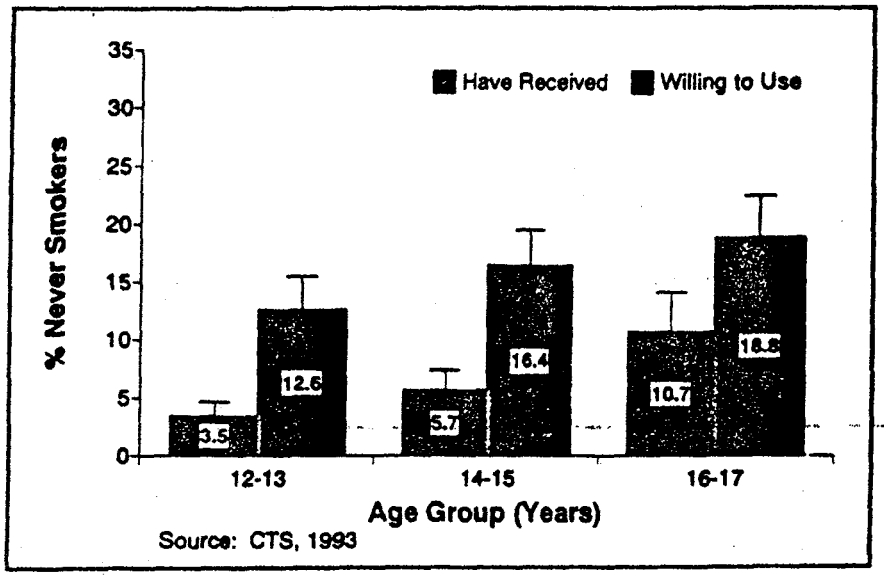


Fig. 3. Percentage of California adolescent never smokers who had received and percentage who would be willing to use products that promote tobacco use, stratified by age group: 12-13 years (n = 1550), 14-15 years (n = 1167), and 16-17 years (n = 819). Numbers in the bars are weighted percents, and the upper limits of the 95% confidence intervals are shown. CTS = California Tobacco Survey.

performance at school was strongly associated with susceptibility to smoking; adolescents who self-rated their performance as "average" or "below average" were significantly more likely to be susceptible to smoking than those who indicated their performance at school to be "very much above average."

Both exposure to smokers and score on the Index of Receptivity to Tobacco Marketing were independently related to susceptibility after adjustment was made for the effects of the sociodemographic variables. Almost one fifth of adolescents who were not exposed to family members or best friends who smoked were classified as susceptible to smoking. The proportion of those who were susceptible to smoking increased by approximately 30% if a member of the family smoked and nearly doubled if adolescents had best friends who smoked. For those adolescents who had best friends who smoked, exposure to smokers in the family as well did not increase any further their likelihood of being susceptible to smoking.

We observed a strong effect between susceptibility to smoking and scores on the Index of Receptivity to Tobacco Marketing. Of adolescents who scored 0 on this index, 13.5% ± 4.6% were susceptible. A score of 2 doubled the proportion of those who were susceptible. Adolescents who scored 4 or more on the index were almost four times more likely to be susceptible, compared with adolescents who scored 0.

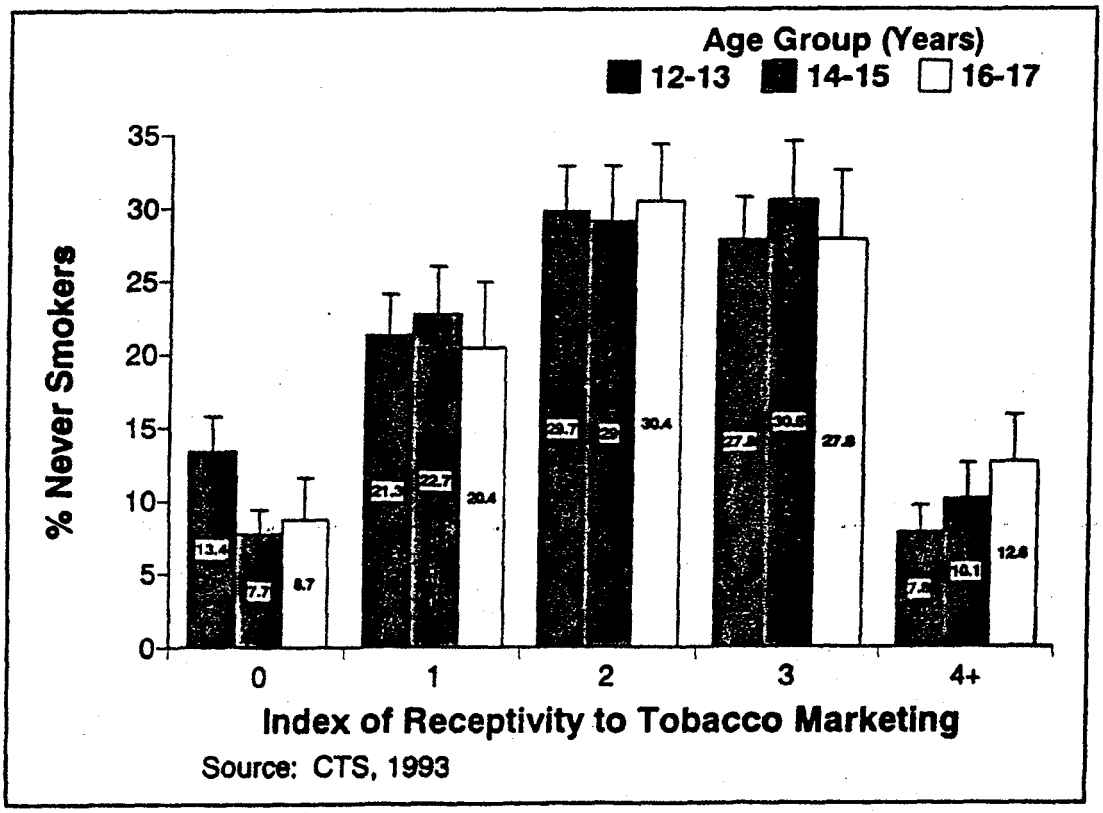


Fig. 4. Percentage of California adolescent never smokers aged 12-13 years (n = 1550), 14-15 years (n = 1167), 16-17 years (n = 819) according to their score of 0-4+ on the Index of Receptivity to Tobacco Marketing (*see* text for definition). Numbers in the bars are weighted percents, and the upper limits of the 95% confidence intervals are shown. CTS = California Tobacco Survey.

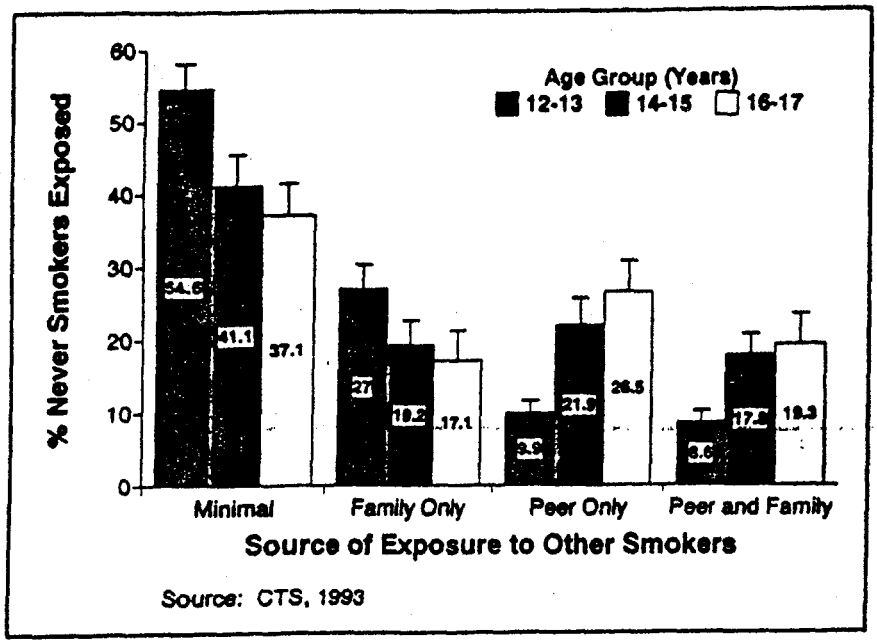


Fig. 5. Percentage of California adolescent never smokers aged 12-13 years (n = 1550), 14-15 years (n = 1167), and 16-17 years (n = 819) who were exposed to other smokers according to their source of exposure: minimal, family only, peer only, or peer and family. Numbers in the bars are weighted percents, and the upper limits of the 95% confidence intervals are shown. CTS = California Tobacco Survey.

To investigate any possible interaction effect between exposure to smokers and score on the Index of Receptivity to Tobacco Marketing, we compared smoking-susceptibility rates among adolescents at two levels of exposure to smokers (minimal versus peer and/or family) and among adolescents at two levels of receptivity to tobacco marketing (zero receptivity score versus any positive receptivity score) (Fig. 6). In a separate logistic regression with specially coded interaction variables, we found no statistically significant interaction between score on the Index of Receptivity to Tobacco Marketing and exposure to smokers. The effects were simply additive: Compared with those having a score of 0 and minimal exposure to smoking, those with minimal exposure and a score of 1 or greater had 2.6 (95% CI = 1.6-4.2) times the likelihood of being susceptible to smoking; those with some exposure to other smokers and a score of 0 had 2.3 (95% CI = 1.0-5.3) times the likelihood; and those with some exposure and a score of 1 or greater had 4.5 (95% CI = 3.1-6.7) times the likelihood.

Table 2. Predictors of susceptibility to smoke among adolescent never smokers

	Sample size	Adjusted odds ratio	95% confidence interval
Age, y			
12	823	1.00*	
13	727	1.46	1.02-2.07
14	611	1.29	0.96-1.71
15	556	1.07	0.77-1.48
16	428	0.67	0.45-0.99
17	391	0.80	0.50-1.27
Sex			
Female	1813	1.00*	
Male	1723	1.08	0.86-1.36
Race/ethnicity			
Non-Hispanic white	1918	1.00*	
Black	238	0.76	0.48-1.19
Hispanic	925	1.73	1.32-2.27
Asian/other	455	1.23	0.91-1.66
School performance			
Very much above average	814	1.00*	
Above average	1395	1.31	0.94-1.85
Average or below average	1327	1.83	1.33-2.52
Exposure index			
Minimal	1645	1.00*	
Family only	755	1.31	1.00-1.72
Peer only	647	1.92	1.36-2.70
Family and peer	489	1.89	1.30-2.74
Index of Receptivity to Tobacco Marketing			
0	351	1.00*	
1	747	1.59	1.00-2.51
2	1090	2.03	1.31-3.15
3	987	2.81	1.89-4.16
4+	361	3.91	2.38-6.42

*Referent group.

Discussion

Of adolescent never smokers surveyed, one quarter appeared to have started the smoking uptake process as measured by susceptibility to smoking. A higher score on the Index of Receptivity to Tobacco Marketing was strongly associated with susceptibility among adolescent never smokers. The association of the index score with susceptibility was independent of and appeared to be stronger than the association with susceptibility of exposure to other smokers. Whereas exposure to both family and best friends who smoked increased susceptibility to smoking by 90%, a score of 4 or more on the Index of Receptivity to Tobacco Marketing produced almost a fourfold increase in the likelihood of being susceptible to smoking, and a score of 2 increased the likelihood by a factor of 2.

Adolescent never smokers appeared to be receptive to tobacco marketing at an early age. Among 12- to 13-year-olds, nearly two thirds scored 2 or higher on the Index of Receptivity to Tobacco Marketing. Only 16% of adolescents did not perceive that cigarette advertising promotes at least one of the benefits queried. Possibly, if fewer benefits had been listed, this percentage may have been higher, but positive responses were in the neighborhood of 70% for at least four of the individual items.

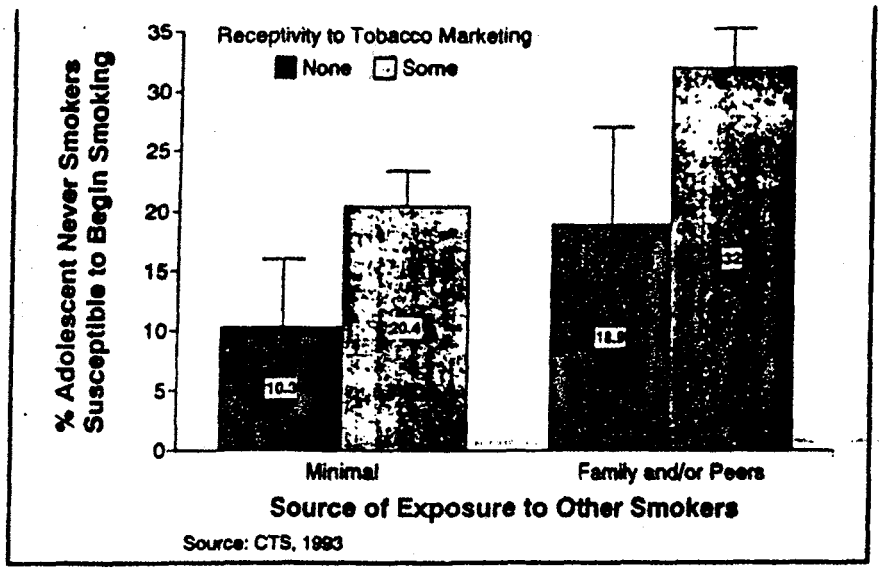


Fig. 6. Percentage of California adolescent never smokers 12-17 years who were susceptible to begin smoking according to their receptivity to tobacco marketing (none, a score of 0 on the index; some, a score of 1 or greater on the index), stratified by their source of exposure to other smokers: minimal or family and/or peers. Numbers in the bars are weighted percents, and the upper limits of the 95% confidence intervals are shown. CTS = California Tobacco Survey.

These data indicate that adolescents are very aware of cigarette advertising.

Almost 60% of 12- to 13-year-old never smokers named a favorite cigarette advertisement, and just over 40% had a preference for the cigarette brand they would buy. Although few adolescent never smokers already possessed items promoting tobacco, 15.2% indicated that they would be willing to use such products, which suggests that there is a market for the promotion of tobacco to nonsmoking adolescents via clothing and other products bearing tobacco logos. Marlboro and Camel cigarettes showed the highest degree of market penetration among adolescent never smokers.

Because this analysis is restricted to never smokers, the demographic distribution of the sample is not representative of the overall adolescent population; for instance, it contained more younger than older adolescents. By the middle to late teens, many adolescents will have experimented with smoking, and some will have progressed to a full-fledged addiction. Personal experience with smoking, such as any direct physical sensation or the reactions of peers, will likely have considerable influence on whether an adolescent progresses from experimentation to addicted smoking. The emphasis of the present study is on the identification of the correlates of entering the first stage of the smoking uptake process, susceptibility.

Consistent with previous research, exposure to smokers and perceived school performance were strongly and independently associated with susceptibility to smoking (*1,11-13*). Adolescent never smokers were 30% more likely to be susceptible to smoking if they reported being exposed to a smoker only in the family and about 90% more likely to be susceptible if they had at least one best friend who smoked. No additional increased risk was observed for adolescents exposed to both family members and best friends who were smokers. The magnitude of this effect was similar to that observed for perceived school performance. Adolescents who rated their performance as "average" or "below average" were almost twice as likely to be susceptible to smoking as those who rated their performance higher.

The telephone modality of the California Tobacco Survey may lead to underreporting of both adolescent smoking behavior and the items defining susceptibilty to smoking. An adolescent could be aware of a parent listening in on a phone extension. Most of the survey questions required "yes" or "no" or "agree" or "disagree" responses, so an adult in the same room would probably not influence the adolescent's answers. In order to maximize the chance for privacy, adolescents were called back on a later date, rather than being interviewed at the time of the initial household contact. Nevertheless, some of our never smokers may have had experience with cigarettes, and some actual never smokers may have denied any future intention because a parent was listening. It is likely that completely accurate data would have produced even stronger correlations among the variables of interest. Misclassified adolescents may have answered the questions on tobacco marketing and exposure to other smokers in a way more like those who are indeed susceptible.

Our index of receptivity to tobacco advertising and promotion is based on a series of survey questions in the 1993 California Tobacco Survey regarding adolescents' awareness and response to tobacco advertising and marketing. This index has been devised solely for use in this study. There may be many more aspects of adolescent cognition and experience that we have not considered that are relevant to receptivity. Research in this area is lacking, especially within the setting of population studies. Nevertheless, the degree of awareness and response that we capture with our index is related to susceptibility in a manner suggesting that the higher the receptivity, the greater the susceptibility to smoking (*see* adjusted odds ratios in Table 2).

The research literature indicates that marketing can encourage consumption of the general product category (such as cigarettes) as well as of the specific brand being advertised (*1,22*). Tobacco marketing may be more effective in promoting the general product category than in promoting the particular brand of cigarettes. In our sample, the preferred brand of purchase was Marlboro, yet the cigarette advertisements most favored by adolescents were those for Camel. We hypothesize that the effect of tobacco advertising on brand purchase intentions is filtered through the brand preferences of the immediate peer network. Thus, brand preference among adolescents may lag be-

hind advertisement preference by the time required for the peer group as a whole to adopt a new brand. Our interpretation of these data is also commensurate with the slow but steady growth in the market share of Camel cigarettes following the introduction of the Joe Camel campaign. In 1987, Camel cigarettes were virtually invisible in the illegal adolescent market. However, 18 months later, Camel cigarettes had acquired a market share of 8.1%, and national data from 1993 indicate that these cigarettes now represent a 13.3% share of the adolescent market (*23*). According to the Federal Trade Commission (*24*), a total of $6 billion was spent marketing tobacco products in 1993, with more than half ($3.4 billion) spent on promotional items such as coupons, specialty, and value-added items.

Our results support the hypothesis that tobacco marketing may be a stronger current influence in encouraging adolescents to initiate the smoking uptake process than demographic characteristics, perceived school performance, or exposure to other smokers in the peer or family network. The accumulated evidence supports the need for effective strategies to prevent adolescents from starting to smoke.

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Notes

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ORIGINAL ARTICLES

Seeing, wanting, owning: the relationship between receptivity to tobacco marketing and smoking susceptibility in young people

Ellen Feighery, Dina L G Borzekowski, Caroline Schooler, June Flora

Abstract

***Objective*—To assess the effect of the tobacco industry's marketing practices on adolescents by examining the relationship between their receptivity to these practices and their susceptibility to start smoking.**

***Design*—Paper-and-pencil surveys measuring association with other smokers, exposure to tobacco industry marketing strategies, experience with smoking, and resolve not to smoke in the future.**

***Setting*—25 randomly selected classrooms in five middle schools in San Jose, California.**

***Subjects*—571 seventh graders with an average age of 13 years and 8 months; 57% were female. Forty-five per cent of the students were Asian, 38% were Hispanic, 12% were white, and 5% were black.**

***Main outcome measures*—Exposure to social influences, receptivity to marketing strategies, susceptibility to start smoking.**

***Results*—About 70% of the participants indicated at least moderate receptivity to tobacco marketing materials. Children who are more receptive are also more susceptible to start smoking. In addition to demographics and social influences, receptivity to tobacco marketing materials was found to be strongly associated with susceptibility.**

***Conclusions*—Tobacco companies conduct marketing campaigns that effectively capture teenage attention and stimulate desire for their promotional items. These marketing strategies may function to move young teenagers from non-smoking status toward regular use of tobacco. Our results demonstrate that there is a clear association between tobacco marketing practices and youngsters' susceptibility to smoke. The findings, along with other research, provide compelling support for regulating the manner in which tobacco products are marketed, to protect young people from the tobacco industry's strategies to reach them.**

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Keywords: adolescents, advertising, smoking initiation

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Introduction

PURPOSE OF THE STUDY

In 1996, the US Food and Drug Administration issued regulations designed to reduce the illegal sale of tobacco products to young people and to reduce the appeal of tobacco use by restricting the manner in which the tobacco industry markets its products.[1] In his State of the Union address on 4 February 1997, President Clinton affirmed his administration's resolve to ban the advertising and marketing of cigarettes to young people.[2] These dramatic actions reflect the wide citizen concern about tobacco use in teenagers and the perceived actions of the tobacco industry to promote its products to children.[3 4]

Federal recognition and response are appropriate given the current situation. Teenage smoking rates in the United States have been rising over the past four years after a decade of relative stability; smoking rates for high school students rose from 27.5% in 1991 to 34.8 % in 1995.[5]

Given the high level of awareness about the dangers of tobacco, why are teenagers smoking in ever greater numbers? Many cite tobacco advertising as a major contributor to this increase.[3 4] The amount being spent by this industry in the United States has more than doubled in a 10-year period, rising to 4–6 billion dollars in recent years.[6] As a result, young people see tobacco advertising messages everywhere: on billboards, in stores, in magazines, on clothing, and at community events.[7] These ubiquitous images and messages serve as symbolic social influences by conveying to young people that tobacco use is desirable, socially acceptable, safe, healthy, and prevalent in society.[8]

In an earlier study, we found a significant association between seventh graders' (aged 12–13) perceived exposure to tobacco advertising and promotions and their experimentation with smoking. This raised the question of whether there might be a relationship between interest and desire for tobacco marketing materials and young people's susceptibility to smoke—that is, would we find that children who are more receptive to tobacco marketing materials also are more susceptible to smoking?

The goal of the current study is to assess the effect of the tobacco industry's marketing practices on young adolescents by examining

the relationship between young people's receptivity to tobacco marketing strategies and their susceptibility to smoke, while controlling for particular demographics and the social influences of peers and parents who smoke. In this section, we present the framework for the study by reviewing the marketing strategies used to promote cigarettes, teenagers' receptivity to these strategies, and its relationship to their smoking susceptibility.

MARKETING OF CIGARETTES

Marketing is used to influence consumer behaviour by signalling how a product meets a perceived need. Advertising, such as tobacco advertisements on billboards and in stores, is designed to influence consumer knowledge, attitudes, and beliefs about a product. Promotions, such as teeshirts and lighters emblazoned with brand logos, are intended to stimulate consumer action toward the use of the product. A mix of these marketing types is intended to move consumers through a sequential decision-making process that ultimately leads to selection and regular use of the product.[9]

The decision to use a particular product generally includes the following steps: (a) awareness of, interest in, and shifting attitudes toward a product; (b) desire and intentions to use the product; (c) experimentation with the product; and finally, (d) regular use.[10] It is interesting to note that there are similarities between the process articulated in the marketing literature and the stages of smoking initiation by young people that have been identified in several tobacco prevention research studies: (a) a preparatory stage in which attitudes and beliefs about the benefits and desirability of smoking are consolidated; (b) first attempts at smoking to conform with perceived norms; (c) irregular, experimental use; and finally, (d) addiction.[11 12]

Tobacco companies use a sophisticated blend of advertising and promotions to effectively communicate the symbolic social value of tobacco use. Symbolic social influences that are behavioural depictors in mass media have been found to play an important role in shaping adolescent tobacco use.[13 14] Effective advertising is imbedded with product symbolism intended to stimulate particular behaviours. Clothing and other promotional items are intended to serve as a clear link between "me" and the role "I" wish to play.[15] The tobacco industry's advertising and promotional products are replete with messages and images that reflect the qualities teenagers value, such as popularity, independence, sexiness, and "coolness". The marketing approaches imply that these qualities can be achieved by using their tobacco products.

The tobacco companies' multibillion dollar efforts seem to guide children through a psychological process of product attachment, the outcome of which may increase their susceptibility to smoking. Their advertisements may shift young people's attitudes and beliefs to view smoking as a means to acquire the above valued qualities. Their promotions may entice them to try on the image of a smoker, which also may resonate with their desired self-image. Their trading stamps, such as Marlboro Miles and Camel Cash, may reflect the companies' intent to stimulate repeat purchases to build allegiance to their products. This is not a surprising goal because brand loyalty has been found to be established with the first cigarette.[16]

TEENAGERS' RECEPTIVITY TO TOBACCO INDUSTRY MARKETING

An understanding of consumers is a critical element in the development of marketing strategies. In the past several years, internal tobacco industry documents confirm that manufacturers conducted extensive research on teenage behaviour and attitudes, and used this information to design tobacco marketing that appeals to young people's psychosocial needs and the stages of initiation of smoking.[17]

To determine if the tobacco industry's marketing efforts are reaching teenagers, we have developed a receptivity scale. This scale approximates the stages in decision-making processes involved with product use that were discussed above. Our first level, "See", reflects awareness of tobacco advertising in various venues such as billboards and magazines. Our second level, "Want", captures aroused interest in and desire for tobacco products, which is reflected in the acquisition of catalogues, mailings, and trading stamps, such as Marlboro Miles or Camel Cash. Our third level, "Own", reflects the teenager's identification with the product by trying on the smoker identity via the use of promotional items. Therefore, an assessment of receptivity provides a good indicator of the impact of the tobacco industry's marketing strategies on young people.

SUSCEPTIBILITY TO START SMOKING

In this study, we examine the association between teenagers' receptivity to tobacco marketing as described above, and their susceptibility to start smoking. As mentioned earlier, we believe that teenagers do not move in one step from non-smoking to smoking, but rather, proceed through various stages of smoking initiation. Young people are considered more susceptible to smoke if there is an absence of a clear resolve not to smoke in the future; this increases their vulnerability to personal, social, and environmental factors that may prompt experimentation with smoking.[18] Two longitudinal studies have concluded that susceptibility is a significant predictor of smoking initiation in adolescents.[19 20] Other studies of susceptibility have found associations between levels of susceptibility and liking of advertisements[21]; awareness of and involvement with tobacco promotional items[22 23]; and receptivity to tobacco advertising.[24]

If we are to succeed in reversing the upward trend in teenage smoking, we need to understand the effect of the tobacco industry's ubiquitous marketing practices on young people to help us understand how a teenager moves from being a non-smoker to a smoker. This study seeks to add to this understanding by

looking at the association between teenagers' receptivity to marketing and their smoking susceptibility.

Methods

DESIGN

Within intact classrooms, the subjects completed pencil-and-paper questionnaires as part of a larger survey on cigarette advertisements and promotional material. For this study, we assessed the youngsters' association with other smokers, receptivity to the tobacco industry's marketing strategies, and their own experience with, and resolve to smoke or not smoke, cigarettes.

SUBJECTS

This study was conducted with 571 seventh-grade students from five middle schools in San Jose, California. Data collection occurred in 25 randomly selected classrooms and active parental permission was obtained for each student before participation in the study. Fewer than 5% of parents refused to provide permission. The average age of the participating seventh-graders was 13 years and 8 months, and 57% of the sample was female. Forty-five per cent of the students sampled were Asian, 38% were Hispanic, 12% were white, and 5% were black.

MAIN OUTCOME MEASURES

Receptivity to marketing strategies

To determine a youngster's level of receptivity to the tobacco industry's marketing strategies, we measured a child's exposure by using the categories See, Want, and Own. These represent a range of receptivity, from low to high, of how responsive or receptive one is to cigarette advertisements and promotions. We assigned students to See if they answered that they sometimes or often saw cigarette advertisements in magazines, on billboards, or at fairs or community events. Students who frequented small groceries, convenience stores, or liquor stores (off licences) were assigned to See, because these types of retail outlets are often replete with pro-smoking messages.[25] Students were assigned to Want if they qualified for See *and* had received a mailing from a cigarette company, saved Camel Cash or Marlboro Miles, had a tobacco company promotional catalogue, or indicated a desire for a promotional item from a cigarette company. To be assigned to Own, students not only had to qualify for Want *but also* had to indicate that they owned a promotional item from a cigarette company.

See indicates a low level of receptivity to cigarette advertisements where young people acknowledge awareness of pro-smoking messages in a variety of settings. Want and Own indicate receptivity to the tobacco company promotional strategies as respondents move beyond awareness to a stage of desire to possess tobacco promotional items.

Social influence

Students were asked to indicate whether their friends and family members smoked cigarettes to assess the impact of social influences on their susceptibility to start smoking. Previous research indicates that peer and parental smoking are predictors of teenage smoking.[26 27] The seventh-graders in this study were placed into one of four groups ranging from those who indicated no social contact with smokers to those who indicated a great deal of social contact with smokers. The groups were: (a) non-smoking family and friends, (b) parental smoking, (c) friends smoking, and (d) smoking families and friends.

Susceptibility

Lastly, students were categorised by their susceptibility to start smoking—a measure representing smoking experience and resolutions about smoking. To determine susceptibility to start smoking, students provided answers to questions about their experience with smoking and their resolve not to smoke in the future. To assess experience, students responded to the question: "Have you ever tried or experimented with cigarette smoking, even a few puffs?" Therefore, experience represented a minimal amount of actual smoking. In measuring their resolve not to smoke, we considered student responses to the following questions: "Do you intend to try a cigarette soon?", "At any time during the next year, do you think you will smoke a cigarette?", and "If one of your best friends were to offer you a cigarette, would you smoke it?" We then created three susceptibility categories: (a) No experience and resolve not to smoke; (b) Experience and resolve not to smoke; (c) Experience and no clear resolve not to smoke. Students who responded "yes" to either "Have you ever smoked a cigarette every day for at least a month?" or "Do you smoke now?" were classified as current smokers and excluded from these analyses focusing on susceptibility to start smoking.

ANALYSIS

Because we were considering several categorical variables, we determined if there were significant associations by considering the χ^2 statistics at a $p<0.05$ level. We looked at the associations between gender, ethnicity, social influence, receptivity to cigarette advertisements and promotions, and susceptibility. In addition, we applied a proportional odds model to estimate the effects of these variables (gender, ethnicity, social influence, and receptivity) on influencing the odds of being susceptible to smoking. Used in a recent study on susceptibility, the proportional odds model is an appropriate and worthwhile method to use because it takes into account the underlying rank order of the categorical dependent variable.[28 29]

Results

Table 1 shows the three levels of receptivity to tobacco marketing strategies that were used to stratify survey respondents and the distribution of the respondents into these categories. Almost a third of the sample were in See, 46% were in the Want, and 24% were in the Own category. Only three children (0.5% of the sample) indicated that they had never seen any tobacco advertisements or promotions or

Table 1 Receptivity to the tobacco industry's marketing strategies

	n	%
See (receptivity level 1)	171	30
Sometimes see cigarette advertisements in magazines, sometimes see cigarette advertisements on billboards, sometimes go to small grocery stores, convenience stores, or liquor stores (off licences), *or* sometimes see cigarette advertisements at fairs or community events.		
Want (receptivity level 2)	263	46
Any of the items specified in See *and* have received a mailing from a cigarette company, have a Camel Cash or Marlboro Miles catalogue, save Camel Cash or Marlboro Miles, *or* indicate desire for a promotional item from a cigarette company.		
Own (receptivity level 3)	134	24
Any of the items specified from See and Want *and* own a promotional item from a cigarette company.		

Table 2 Relationship between sociodemographic factors, social influences, and receptivity with susceptibility

			Receptivity				
Variable	*Category*	*n*	*See %*	*Want %*	*Own %*	χ^2	*p<*
Gender	Boys	245	25.7	53.1	21.2	8.30	0.05
	Girls	320	33.4	40.9	25.6		
Ethnicity	White	64	46.9	39.1	14.1	30.29	0.001
	Black	30	16.7	56.7	26.7		
	Hispanic	211	18.5	52.6	28.9		
	Asian	248	36.3	41.5	22.2		
Social Influence	No-one	139	52.5	28.8	18.7	73.38	0.001
	Parents only	68	29.4	58.8	11.8		
	Friends only	130	22.3	43.9	33.9		
	Parents and friends	169	13.0	59.2	27.8		
Susceptibility	No experience/firm resolve	235	44.7	36.6	18.7	44.84	0.001
	Experience/firm resolve	119	34.5	42.0	23.5		
	Experience/no resolve	141	11.4	56.7	31.9		

Table 3 Proportional odds model for susceptibility: the effects of sociodemographic factors, social influences, and receptivity to the tobacco industry's marketing strategies

Variable	*β*	*SE*	*p<*	*OR*
Gender	−0.54	0.19	0.01	0.58
Black	−0.10	0.48	NS	0.90
Hispanic	0.93	0.30	0.01	2.53
Asian	0.30	0.29	NS	1.35
Parents but not friends smoke	0.11	0.30	NS	1.12
Friends but not parents smoke	1.09	0.25	0.001	2.98
Parents and friends smoke	1.66	0.24	0.001	5.23
Want	0.81	0.22	0.001	2.25
Own	0.85	0.25	0.001	2.35
Intercept 1	1.25	0.32	0.001	NA
Intercept 2	2.53	0.33	0.001	NA

Reference is a white male, whose parents and friends don't smoke, who is in the See receptivity group.
SE = standard error; OR = odds ratio; NS = not significant; NA = not applicable.

frequented places likely to display such items. We excluded these children from the subsequent analyses and results.

In table 2, the reported bivariate analyses reveal that boys ($\chi^2 = 8.30$, $p<0.05$), and blacks and Hispanics ($\chi^2 = 30.29$, $p<0.001$) were more likely to report higher levels of receptivity to marketing. In addition, those with more real-world social influences to smoke (having parents or friends who smoked, or both) also reported greater receptivity ($\chi^2 = 73.38$, $p<0.001$). Among those who reported having neither smoking parents nor friends, more than half (52.5%) were in See, the lowest receptivity level. In contrast, among those who had parents and friends who smoked, only 13% were in See.

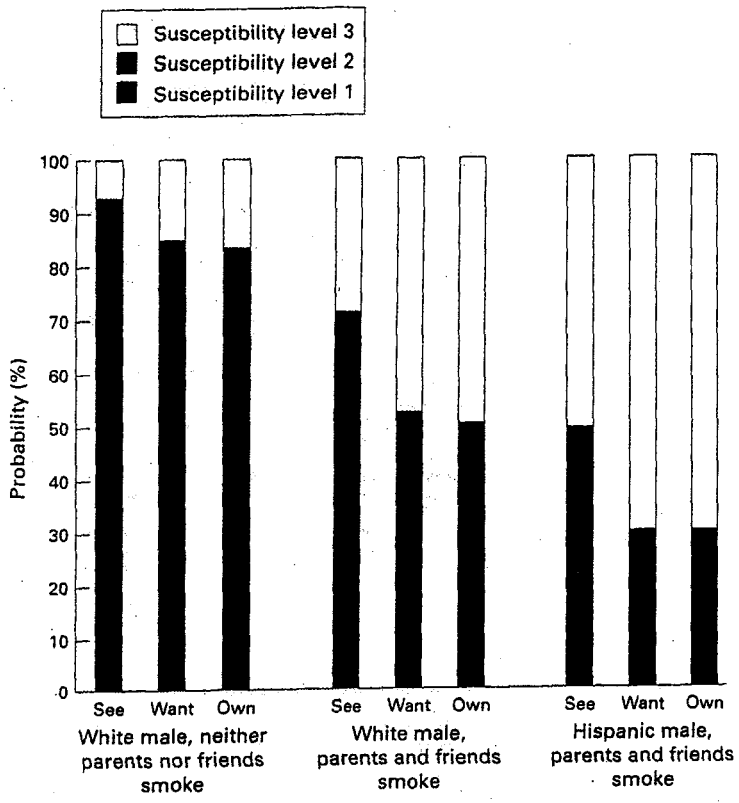
We classified 495 children into three susceptibility levels; the remaining children were either regular smokers (n = 65) or had missing data (n = 11). We observed a significant relationship between susceptibility and receptivity ($\chi^2 = 44.84$, $p<0.001$). Those with lower levels of receptivity to tobacco marketing were at the lower levels of smoking susceptibility. Of those seventh-graders who had no experience and a clear resolve not to smoke, 44.7% were in the See group. This contrasts sharply with those children who had experience with and lack of resolve not to smoke, of whom 11.4% were in the See group. The reverse occurs at the higher levels of receptivity where those less susceptible are the least likely to want or own promotional material, and the most susceptible are more likely to want or own such items.

In the proportional odds model, we observed that all the covariates, except some of the ethnicity dummy variables, were statistically significant. Beyond the significant role gender and ethnicity as well as parental and peer smoking played in predicting a teen's susceptibility, receptivity to tobacco marketing materials also increases the odds that one will smoke. As a group, the regressors predict susceptibility and we observed that the χ^2 of all the covariates is 130.28 (df=9, $p<0.0001$). The test for equality of slopes for these variables proved to be non-significant ($\chi^2 = 10.93$, df = 9, $p<0.28$).

Table 3 presents the change in odds for being in the higher susceptibility levels. Considering our set of predictors, girls were less likely than boys to have experience with smoking or lack a clear resolve not to smoke, or both. The odds that a Hispanic child had experience or lack a resolve not to smoke, or both, were two and a half times greater than the odds for a white child. Having parents who smoked increased the odds by a factor of 1.12 and having friends who smoked increased the odds by 2.98. The combination of having parents and friends who smoke increased the odds that a child was more susceptible to 5.23. Being in the Want or Own receptivity level increased the odds of being susceptible at similar rates (approximately 2.30 times greater). The odds act in a multiplicative manner such that a Hispanic child whose parents and friends smoked had odds of being in higher susceptibility levels that were 13.23 times greater than if the child was white and had neither parents nor friends who smoked. If that same child owned tobacco promotional material, then the odds that he or she was susceptible would be 31.09 times greater than the odds for a child without these characteristics.

Using the estimated parameter coefficients and intercepts, we calculated fitted probabilities that given children would be in the different susceptibility groups (figure 1). Here, we see that it is highly probable (p = 0.78) that a white boy, whose parents or friends did not smoke, and is in the See category, is in the lowest susceptibility category (no smoking experience and has a clear resolve not to smoke). On the other hand, a Hispanic boy, whose parents and friends smoke, and is in the Own category, has a high probability (p = 0.71) of being in the highest susceptibility category (having experience and lacking a clear resolve to smoke in the future.

It should be noted that we also performed these analyses with current smokers included



Probability of being in susceptibility level 1, 2, or 3, based on predictors in proportional odds model.

as a fourth level to the susceptibility index. The results resemble those encountered in the level 3 susceptibility index, with similar significant bivariate relationships and significant variables in the proportional odds model.

Discussion

This study examines the relationship between receptivity to tobacco marketing materials and susceptibility to start smoking as reported by 571 seventh-graders. The results show that virtually all young people in the study were aware of tobacco advertising, in that more than 99% of them reported seeing tobacco advertising and promotions in a variety of venues. Remarkably, about 70% of the seventh-graders in this study population indicated a level of receptivity to tobacco marketing materials that is greater than the simple awareness of advertising and promotions. Most of these young people said that they received tobacco company mailings, saved Camel Cash or Marlboro Miles, wanted to own promotional items, or actually owned them.

Not surprising is the finding that the odds of being susceptible to smoking are greatly increased when a parent or friends smoke. This is consistent with other research findings, which have found that these social influences are important contributors to a teenager's decision to smoke.[30] What is very disturbing, however, is that the odds of being susceptible more than doubled for those in the Want and Own categories even when controlling for gender, ethnicity, and knowing others who smoke. Interestingly, mere desire (Want) for tobacco promotional items increased the odds of being susceptible to smoking almost as much as actually owning them.

Equally disturbing are the findings on ethnicity. A Hispanic boy with family and friends who smoke and a high level of receptivity to tobacco marketing was 25% more likely than his white counterpart to be highly susceptible to smoking. We believe this finding warrants further study.

These findings indicate that the marketing campaigns designed by tobacco companies are extremely effective in capturing teenagers' attention and increasing desire for their promotional items. The findings also suggest that the tobacco industry is successfully using promotions to stimulate movement toward regular use of their products by providing young people with paraphernalia that allows them to take on the identity of a smoker.

A vast majority (almost 90%) of the adolescents who have experimented with smoking and lack a firm commitment not to smoke in the future also report much higher levels of receptivity to tobacco marketing in the forms of working toward the acquisition of promotionals by saving Camel Cash or Marlboro Miles, and ownership of these items. These findings demonstrate that the most susceptible teenagers are most receptive to using promotional items that may help them achieve the "smoker" identity. This is consistent with marketing theories mentioned previously which explain that promotions allow a consumer to "try on" an identity and are intended to move consumers closer to using a product.

Those who report being the least receptive to these materials (30%) are also less likely to be susceptible toward tobacco use. However, more than 50% of those with no experience and a clear resolve not to smoke, either want or own tobacco promotional items; this illustrates the obvious appeal of these materials. We suspect that this might be the first step in moving some of these young people along the continuum of decision making toward the use of their products. Only a longitudinal study would allow us to find this out.

There are several limitations to this study. This sample is drawn from two school districts in northern California and is more ethnically diverse than the American population, so it may not be generalisable to the general population. Another potential limitation is that these are self-reported data of exposure to marketing strategies, as well as experience in smoking and intent to smoke. Response bias is possible; however, prevalence rates observed here are similar to those reported in other research.[31] Most importantly, these are cross-sectional data; therefore, a causal relationship between advertising and smoking behaviour cannot be determined. Although these data show that a relationship exists between receptivity and susceptibility, it is possible that susceptibility to smoke precedes interest in and receptivity to tobacco advertising. A well-controlled longitudinal study would identify which variable causes the other.

The findings of this study indicate that although parents and peers play a significant role in whether a teenager begins to smoke,

tobacco marketing materials may also have a strong influence. Previously confidential tobacco company records reveal that these companies studied teenagers and used this information to design marketing strategies to move them from non-smoking to smoking status. The results of this study confirm that the massive marketing efforts of the tobacco industry are in fact working: their advertising is noticed, and their promotional items are desired and owned by significant numbers of teenagers. Moreover, teenagers who are more receptive to the sophisticated marketing practices of the tobacco industry are more likely to report experimentation, intent to smoke, or regular use. These findings add to the growing body of research demonstrating the influence of tobacco marketing practices on youngsters' susceptibility to start smoking.

The results of the study provide a new framework on how to talk with young people about how the marketing strategies of the tobacco industry are designed to move them from non-smoking to smoking status. Of particular benefit is a discussion of the use of promotional items that may bring a consumer closer to the use of a product. In addition, the findings of this and other studies cited here provide compelling support for regulating and overseeing the manner in which tobacco products are marketed, to protect young people from the highly effective strategies of the tobacco industry to reach them.

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Brand Logo Recognition by Children Aged 3 to 6 Years

Mickey Mouse and Old Joe the Camel

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Objective.—Little is known about the influence of advertising on very young children. We, therefore, measured product logo recognition by subjects aged 3 to 6 years.

Design.—Children were instructed to match logos with one of 12 products pictured on a game board. Twenty-two logos were tested, including those representing children's products, adult products, and those for two popular cigarette brands (Camel and Marlboro).

Setting.—Preschools in Augusta and Atlanta, Ga.

Participants.—A convenience sample of 229 children attending preschool.

Results.—The children demonstrated high rates of logo recognition. When analyzed by product category, the level of recognition of cigarette logos was intermediate between children's and adult products. The recognition rates of The Disney Channel logo and Old Joe (the cartoon character promoting Camel cigarettes) were highest in their respective product categories. Recognition rates increased with age. Approximately 30% of 3-year-old children correctly matched Old Joe with a picture of a cigarette compared with 91.3% of 6-year-old children.

Conclusion.—Very young children see, understand, and remember advertising. Given the serious health consequences of smoking, the exposure of children to environmental tobacco advertising may represent an important health risk and should be studied further.

(*JAMA*. 1991;266:3145-3148)

SEVERAL types of research have been used in the past decade to examine the association between cigarette advertising and rates of underage smoking. These studies have included econometric modeling,[1,2] the measurement of advertisement recognition,[3,4] and experimental studies of adolescents' reactions to advertisement imagery.[5-7] In one recent study of teenagers, the self-perceived influence of cigarette advertising had the strongest and most consistent effect on the initiation of smoking among a group of variables that included parental smoking, sibling smoking, peer influence, and intention to smoke.[8] Collectively, these studies provide compelling evidence that cigarette advertisements are seen by adolescents and that they respond to the advertisements' intent. Some health experts, therefore, now believe that cigarette advertising is causally linked to smoking behavior.[9-11]

In contrast, the tobacco industry argues that cigarette advertising is not targeted to adolescents and that advertising does not increase the use of tobacco products. These companies claim that advertising and promotion are designed instead to produce brand switching by adults who already smoke.[12] In 1988, the tobacco industry spent $3.27 billion on cigarette advertising and promotions, making cigarettes the second most heavily advertised product in the United States.[11] This level of advertising cannot be justified on the basis of brand switching alone, since only 10% of current smokers change brands within a given year.[13]

See also pp 3149, 3154, and 3185.

There has been considerable speculation but little published research on the impact of advertising on very young children. Typical survey methods are generally unreliable when conducting research involving this age group since children have limited verbal skills and, therefore, cannot articulate concepts that they may understand. There is, however, some evidence that very young children understand advertising. Donohue et al[14] used nonverbal measures (ie, picture games) to study young children's knowledge of television commercials. They concluded that by 3 years of age, children understand both the intent of television commercials and the sophisticated concept of audience segmentation (ie, that advertisements are targeted to specific groups).

We studied the recognition level of 22 brand logos by children aged 3 to 6 years. Included were logos from two of the

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most heavily advertised cigarette brands: Camel and Marlboro.

METHODS

The study design was based on the well-accepted market research concept of advertisement recognition.[15] Recognition of an advertisement indicates that it has been both seen and remembered.

Twenty-two brand logos were collected from a variety of printed sources including advertisements and product packaging. These included the logos of 10 products that are, in part, targeted to children, five logos representing two cigarette brands, and seven logos of products primarily targeted to adults (Table). No logos had specific image or word clues that might indicate what kind of product the brand represented (eg, the "Marlboro man" was not smoking). One of the current Surgeon General's warnings ("Quitting Smoking Now Greatly Reduces Serious Risks to Your Health") as it appears on printed advertisements was also included as a test item.

Recognition was measured by having the subjects match 22 logo cards to one of 12 products pictured on a game board (Table). Product position on the board was made by random assignment and was not varied between subjects.

Subjects were recruited from 10 preschools in Augusta and Atlanta, Ga. The schools were selected in an attempt to balance the sample for race and socioeconomic variables. Each subject's parent signed a parental consent form and completed a short questionnaire about the child's age, gender, race, number of hours of television watched each day, frequency with which the child requested specific brands, number of years of parental education, and the use of cigarettes in the subject's home.

On the following day, each child was individually tested in a quiet, separate area of his or her classroom. It was explained to the child that he or she would play a game matching cards with products. Each of the 12 products on the game board was then named. A demonstration of matching was done with a sample logo card. The child was then given a test card to match. After the child placed the card on the board (whether correct or incorrect), the child was told, "That's good." No other feedback or encouragement was given. Following each match, that card was removed from the board and the child was presented with the next card. The cards were randomized for each subject to prevent bias due to the order of presentation.

Responses were graded as either correct (grade of 1) or incorrect (grade of 0), and a score was derived by summing the binary values assigned to each logo.

Table 1.—Logos Tested,* Correct Product Response, and Recognition Rates for 229 Subjects Aged 3 to 6 Years

Product Category	Logo	Correct Product Response	Recognition Rate, %
Children's brands	Disney Channel	Mickey Mouse	91.7
	"McDonald's"	Hamburger	81.7
	"Burger King"	Hamburger	79.9
	"Domino's Pizza"	Pizza	78.2
	"Coca Cola"	Glass of cola	76.0
	"Pepsi"	Glass of cola	68.6
	"Nike"	Athletic shoe	56.8
	"Walt Disney"	Mickey Mouse	48.9
	"Kellogg's"	Bowl of cereal	38.0
	"Cheerios"	Bowl of cereal	25.3
Cigarette brands	Old Joe	Cigarette	51.1
	"Marlboro" and red roof	Cigarette	32.8
	Marlboro man	Cigarette	27.9
	Camel and pyramids	Cigarette	27.1
	"Camel"	Cigarette	18.0
Adult brands	"Chevrolet"	Automobile	54.1
	"Ford"	Automobile	52.8
	Apple	Computer	29.3
	"CBS"	Television	23.1
	"NBC"	Television	21.0
	"Kodak"	Camera	17.9
	"IBM"	Computer	16.2
Surgeon General's warning		Cigarette	10.0

*Quotation marks on the logo indicate that the brand name is part of the test item.

Subscores were calculated for each product type (ie, children's brands, cigarette brands, or adult brands), which were then transformed into a recognition rate score based on the percentage of correct matches for that type of product and for the products overall. These were then compared with data from the parental questionnaire. Analyses using the χ^2 test were used to test for independence between categorical variables. The McNemar Test was used to test for the significance of change in correct responses between two logos (The Disney Channel and Old Joe).[16] A correlation analysis was used to test for association of recognition rates by age. A multifactor analysis of variance was used to test the significance of the survey variables and the recognition of logos.

RESULTS

Two hundred twenty-nine children were recruited. Subjects ranged in age from 3 to 6 years. Seventy-nine were 3 years of age (34.5%), 67 were 4 years of age (29.3%), 60 were 5 years of age (26.2%), and 23 were 6 years of age (10.0%). One hundred twenty-three (53.7%) were boys. One hundred sixty-six (72.5%) were white and 63 (27.5%) were black. Of the subjects' parents, 67 (29.3%) had less than 12 years of education, 123 (53.7%) had 12 to 16 years of education, and 39 (17.0%) had more than 16 years of education. Many subjects (34.1%) came from homes where at least one person smoked.

Each subject's parent was asked to report the number of hours of television watched per day by his or her child. One hundred eight (47.2%) of the subjects watched up to 2 hours per day, 100 (43.7%) watched 2 to 4 hours, and 21 (9.2%) watched 4 or more hours per day.

The parents were also asked to rate how often their child requested specific product brands, measured with a four-item Likert scale. Thirty-seven parents (16.2%) reported almost always, 106 (46.3%) reported often, 79 (34.5%) reported infrequently, and seven (3.1%) reported never. Unexpectedly, χ^2 analysis revealed no association of more frequent brand requests among older children. Fifty-two percent of 3-year-old children, 73% of 4-year-old children, 63% of 5-year-old children, and 65% of 6-year-old children often or almost always requested specific brands ($P=.10$).

The mean logo recognition rates for all subjects are shown in the Table. As would be expected, children had high recognition of the children's brand logos ranging from 91.7% for The Disney Channel to 25.3% for Cheerios. Random guessing alone would produce a recognition rate of 8.3% (ie, one of 12 items).

Old Joe, the cartoon character promoting Camel cigarettes, had the highest recognition rate among the tested cigarette logos. More than half of the subjects correctly matched this figure with a picture of a cigarette. The other cigarette logos were correctly recognized at rates of 18.0% to 32.8%. The logos for adult products were recognized by 16.2% to 54.1% of subjects, with automobile brand logos having the highest recognition rates.

Logo recognition was highly associated with the subject's age. Figure 1 shows mean recognition rates by age for each of the three product categories. This association of increased recognition with older age was significant for

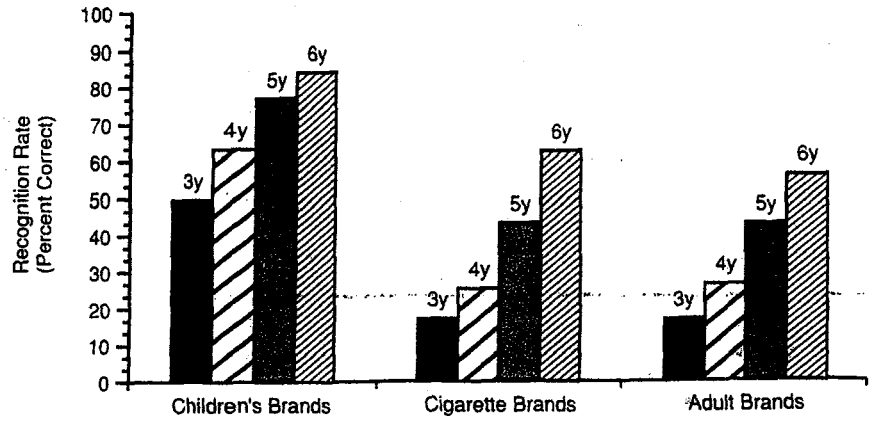


Fig 1.—Logo recognition rates by years of age for children's brands, cigarette brands, and adult brands.

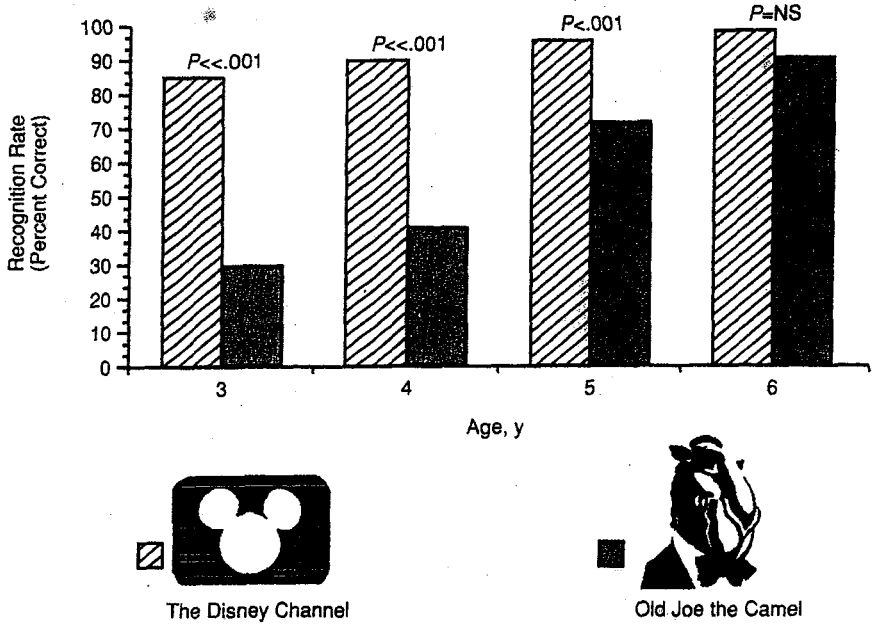


Fig 2.—Logo recognition rates for The Disney Channel and Old Joe by subject age.

children's products ($r = .51$; $P < .0001$), cigarette brands ($r = .52$; $P < .0001$), and adult brands ($r = .50$; $P < .0001$).

Cigarette logo recognition rates ranged from 11.4% (Camel) to 30.4% (Old Joe) for 3-year-old subjects. This rate increased to between 43.5% (Camel) and 91.3% (Old Joe) for children 6 years of age.

Figure 2 compares the recognition rates for The Disney Channel and Old Joe by subject age. These two were the most highly recognized logos in their respective product categories. While The Disney Channel's logo recognition was higher for subjects aged 3, 4, and 5 years, this difference in recognition was not significant in subjects aged 6 years. In that age group, both the silhouette of Mickey Mouse and the face of Old Joe were nearly equally well recognized and correctly matched by almost all children.

Neither race nor gender was associated with the recognition scores of any of the three product categories. A multifactor analysis of variance that included each of the other survey variables showed that the hours of television watched were positively associated with the recognition of children's product logos ($F_{(2,198)} = 10.1$; $P < .0001$) and adult logos ($F_{(2,198)} = 4.41$; $P = .01$), but not with cigarette logos. Parental education was positively associated with the recognition of adult product logos ($F_{(2,198)} = 6.14$; $P = .002$), but not with children's products or cigarettes. The recognition of cigarette logos was independent of the use of cigarettes in the subjects' homes.

Only 23 (10.0%) of the subjects matched the Surgeon General's warning with the picture of a cigarette. The recognition rate for the warning in subjects aged 3, 4, and 5 years was only 8.4%, a rate nearly equal to that expected for random guessing.

COMMENT

Children are referred to by marketing researchers as "consumers in training." As stated by McNeal,[17] "All of the skills, knowledge, and behavior patterns that together we call consumer behavior are purposely taught to our children right along with toilet training, toddling and talking."

Research has identified three distinct children's markets. First are the markets directly under the control of children. Children aged 5 to 12 years spend $4.2 billion of their own money each year.[17] By age 6 years, half of all children regularly go shopping by themselves.[17]

The second market is for products in which children influence household purchasing decisions. Children influence the spending of $131 billion each year, including $82 billion for food and beverages, $17 billion for leisure activities and products, and $13 billion for apparel (*Business Week*. September 9, 1991:94).

The third market is for products that children will consume when they become adolescents and adults. Market researchers believe that brand awareness created in childhood can be the basis for product preference later in life.[17] It has been shown that children prefer the brands that they see advertised.[18] This effect has been shown to even influence their preference of products that they are too young to use, such as lipstick and diet soft drinks.[19] This potential influence has raised concern about the exposure of children to cigarette advertising. For instance, it has been suggested that children receive positive messages about smoking when they view cigarette advertisements and that this may influence later decisions to smoke.[20]

The children in this study demonstrated high recognition rates of brand logos for products that are targeted to both children and adults. It is no surprise that most children can properly match the McDonald's arches to a hamburger. It is also not surprising that there is high recognition of the Chevrolet and Ford logos. Automobiles are heavily advertised on television, and

many children are exposed to these brands through personal family use. In contrast, the high recognition rate of cigarette logos may be counterintuitive. After all, cigarette advertising no longer appears on television and very young children cannot read. Yet by the age of 6 years, Old Joe is as well recognized as Mickey Mouse.

Children's knowledge of cigarette brand logos is most likely the result of their exposure to "environmental tobacco advertising." Camel and Marlboro brand advertising is ubiquitous, appearing in movies, on billboards, promotional displays at youth-oriented events, on television during sporting events, and on "line extenders," such as T-shirts, posters, and caps.[21,22] In addition to this paid advertising, Camel and Marlboro brand logos appear on video arcade games, children's toys, and candy products (*Washington Post*. March 13, 1990;sect A:8).

There are several limitations to the current study. First, the subjects were a convenience sample and, therefore, did not include children cared for at home. While the sample does represent children from families with a range of ethnic and socioeconomic backgrounds, it is unknown how the sampling method might have influenced the study results. The study design relied on the ability of children to match cards picturing brand logos to products on a game board. This is a novel design that has face validity, but which would be difficult to validate in any other way. Finally, there is some obvious arbitrariness to the selection of specific logos as test items. The choice of children's products was based on published data describing children's markets.[17] Heavily advertised cigarette brands were tested. Adult brands were chosen from among those products that are primarily targeted to consumers who are older than the study subjects. Of all the brands tested, only the manufacturers of cigarettes specifically claim not to advertise to children.

It is obviously impossible to predict how the exposure of children to environmental tobacco advertising might influence their later smoking behavior. While cigarette companies claim that they do not *intend* to market to children, their intentions are irrelevant if advertising *affects* what children know. R J Reynolds Tobacco Company is as effective as The Disney Channel in reaching 6-year-old children. Given this fact and the known health consequences of smoking, cigarette advertising may be an important health risk for children.

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HOW TOBACCO COMPANY ADVERTISING INFLUENCES MINORS TO USE TOBACCO:

A SUMMARY OF INDEPENDENT RESEARCH AND INTERNAL INDUSTRY DOCUMENTS

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May 20, 1996

HOW TOBACCO COMPANY ADVERTISING INFLUENCES MINORS TO USE TOBACCO:

A SUMMARY OF INDEPENDENT RESEARCH AND INTERNAL INDUSTRY DOCUMENTS

"[T]he substantial convergent evidence that advertising and promotion increases tobacco use by youths is impressive and, in the Committee's view, provides a strong basis for legal regulation."

— Institute of Medicine Report, National Academy of Sciences (1994)

"Cigarette advertising encourages youth to smoke and should be banned."

— Pierce, et al, Journal of the American Medical Association, Dec. 11, 1991

"Cigarette people maintain peer pressure is the culprit in getting kids to start smoking and that advertising has little effect. That's like saying cosmetic ads have no effect on girls too young to put on lipstick. . ."

— Rance Crain, *Advertising Age*, Oct. 20, 1995

BACKGROUND ON YOUTH SMOKING

The U.S. Centers for Disease Control and Prevention estimates that smoking is related to approximately 419,000 U.S. deaths each year. In addition to being responsible for 87% of lung cancers, smoking accounts for 30% of all cancer deaths and is also a major cause of cardiovascular ailments and deaths.[1] Cigarettes cause more deaths than illegal drugs, car accidents, fires, homicides, AIDS, alcohol and suicides combined.[2]

Most adults do not realize that nearly 89% of all smokers begin using cigarettes before or by age 18, and 71% of underage smokers smoke daily.[3] The average youth smoker starts smoking at 13 and becomes a daily smoker by 14 1/2.[4] The average age of the first time smoker has dropped steadily over the past

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[1] American Cancer Society, Cancer Facts and Figures - 1995, p. 22-23.

[2] Institute of Medicine, "Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths," National Academy of Sciences (1994), p. 106 (hereinafter cited as "Institute of Medicine Report.")

[3] "Preventing Tobacco Use Among Young People: A Report of the Surgeon General." Atlanta GA: DHHS, PHS, CDC, NCCDPHP, OSH, 1994, p. 65 (hereinafter cited as "1994 Surgeon General's Report").

[4] Teenage Attitudes and Practices Survey II, 1993, unpublished data. Cited in the "Results of a National Household Survey to Assess Public Attitudes About Policy Alternatives for Limiting Minors' Access to Tobacco Products," Robert

four decades.[5] The younger a person begins to smoke, the more likely he or she is to become a lifelong user, and also the greater the likelihood the individual will suffer from a tobacco-related disease.

Despite laws in every state making it illegal to sell tobacco to minors, teens and children purchase over half a billion packs of cigarettes and twenty-six million containers of smokeless tobacco products each year.[6] Each day, 3,000 new children smoke their first cigarette. Currently, there are over three million adolescents who smoke and over one million who use smokeless tobacco.[7] Most of these young people will become addicted to tobacco, and approximately one third will eventually die from a tobacco-related illness.

While adult smoking rates have declined steadily over the past decade, recent data show an alarming increase in smoking by junior high school and high school students. Between 1991 and 1994, the prevalence of smoking among eighth graders rose 30%.[8]

Once a child starts smoking, it's easy to continue getting cigarettes. Numerous studies and surveys conducted over the past several years consistently demonstrate that children and adolescents are successful in purchasing tobacco from retail outlets 50% to 75% of the time.[9] Vending machines are even easier. Overall, children and adolescents are successful in purchasing tobacco from vending machines 80% to 100% of the time.[10]

INDUSTRY'S NEED: FIND NEW CUSTOMERS TO REPLACE THOSE WHO QUIT OR DIE

If the tobacco industry did not find replacements for older smokers who die or quit, it would have gone out of business in the U.S. long ago. Because almost no one begins to use tobacco after age 18, the tobacco companies have a bottome line, purely economic need to see to it that literally a million minors a year take up smoking, just to stay even. Since the tobacco companies can no longer advertise on television or the radio (the two best ways to reach kids), they use alternative forms of advertising and promotion - subtle and blatant - to persuade kids to start smoking. Historically one of the most heavily-used strategies has been posting ads in places where the companies know or reasonably expect that many children will see them.

The first piece of evidence suggesting the need to restrict cigarette advertising is that for many years tobacco has been the most heavily advertised product in America, and that the amount spent on advertising has exploded over the past two decades as the adult market has declined. The tobacco industry currently spends over $6 billion annually in advertising and promotional activities, many of which are targeted towards youth.[11] Between 1970 (the year before Federal law prohibited cigarette advertisements on television and radio) and 1993, cigarette advertising and promotional expenditures

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[5] Institute of Medicine Report, p. 106.

[6] "No Sale: Youth, Tobacco and Responsible Retailing," Findings and Recommendations of a Working Group of State Attorneys General, p. 1, December, 1994.

[7] 1994 Surgeon General's Report, p. 5.

[8] The University of Michigan, Monitoring the Future Study, Ann Arbor, MI, Survey Research Center, 1995.

[9] Cummings, K.M., Sciandra, E., Pechacek, T., Orlandi, M., and Lynn, W. for the COMMIT Research Group, "Where Teenagers Get Their Cigarettes: A Survey of the Purchasing Habits of 13-16 Year Olds in 12 U.S. Communities," Tobacco Control 1 (1992): 264-267.

[10] 1994 Surgeon General's Report, p. 249.

[11] "Report to Congress for 1993, Pursuant to the Federal Cigarette Labeling and Advertising Act," Federal Trade Commission, Table 3 and 3D, 1995.

increased from $361 million to $6 billion, a 1,562 percent increase.[12] During the same period, the portion of adult Americans who smoked dropped nearly in half, from 41% to 23%.[13]

INDUSTRY'S STRING OF BROKEN PROMISES NOT TO MARKET TO KIDS

After the landmark 1964 Surgeon General's Report on the hazards of smoking, the tobacco industry promised that same year not to market to children and not to use advertising that appealed to children. The companies jointly proclaimed that they were adopting an advertising "Code" that "would bar ads directed mainly at persons under the age of 21."[14] In June of the same year, the tobacco industry testified before Congress and reiterated that their Advertising Code would bar all advertising "which has an appeal to young people."[15]

Then, when tobacco advertising was banned from television and radio in 1970, the president of the Tobacco Institute promised that cigarette manufacturers would not circumvent the letter or spirit of the law by televising sporting events sponsored by tobacco companies.[16]

While the Cigarette Advertising Code was "technically terminated" with the tv ad ban, the industry has testified before Congress several times since that it continues to abide by the Code's principles.[17] Among other things, the industry swore that it would continue to comply with the following portions of their Code:

- Cigarette advertising shall not suggest that smoking is essential to social prominence, distinction, success or sexual attraction . . .
- Cigarette advertising shall not . . . show any smoker participating in or obviously just having participated in a physical activity requiring stamina or athletic conditioning beyond that of normal recreation.

Every one of the industry's promises not to market to children has been broken on a regular basis. As an advertising executive who worked on the Marlboro account put it:

> When all the garbage is stripped away, successfull cigarette advertising involves showing the kind of people most people would like to be, doing the things that most people would like to do, and smoking up a storm. I don't know of any way of doing this that doesn't tempt young people to smoke.[18]

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[12] Id.

[13] American Cancer Society, Cancer Facts and Figures - 1996.

[14] Full page ad, New York Times, January 4, 1964.

[15] Testimony of Bowman Gray, Hearing Before the Committee on Interstate and Foreign Commerce, U.S. House of Representatives, 88th Cong., 2nd Sess. (June 25, 1964).

[16] Morris, John, "Tobacco Men Bar Evasion of TV Ad Ban," New York Times, January 9, 1971.

[17] Testimony of Horace Kornegay, Hearing Before the Consumer Subcommittee of the Committee on Commerce, U.S. Senate, 92nd Cong., 2d Sess. (February 1, 1972); Testimony of Horace Kornegay, Hearing Before the Subcommittee on Labor and Public Welfare, U.S. Senate, (February 19, 1976); Testimony of Edward Horrigan, Jr., CEO, R.J. Reynolds, on behalf of the Tobacco Institute, Hearing before the Subcommittee on Health and the Environment of the Committee on Energy and Commerce, U.S. House of Representatives, 97th Cong., 2d Sess., Ser. No. 97-106 March 11, 1982).

[18] 1994 Surgeon General's Report, p. 101.

As a result of this string of broken promises, the American Medical Association, American Heart Association, American Cancer Society, American Lung Association, American Academy of Family Physicians, World Health Assembly, and the World Health Organization have all recommended restrictions on advertising and promoting tobacco, including a total ban of all promotional and advertising activities that can influence children.[19]

THE CASE IS OVERWHELMING: ADVERTISING INFLUENCES ADOLESCENTS TO SMOKE

The body of evidence built from a wide range of independent and unbiased studies by credible organizations makes this conclusion incontrovertible: many of the ad campaigns by the cigarette companies appeal strongly to young people and contribute to increasing their use of tobacco. Even if one were to accept the industry claim that it does not "target" or "intentionally" try to influence children (but see subsequent section on uncovered industry documents), a host of studies have shown that their ad campaigns have the effect of promoting youth smoking. Some of the most well-researched and oft-cited studies include:

- Institute of Medicine report, "Growing Up Tobacco Free," (1994);[20]
- 1994 Report of the Surgeon General "Preventing Tobacco Use Among Young People;"[21]
- 1989 Report of the Surgeon General "Reducing the Health Consequences of Smoking;"[22]
- "Influence of Tobacco Marketing and Exposure to Smokers on Adolescent Susceptibility to Smoking" in the Journal of the National Cancer Institute (1995);[23]
- The California case study in the Journal of the American Medical Association showing how advertising targets young people to smoke (1991);[24]
- The new report in Health Psychology demonstrating the impact of major new cigarette advertising campaigns on American youth smoking rates, going back to 1890 (1996);[25]

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[19] "American Academy of Family Physicians Urges Greater Regulation of Tobacco," 1994-95 Compendium of AAFP Positions of Selected Health Issues, Washington, DC, 1995; "Resolution WHA 31.56," The Thirty-first World Health Assembly, May 1976; Letter from Thomas P. Houston, M.D., American Medical Association, to Sharon Natanblut, Food and Drug Administration, August 2, 1995; World Health Organization, "It Can Be Done," p.33, 1990; Forty-Third World Health Assembly, "Tobacco or Health," WHA 43.16, May 17, 1990; Coalition on Smoking or Health Endorses Call for Ban on Tobacco Advertising and Promotion, June 9, 1986.

[20] 1994 Surgeon General's Report.

[21] Institute of Medicine Report.

[22] "Reducing the Health Consequences of Tobacco: 25 Years of Progress. A Report of the Surgeon General," Atlanta, GA: DHSS, PHS, CDC, NCCDPHP, OSH, 1989.

[23] Pierce, J. P., Ph.D., Evans, N., Farkas, A., Gilpin, E., Berry, C., "Influence of Tobacco Marketing and Exposure to Smokers on Adolescent Susceptibility to Smoking," Journal of the National Cancer Institute 1995; 87:1538-45.

[24] Pierce, J., Gilpin, E., Burns, D., Whalen, E., Rosbrook, B., Shopland, D. and Johnson, M., "Does Tobacco Advertising Target Young People to Start Smoking?: Evidence from California,", Journal of the American Medical Association, vol. 266, No. 22, pp.3154-3158 (1991).

[25] Pierce, J. and Gilpin, E., "A Historical Analysis of Tobacco Marketing and the Uptake of Smoking by Youth in the United States: 1890-1977," Health Psychology, Vol. 14, No. 6, p.500. –

- A study of the most obvious recent attempt to reach children, "RJR Nabisco's Cartoon Camel Promotes Camel Cigarettes to Children", Journal of the American Medical Association (1991)[26];

- "Tobacco Advertising and Consumption: Evidence of a Causal Relationship," Journal of Public Health Policy (1987)[27];

- The 1989 international report which showed how advertising bans or restrictions in a host of countries helped reduce youth smoking;[28] and

- "The Effect of Tobacco Advertising on Tobacco Consumption," the 1993 report by the Government of Great Britain which showed similar reductions in youth smoking from ad ban in several Western European countries.[29]

Testimony at numerous Congressional hearings provides additional support for the conclusion that advertising and marketing make tobacco appealing to children and influence the rate of smoking by minors.[30]

The 1994 Surgeon General's Report, which included a comprehensive review of the literature on the issue, concluded that "[c]onsidered together, these studies offer a compelling argument for the mediated relationship of cigarette advertising and adolescent smoking.[31] The Surgeon General's Report, together with the Institute of Medicine's report[32] (the other most recent and comprehensive government review of the issue) find that there is sufficient evidence to conclude that advertising and labeling play a significant and important contributory role in a young person's decision to use cigarettes or smokeless tobacco products.

Highlights from some of these reports:

The study recently published in the Journal of the National Cancer Institute found that adolescents who are receptive to cigarette advertising are nearly 4 times more likely to start smoking compared to

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[26] DiFranza, et al, "RJR Nabisco's Cartoon Camel Promotes Camel Cigarettes to Children," Journal of the American Medical Association, vol. 266, No. 22, Dec. 11, 1991, p. 3149-3153.

[27] Tye, J., Warner, K. and Glantz, S., "Tobacco Advertising and Consumption: Evidence of a Causal Relationship," Journal of Public Health Policy, vol. 8, pp. 492-508, Winter 1987.

[28] "Health or Tobacco--An End to Tobacco Advertising and Promotion," Toxic Substances Board, Wellington, New Zealand, May 1989.

[29] Smee, C., "Effect of Tobacco Advertising on Tobacco Consumption - A Discussion Document Reviewing the Evidence," Department of Health Economics, and Operational Research Division, London (1993).

[30] See, for example, "Advertising of Tobacco Products," Hearings Before the Subcomm. on Health and the Environment of the Comm. on Energy and Commerce, U.S. House of Representatives, 99th Cong., 2d Sess., Ser, No, 99-167 (July 18 and August 1, 1986); "Tobacco Advertising," Hearings Before the Subcomm. on Health and the Environment of the Comm. on Energy and Commerce, U.S. House of Representatives, 99th Cong,, 2d Sess,, Ser, No, 100-120 (July 27 and 28, 1987).

[31] 1994 Surgeon General's Report, p. 188.

[32] Institute of Medicine Report, p. 131.

youngsters who do not notice tobacco ads.[33] In contrast, children exposed to family members and peers who smoked were less than twice as likely to begin smoking compared to those not exposed to smokers.[34] The tobacco companies claim that peer pressure is the sole force influencing kids to smoke, but as the NCI study explained, advertising plays an even bigger role.

The same team of researchers then studied major tobacco advertising campaigns from the turn of the century to 1977 and found that sudden rises in smoking coincided with new, large-scale promotional campaigns.[35] The number of new smokers increased most dramatically among youth in the campaigns' target markets.[36]

The industry also claims that kids only recall or retain cigarette advertising after they have started smoking, but another study [37] showed that causality flowed in both directions: experimentation with cigarettes prompted subjects to attend to and retain information from cigarette advertisements (smoking status determined whether the child attended to advertising), and the amount of information retained by each subject from cigarette advertisements predicted the subjects' experimentation with cigarettes (causality).[38]

Even relatively young children are aware of cigarette advertisements and can recall salient promotions. A recent Gallup survey found that 87 percent of adolescents could recall seeing one or more tobacco advertisements and that half could identify the brand name associated with one of four popular cigarette slogans.[39]

Other studies relating children's misperceptions about the prevalence of smoking to advertising exposure and smoking status have found that overestimating smoking prevalence appears to be a very strong predictor of smoking initiation and progression to regular smoking.[40] Overestimating smoking prevalence, as well as self-reported exposure to advertising, have both been positively correlated with the

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[33] Pierce, John P., Ph.D., Evans, N., Farkas, A., Gilpin, E., Berry, C., "Influence of Tobacco Marketing and Exposure to Smokers on Adolescent Susceptibility to Smoking." Journal of the National Cancer Institute 1995; 87:1538-45.

[34] Id. See also Goldstein, A.O., et al., "Relationship Between High School Student Smoking and Recognition of Cigarette Advertisements," Journal of Pediatrics, vol. 110, No. 3, pp. 488-491, 1987.

[35] Pierce, J. and Gilpin, E., "A Historical Analysis of Tobacco Marketing and the Uptake of Smoking by Youth in the United States: 1890-1977," Health Psychology, Vol. 14, No. 6, p.500.

[36] Id.

[37] Klitzner, M., P.J. Gruenewald, and E. Bamberger, "Cigarette Advertising and Adolescent Experimentation with Smoking," British Journal of Addiction, vol. 86, pp. 287-298, 1991.

[38] Id.

[39] "Teen-Age Attitudes and Behavior Concerning Tobacco--Report of the Findings," The George H. Gallup International Institute, Princeton, NJ, p.18, September 1992.

[40] Chassin, L., et al., "Predicting the Onset of Cigarette Smoking in Adolescents; A Longitudinal Study," Journal of Applied Social Psychology, vol. 14, No. 3, pp. 224-243, 1984; Collins, L.M., et al., "Psychosocial Predictors of Young Adolescent Cigarette Smoking: A Sixteen-Month, Three-Wave, Longitudinal Study," Journal of Applied Social Psychology, vol. 17, No. 6 pp. 554-573, 1987; Sussman, S., et al, "Adolescent Nonsmokers, Triers and Regular Smokers' Estimates of Cigarette Smoking Prevalence: When Do Overestimations Occur and by Whom? Journal of Applied Social Psychology, vol. 18, No. 7, pp. 537-551, 1988.

intention to smoke by other studies.[41]

THE SUSCEPTIBILITY OF ADOLESCENTS TO CIGARETTE ADVERTISING

The Institute of Medicine in its seminal report on youth and smoking explained why adolescents are susceptible to cigarette advertising:

> The images typically associated with advertising and promotion convey the message that tobacco use is a desirable, socially approved, safe and healthful, and widely practiced behavior among young adults, whom children and youths want to emulate. As a result, tobacco advertising and promotion undoubtedly contribute to the multiple and convergent psychosocial influences that lead children and youths to begin using these products and become addicted to them.[42]

As one consumer psychologist explained:

> [Adolescence] create[s] a lot of uncertainty about the self, and the need to belong and to find one's unique identity as a person becomes extremely important. . . . Teens actively search for cues from their peers and from advertising for the 'right' way to look and behave. . . . Teens use products to express their identities, to explore the world and their newfound freedoms in it, and also to rebel against the authority of their parents and other socializing agents. . . Product usage is a significant medium to express these needs.[43]

THE THREE STEPS TO BECOMING A SMOKER

Many researchers, including those within the cigarette industry, have advanced a stage-based model of smoking uptake[44] that is used by marketers to design messages and methods to promote youth smoking.

Stage One: Preparatory Phase The first, preparatory stage is when a child or adolescent starts forming his or her attitudes and beliefs about smoking, and sees smoking as a coping mechanism, as a badge of maturity, as a way to enter a new peer group, or as a means to display independence.[45] During this stage, pervasive advertising imagery that glamorizes tobacco use becomes an factor in shaping beliefs of many youngsters.

Stage Two: Experimenting with Tobacco The middle, trying and experimenting stages occur when

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[41] See Botvin, G., et al., "Smoking Behavior of Adolescents Exposed to Cigarette Advertising," Public Health Reports, vol. 108, No. 2, pp. 217-224, 1993; Sherman, S.J., et al., "The False Consensus Effect in Estimates of Smoking Prevalence: Underlying Mechanisms," Personality and Social Psychology Bulletin, vol. 9, No. 2, pp. 197-207, 1983.

[42] Institute of Medicine Report, p.131.

[43] Solomon, M.R., "Consumer Behavior, Buying, Having, and Being," Allyn and Bacon, p.448, 1992. See also, Institute of Medicine Report, p. 119, Tye, J.B., K.E. Warner, and S.A. Glantz, "Tobacco Advertising and Consumption: Evidence of a Causal Relationship," Journal of Public Health Policy, vol. 8, No. pp. 492-508, Winter 1987; Cohen, J.B., "Effect of Cigarette Advertising on Consumer Behavior," University of Florida, p. 33, 1990.

[44] Cohen, J.B., "Effects of Cigarette Advertising on Consumer Behavior," University of Florida, p.32, 1990 (citing Jarvik, M.E., "The Role of Nicotine on the Smoking Habit," in "Learning Mechanisms and Smoking," Aldine, 1970; Dunn, W.L. Jr., "Smoking Behavior: Motives and Incentives," V.H. Winston & Sons, pp. 102-103, 1973; Leventhal, H., and Cleary, P., "The Smoking Problems: A Review of the Research and Theory in Behavioral Risk Modification," Psychological Bulletin, vol. 88, No. 2, pp. 370-405, 1980).

[45] Id.

the first cigarette is smoked, often at the urging of a peer, and becomes repeated but irregular. It is important to note that those who experiment often, or begin smoking at an early age, are much more likely to become regular smokers.[46] Therefore, age of "initiation" is important.

Stage Three: Nicotine Addiction The final stage, nicotine dependence and addiction, is characterized by a physiological need for nicotine.

TARGETING AND INFLUENCING MINORS: RECENTLY DISCOVERED INDUSTRY DOCUMENTS

A host of recently discovered internal tobacco industry documents confirms what critics have long asserted:

1) the tobacco companies researched and understood the psychological reasons that lead many adolescents to smoke,
2) they also fully understood the three stages of becoming a smoker, and
3) they combined this knowledge to develop advertising that appealed to and influenced minors to take up smoking.

As discussed in the scientific literature cited above, in the early stages of smoking, psychosocial factors are decisive. Those factors are most often capitalized on in the themes used in tobacco product advertising. A document prepared by Imperial Tobacco Ltd. of Canada, a sister company of Brown & Williamson, stated:

> At a younger age, taste requirements and satisfaction in a cigarette are thought to play a secondary role to the social requirements. Therefore taste, until a certain nicotine dependence has been developed, is somewhat less important than other things.[47]

Also as discussed, many behavioral and personal characteristics influence an adolescent's decision to use cigarettes or smokeless tobacco products: rebelliousness; risk-taking personality; use of other legal or illegal drugs; belief in the perceived utility of smoking (to cope with stress, control weight, or improve one's self-image); low self-esteem or depression; disbelief of our discounting health risks; and poor academic achievement.[48]

Tobacco advertising plays on these feelings and exploits these adolescent vulnerabilities. As one report, created for a Canadian cigarette company, stated:

> Starters no longer disbelieve the dangers of smoking, but they almost universally assume these risks will not apply to themselves because they will not become addicted. Once addiction does take place, it becomes necessary for the smoker to make peace with the accepted hazards. This is done by a wide range of rationalizations.[49] (Emphasis added.)

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[46] Chassin, L., et al., "The Natural History of Cigarette Smoking: Predicting Young-Adult Smoking Outcomes From Adolescent Smoking Patterns," Health Psychology, vol. 9 No. 6, pp. 701-716, 1990.

[47] Imperial Tobacco Document No. 89: Research Brief for a Player's Filter, p.2; (Imperial Tobacco Ltd. and R.J. Reynolds-MacDonald, Inc. v. Le Procurer General du Canada, Quebec Superior Court, 1990.)

[48] See generally, 1994 Surgeon General's Report, pp. 133-137, 141-145 and studies cited therein.

[49] "Project Plus/Minus," Kwechansky Marketing Research, Inc., Report for Imperial Tobacco Limited, Study Highlights, p.1, May 7, 1982 (cited in Pollay, R., "The Functions and Management of Cigarette Advertising," Rapport, July 27, 1989).

As 89% of all beginning smokers are 18 or less, "starters" (an industry term) are, by definition, nearly all minors.

Cigarette manufacturers have conducted extensive research on smoking behavioral and attitudes in young people and how ads should be designed to appeal to them. Documents from Philip Morris' files indicate that the company did, at least on one occasion, conduct research about the smoking habits of adolescents, questioning people in Iowa, including teen-agers as young as 14.[50]

A similar research objective was described in a 1969 research paper presented to the Philip Morris Board of Directors.[51] The paper stated that one of its objectives was to probe "[w]hy do 70 million Americans . . . smoke despite parental admonition, doctors' warnings, governmental taxes, and health agency propaganda?"[52] The paper continues:

> There is general agreement on the answer to the first [question--why does one begin to smoke.] The **16 to 20-year old** begins smoking for psychosocial reasons. The act of smoking is symbolic; it signifies adulthood, he smokes to enhance his image in the eyes of his peers.[53] (Emphasis added.)

Another Imperial Tobacco document declared:

> If the last ten years have taught us anything, it is that the industry is dominated by the companies who respond most effectively to the needs of younger smokers.[54]

To further this goal, Imperial Tobacco hired a consulting research company to investigate attitudes about smoking among people aged 15 years and older.[55]

Similar attitudinal research was done for R.J.R.-MacDonald, Inc., the Canadian subsidiary of R.J. Reynolds.[56] A report entitled "YOUTH 1987" closely examined the lifestyles and value systems of "young men and women in the 15-24 age range."[57] The report said the research would:

> provide marketers and policymakers with an enriched understanding of the mores and motives of this important emerging adult segment which can be applied to better decision making in regard to products and programs directed at youth.[58]

Research conducted for another Canadian affiliate of one U.S. cigarette firm focused on the need to

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[50] Hilts, P.J., and G. Collins, "Documents Disclose Philip Morris Studied Nicotine's Effect on Body," New York Times, June 8, 1995, pp. A1, D6.

[51] Wakeham H., "Smoker Psychology Research," presented to the Philip Morris Board of Directors on November 26, 1969.

[52] Id., p. 2.

[53] Id., p. 8.

[54] Overall Marketing Objectives-F88, 1988 Imperial Tobacco Ltd. Marketing Plan, p.6

[55] The Creative Research Group Limited, "Project Viking, Volume I: A Behavioral Model of Smoking," Foreword, February-March, 1986.

[56] "Youth 1987," The Creative Research Group Limited, for RJR Macdonald Inc., Foreword, June 8, 1987.

[57] Id.

[58] Id.

attract "teenagers", stating:

> Ads for teenagers must be denoted by a lack of artificiality, and a sense of honesty. Attempts at use of celebrities . . . do not seem to really click. If freedom from pressure and authority can also be communicated, so much the better.[59] (Emphasis added.)

Individual retailers also saw the need to market directly to teens. For example, a manager in Sarasota, Florida, issued a January 10, 1990 memorandum asking R.J.R. cigarette sales representatives to identify stores -

> . . . that are heavily frequented by young adult shoppers. These stores can be in close proximity to colleges[,] high schools or areas where there are a large number of young adults [who] frequent the store."[60] (Emphasis added.)

On May 3, 1990, when the Wall Street Journal published this memorandum, the cigarette manufacturer stated that the memorandum was a "mistake" and violated company policy by targeting high schools.[61]

Yet, on April 5, 1990, a manager in Moore, Oklahoma issued a similar memorandum regarding the Young Adult Smoker program by asking RJR sales and service representatives to identify what was termed "Retail Young Adult Smoker Retailer Accounts."[62] One criterion for identifying a "Young Adult Smoker" account included facilities "located across from, adjacent to are [sic] in the general vicinity of the High Schools or College Campus [sic]."[63] (Emphasis added.)

THE R.J. REYNOLDS "TEAGUE MEMO"

But perhaps no one industry document better outlined the industry's overall efforts to get minors to smoke than a 1973 Confidential Memorandum on "New Brands of Cigarettes for the Youth Market" by Claude Teague, then R.J. Reynolds Assistant Director for Research and Development in the U.S.[64] He started with the three stage model and explained the obstacles to getting the young nonsmoker to try his or her first cigarette:

> [T]here are sharp, perhaps exploitable differences between pre-smokers, 'learners' and confirmed smokers in terms of what they expect or derive from smoking. . .
>
> For the pre-smoker and learner the physical effects of smoking are largely unknown, unneeded, or actually quite unpleasant or awkward. The expected or derived psychological effects are largely responsible for influencing the pre-smoker to try smoking, and provide sufficient motivation during the learning period to keep the learner going, despite the physical unpleasantness and awkwardness of the period.

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[59] Kwechansky Marketing Research, Inc., "Project 16," p.97, October 18, 1977.

[60] Memorandum for J.P. McMahon, Division Manager, RJR Sales Company, to All Area Sales Representatives, Sales Representatives, and Chain Service Representatives, January 10, 1990.

[61] Wall Street Journal, May 3, 1990, at B1, col. 3.

[62] Memorandum from R.G. Warlick, Division Manager, RJR Sales Company, to All Area Sales Representatives, Sales Representatives, and Chain Service Representatives, April 5, 1990.

[63] Id.

[64] Schwartz, J., "1973 Cigarette Company Memo Proposed New Brands for Teens," Washington Post (October 4, 1995); Teague, C., "Research Planning Memorandum on Some Thoughts About New Brands of Cigarettes for the Youth Market," R.J. Reynolds Tobacco Company (February 2, 1973).

> In contrast, once the 'learning' period is over, the physical effects become of overriding importance and desirability to the confirmed smoker, . . . [65]

Again, because 89% of all smokers start by or before 18, virtually all "pre-smokers" (another industry word like "starters") are, by definition, underage.

R.J. Reynolds' research executive showed a basic understanding of adolescent psychology subsequently evaluated in depth by so many outside researchers:

> Pre-smokers learn to identify with and participate in shared experiences of a group of associates. If the majority of one's closest associates smoke cigarettes, then there is strong psychological pressure, particularly on the young person, to identify with the group, follow the crowd, and avoid being out of phase with the group's value system even though, paradoxically, the group value system may esteem individuality. This provides a large incentive to begin smoking . . . [66]

Mr. Teague then led to the inevitable marketing conclusion:

> **Thus a new brand aimed at the young smoker must somehow become the 'in' brand,** and its promotion should emphasize togetherness, belonging, and group acceptance, while at the same time emphasizing individuality and 'doing one's own thing'.
>
> The fragile, developing self-image of the young person needs all of the support and enhancement it can get. Smoking may appear to enhance that self-image in a variety of ways. If one values, for example, an adventurous, sophisticated adult image, smoking may enhance one's self-image . . . This self-image enhancement effect has traditionally been a strong promotional theme for cigarette brands and should continue to be emphasized.[67] (Emphasis added.)

The entire focus is on how to appeal to teenagers. One of the goals stated, which is seen throughout current tobacco advertising, is to give the false impression that most kids smoke. The "adventurous" passage presages the appeal of campaigns like the Marlboro Man to teens. And the reference to the "incentive to <u>begin</u> smoking" directly contradicts the claim that tobacco advertising is only about brand switching.

INDUSTRY RESPONSE: <u>ADVERTISING TARGETS ADULTS ONLY, AND JUST TO SWITCH BRANDS</u>

All tobacco companies deny that they seek to attract new smokers, much less new underage smokers.[68] They claim that the $6 billion spent each year on marketing focuses <u>only</u> on adult customers and is intended <u>only</u> to maintain brand share and product loyalty. The industry further claims that the tobacco market is a "mature" one in which awareness of the product is universal and overall demand is either

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[65] Id.

[66] Id.

[67] Id.

[68] "[illegible] Youth Market Fair Game." *Advertising Age*, pp. M-16-17, January 31, 1983.

stable or declining.[69] In a mature market, the industry contends, advertising functions to merely shift customers from one brand to another, but does not act as a stimulus to new customers to enter the market.

But as a former cigarette advertising executive put it:

> [T]he cigarette industry has been artfully maintaining that cigarette advertising has nothing to do with total sales. . . . [T]his is complete and utter nonsense. The industry knows it is nonsense.[70]

The industry's "brand switching" argument fails the simple test of dollars and sense. Last year less than 10% of adult smokers switched brands, and only 6.7% switched companies.[71] On the other hand, millions of smokers quit annually, and 419,000 current and former smokers died of smoking-related diseases last year alone. If the industry's marketing efforts didn't find millions of new smokers, it would have quickly run out of customers by now. Since 89% of all new smokers are adolescents, the tobacco companies must recruit young people to replace all those adults who quit or die.

The industry marketing executives and their advertising agencies are good at what they do: over one million minors start smoking each year.[72]

EFFECT OF INDUSTRY ADVERTISING: KIDS SMOKE THE MOST HEAVILY ADVERTISED BRANDS

In two surveys, at least 86 percent of adolescent smokers smoked only one of three brands - Marlboro, Newport or Camel - even though they had dozens to choose from. Only 35 percent of adults, by contrast, smoked these three brands.[73] Not coincidentally, these three are the most highly advertised targeted brands.[74] The same surveys found that preference for brands that rely heavily on image advertising is much more tightly concentrated among youth smokers than adult smokers. Additional evidence indicates that children smoke many fewer brands than adults and that their choices, unlike adults, are directly related to the amount and kind of advertising.[75]

Among 12 to 18 year old smokers, 71 percent of whites smoke Marlboro, while 61 percent of blacks

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[69] See generally, "Tobacco Issues (Part 2)" Hearings Before the Committee on Energy and Commerce, U.S. House of Representatives, 101st Cong., Ser. No. 101-126, 1989, 302-308 (testimony of S. Ward); 1994 Surgeon General's Report, p. 174; Institute of Medicine Report, p.115.

[70] Foote, E., "Advertising and Tobacco," Journal of the American Medical Association, vol. 245, No. 1668, 1981.

[71] Siegel, M., et al., "The Extent of Cigarette Brand and Company Switching: Results from the Adult Use of Tobacco Survey," Draft accepted for publication, American Journal of Preventive Medicine.

[72] 1994 Surgeon General's Report, p. 112.

[73] "Changes in the Cigarette Brand Preferences of Adolescent Smokers-United States, 1989-1993," in Morbidity and Mortality Weekly Report, CDC, DHHS, vol. 43, no. 32, p 577-581, 1994.

[74] Id.; Pierce, John P., Ph.D., Evans, N., Farkas, A., Gilpin, E., Berry, C., "Influence of Tobacco Marketing and Exposure to Smokers on Adolescent Susceptibility to Smoking." Journal of the National Cancer Institute 1995; 87:1538-45.

[75] "Changes in the Cigarette Brand Preferences of Adolescent Smokers-United States, 1989-1993," Morbidity and Mortality Weekly Report, CDC, DHHS, vol. 43, no. 32, p 577-581, 1994. See also Goldstein, A.O., et al., "Relationship Between High School Student Smoking and Recognition of Cigarette Advertisements," The Journal of Pediatrics, vol. 110, No. 3, pp. 488-491, 1987.

smoke Newport,[76] a menthol brand targeted to blacks. Camel represents the second most popular brand among white youth, while for blacks, the next most preferred brands are Kool and Salem,[77] two other menthol brands also heavily aimed at the African American community. These are image-based campaigns that communicate sexual attractiveness, social acceptability, independence or "coolness."[78]

MARLBORO - THE TRADITIONAL LEADER

For years, Marlboro has been the most popular brand among kids. The long-standing success of Marlboro is consistent with the results of research conducted by McCarthy and Gritz who examined the psychological and social factors which influence teenagers to smoke:

> To the degree that adolescents consciously try to reduce the distance between their ideal self-image and their own self-images, and the scientific literature supports that they do, there is reason to conclude that the personality traits popularly imputed to cigarette smokers and cigarette advertisements are sufficiently alluring to induce adolescents to smoke.
>
> For the typical teenager . . . the portrayal in cigarette ads of valued aspects of identity such as independence, social and physical attractiveness and confidence cannot fail to make cigarettes appear more attractive to teenagers than they would be without such associated imagery.[79]

CAMEL - HUGE NEW HIT, ESPECIALLY WITH THE YOUNGEST KIDS

> The new Joe Camel advertising campaign is "highly effective at reaching young people, especially kids under 13."
> — *Advertising Age*, p. 12, April 27, 1992
>
> "The Old Joe Camel cartoon advertisements are far more successful at marketing Camel cigarettes to children than to adults."
> — DiFranza, J., M.D., et al, "RJR Nabisco's Cartoon Camel Promotes Camel Cigarettes to Children", Journal of the American Medical Assoc., Dec. 11, 1991

The Joe Camel cartoon character contains none of the subtlety of the Marlboro cowboy, but no advertising campaign has ever been more effective in a shorter period of time with youngsters. In 1986, Camel ranked seventh among the youngest age group of smokers, with less than one percent of all children smoking Camels. "Old Joe" was introduced in 1988. One year later, the brand jumped to third

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[76] Id.

[77] Id.

[78] Johnston, L., J. Bachman, and O'Malley. "Monitoring the Future Study." Press release. The University of Michigan, Ann Arbor, July 20, 1995.

[79] Testimony of Dr. William McCarthy, "Advertising of Tobacco Products," Hearings Before the Subcomm. on Health and the Environment of the Comm. on Energy and Commerce, U. S. House of Representatives, 99th Cong., 2d Sess., Ser. No. 99-167 (July 18 and August 1, 1986).

among teenagers.[80]

"In just three years," researchers wrote, "Camel's Old Joe cartoon character had an astounding influence on children's smoking behavior."[81] The proportion of smokers under 18 years of age who chose Camels jumped from 0.5% to 32.8%.[82] Many of these children had never smoked before; and following the introduction of Joe Camel the total number of children who smoked rose significantly.[83] During this same period, Camel's share of the adult market barely moved form its 4 percent level.[84]

One study explored the power of the Joe Camel campaign to penetrate the youth market. The researchers found that children as young as three years old could identify Joe Camel as a symbol for smoking. In fact 30 percent of 3 year olds could recognize the character, while recognition shot up to 91 percent for 6 years olds. In fact, the recognition rates for Joe Camel surpassed the rates for certain children's products, cereals, computers, and network television symbols.[85]

A similar study funded by R.J. Reynolds found that 72 percent of 6 year olds and 52 percent of children between the ages of 3 and 6 could identify Joe Camel.[86] These rates exceeded the recognition rates for Ronald McDonald.[87] The higher recognition rates for Joe Camel are particularly impressive, because Federal Law prohibits cigarette advertisements on television, the most effective medium for reaching youngsters.

"SLIM" CIGARETTES TARGET GIRLS EXTREMELY EFFECTIVELY

Image advertising has worked equally as well with teenage girls. The 1970's and 80's witnessed an explosion of advertising using images linking smoking, especially the new "slim" cigarettes, with tall, thin, elegant, attractive women. The advertising slogans associated "slims" with good health through thinness and weight reduction.

The ads worked. In the 1960's far more teenage boys smoked than teenage girls. In the 1970's, teenage girls were the only population cohort where smoking actually increased. The "initiation" rate (the percentage who started smoking) for girls under age of 18 peaked in 1973 -- about the same time that sales for these brands (Virginia Slims, Silva Thins, and Eve) peaked.[88] Between 1967 and 1973, smoking initiation rates increased around 110 percent for 12-year-old girls, 70 percent for 14-year-old

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[80] "Changes in the Cigarette Brand Preference of Adolescent Smokers, United States, 1989-1993," Morbidity and Mortality Weekly Report, CDC, DHHS, vol. 43, No. 32, pp. 577-581, 1994.

[81] "DiFranza, J., M.D., et al, "RJR Nabisco's Cartoon Camel Promotes Camel Cigarettes to Children," Journal of the American Medical Association, vol. 266 No. 22, pp. 3148-3153, Dec. 11, 1991.

[82] Id.

[83] Institute of Medicine Report, p. 117.

[84] "Changes in the Cigarette Brand Preference of Adolescent Smokers, U.S. 1989-1993," in "Mortality and Morbidity Weekly Report," CDC, DHHS, vol. 43, No. 32, pp. 577-581, 1994.

[85] Fischer, P.M., et al., "Brand Logo Recognition by Children Aged 3 to 6 Years: Mickey Mouse and Old Joe the Camel," Journal of the American Medical Association, vol. 266, No. 22, pp. 3145-3148, 1994.

[86] Mizerski, R., "The Relationship Between Cartoon Trade Character Recognition and Product Category Attitude in Young Children," presented at "Marketing & Public Policy Conference," May 13-14, 1994.

[87] Id.

[88] Pierce, J., L. Lee, and E.R. Gilpin, "Smoking Initiation by Adolescent Girls, 1944 Through 1988," Journal of the American Medical Association, vol. 271, No. 8, pp. 608-611, 1994.

girls, and 55 percent for 16-year-olds.[89]

Today, teenage boys and teenage girls smoke in almost equal numbers.[90]

OUTDOOR ADVERTISING: CRITICAL TO REACHING KIDS

Since the 1970s, the tobacco companies have been the leading advertiser on billboards, with alcohol number two;[91] Of the approximately 3 million billboards in the U.S., 30% were allocated to tobacco and alcohol products.[92] A disproportionate portion of outdoor advertising is targeted at blacks. According to the report by the Institute of Medicine:

> "The industry has saturated African-American neighborhoods with cigarette billboards. Studies reveal that the intensity of cigarette billboard advertising is 2.6 times greater in Columbia, South Carolina in African-American neighborhoods than in white neighborhoods and 3.8 times greater in Baltimore." [93]

Almost 60% of the billboards in black neighborhoods promote cigarettes and alcohol.[94] A 1989 survey in Baltimore found that almost 70% of billboards in African American neighborhoods pushed tobacco or alcoholic beverages.[95]

Several other studies show that billboards touting alcohol and tobacco are likely to turn up disproportionately in poor areas.[96] The Detroit Planning Commission found that 55-58% of billboards in poor neighborhoods advertised tobacco and alcohol, compared with 34-43% in higher income areas.[97]

Tobacco ads were also heavily placed on public transit vehicles, which in turn are disproportionately used and seen by minorities in many cities. In response, many cities large and small have banned these ads on their public transportation systems. (See Appendix for list of cities.)

CIGARETTES AND SPORTS

Tobacco companies also associate their products with athletic activities that appeal to youth through brand name sponsorship of sporting events and billboards in sports stadiums and arenas. Perhaps the most highly recognized of these are the NASCAR "Winston Cup" auto racing series, and the "Virginia Slims" tennis tournaments. Such sponsorship glamorizes tobacco use in the minds of young people, and associates a product that causes death and disease with wholesome, athletic pursuits.

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[89] Id.

[90] 1996 State Tobacco Control Highlights, US DHHS, PHS, CDCP, OSH, p.112, Centers for Disease Control.

[91] Alcohol and Tobacco Advertising on Billboards, Scenic America, November 1989; Fahey, Alison. "Outdoor Sets Limits." *Advertising Age* 61:26 (1990): 57

[92] *Advocacy Institute*. 5 September 1990

[93] Institute of Medicine Report, p.112

[94] Alcohol and Tobacco Advertising on Billboards, Scenic America, November 1989.

[95] Id.

[96] See studies cited in Alcohol and Tobacco Advertising on Billboards, Scenic America, November 1989.

[97] Id.

Placing brand names and logos at highly visible locations during broadcast sporting events was a clever way for the tobacco companies to circumvent the Public Health Cigarette Smoking Act of 1970 which prohibited tv advertising of cigarettes. Tobacco companies receive millions of dollars of free brand name television and radio exposure during these events and use messages in these ads that are particularly effective with children. Recently, however, professional stadiums in the U.S. have responded by banning tobacco ads. (See Appendix for list of stadiums.)

ADVERTISING INSIDE THE STORE

The tobacco companies pay billions of dollars to store owners in "stocking fees" for premium shelf space and for stocking a wide variety of brands, often more brands than are justified by consumer demand. And the amount of money for these in-store promotions has shot up.[98]

These payments result in cigarettes being displayed more prominently and over a wider area than they would otherwise be displayed, making them more readily available and giving the false impression that smoking is no less popular than it was many years ago. This false impression is an important component of the industry's effort to make children believe that it is "cool" to smoke because "everyone is doing it." As a result of the these stocking fees, numerous surveys document than teenagers routinely overestimate the number of their peers who smoke.[99]

TOBACCO COMPANIES' ANSWER TO YOUTH SMOKING: EMPTY PR CAMPAIGNS

Every time the government appears poised to take strong action to reduce tobacco use among children, the cigarette manufacturers announce a new voluntary program which they assert is designed to discourage children from smoking. In the last 10 years alone, they have rolled out at major press events no less than six such public relations campaigns.

"Helping Youth Decide"

In 1986 the Tobacco Institute announced before a Congressional committee considering restrictions on tobacco advertising that the industry had just initiated a major new program called "Helping Youth Decide" to help parents and children make sound decisions about tobacco.[100] The proposed advertising restrictions were subsequently dropped.

"It's the Law"

In 1990 the Tobacco Institute announced a new program entitled "It's The Law" as an educational program through the distribution of materials to merchants. Once again the program had no measurable impact other than to fend off government action.

"Support the Law, It Works"

Recently R.J. Reynolds sponsored a similar program entitled "Support the Law, It Works."

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[98] Blum, A., M.D., and Myers, M., J.D., "Tobacco Marketing and Promotion," Tobacco Use: An American Crisis.

[99] See Botvin, G., et al., "Smoking Behavior of Adolescents Exposed to Cigarette Advertising," Public Health Reports, vol. 108, No. 2, pp. 217-224, 1993; Sherman, S.J., et al., "The False Consensus Effect in Estimates of Smoking Prevalence: Underlying Mechanisms," Personality and Social Psychology Bulletin, vol. 9, No. 2, pp. 197-207, 1983.

[100] Testimony of Horace Kornegay and Jolly Ann Davidson, Hearing before the Subcommittee on Health and the Environment of the Energy and Commerce Committee, U.S. House of Representatives, 99th Cong., 2d Sess. (August 1, 1986).

AMERICAN CANCER SOCIETY NATIONAL PUBLIC ISSUES OFFICE

CITIES AND STATES BANNING OR RESTRICTING TOBACCO ADVERTISING

CITY/STATE	TYPE OF ADVERTISING BAN OR RESTRICTION
Albany, NY	Public transportation
Baltimore	Certain forms of billboards, signboards, posters and other advertising in "publicly visible locations"
Boston	Public transportation in Boston and Massachusetts Bay Transportation Authority
California	- Statewide: State-owned or state-occupied buildings. - Alameda and Contra County Transit District - Bay Area Rapid Transit (San Francisco region) - Santa Clara County Transit
Chicago	Public transportation
Cincinnati	Billboards and ads on city property
Denver	Regional Transportation District
Kentucky	Billboards within 500 feet of schools and churches
King County, WA (Seattle area)	- All facilities owned or leased by the county - The Metro Transit bus system in Seattle
Long Beach, CA	Billboards
Madison, WI	Public transportation
Massachusetts	- Billboards in seven towns - Ads on government property in 16 towns - Point-of-Purchase Ads in two towns - Public transportation in Springfield and eight towns
Minnesota	Minnesota Valley Transit Authority
New York City	Subways, buses, airports (LaGuardia, JFK and Newark) and facilities (bus station, PATH commuter rail station) controlled by the Port Authority or the Metropolitan Transit Authority; and phone booths
Portland, OR	Tri-County Metropolitan Transportation District
San Francisco	Ads on city property
Syracuse, NY	Public transportation
Texas	Billboards within 500 feet of schools and churches
Utah	Statewide ban on billboards, buses, street cars, street car signs, placards or other objects or places of display

Transit-related actions as of August 11, 1994; other city and state actions as of March 6, 1996.

AMERICAN CANCER SOCIETY NATIONAL PUBLIC ISSUES OFFICE

STADIUMS AND ARENAS THAT BAN TOBACCO ADVERTISEMENTS
(As of Oct. 1, 1995)

Baltimore	Oriole Park at Camden Yards
Boston	Fenway Park
Chicago	Wrigley Field
Cleveland	Indians Park
Colorado (Rockies)	Coors Field
Houston	Astrodome
Kansas City	Royals Stadium
Los Angeles	Dodgers Stadium
Minnesota	Metrodome
Montreal	Olympic Stadium
Oakland	Coliseum
Philadelphia	Veterans Stadium
Pittsburgh	Three Rivers Stadium
Phoenix	America West Arena
San Diego	Jack Murphy Stadium
Seattle	Kingdome
St. Louis	Busch Stadium
Texas (Rangers)	The Ballpark in Arlington
Toronto	SkyDome
Salt Lake City	Delta Center

Also:

The National Hockey League bans tobacco ads on the boards of all rinks.
All Olympic Stadiums, including Atlanta, ban tobacco advertising.

"Action Against Access"
In response to the recent FDA proposal to restrict youth access to tobacco, Philip Morris announced in 1996 via full page ads in major newspapers its new program entitled "Action Against Access."

"We Card"
The latest "voluntary" effort by the industry, "We Card," is being promoted by a coalition of retailers that work closely with the tobacco companies.

The 1994 Working Group of State Attorneys General on tobacco issues found no evidence that these tobacco industry sponsored programs have been effective at all in reducing teen smoking.[101] To the contrary, youth smoking has increased 30% in the 1990's.[102]

ADVERTISING RESTRICTIONS IMPOSED BY OTHER GOVERNMENTS HAVE REDUCED SMOKING AMONG YOUTH

There are many direct quantitative studies of the relationship between advertising and tobacco use and of the effects of advertising restrictions and bans on consumption. These studies also provide evidence confirming advertising's affects on consumption and the effectiveness of advertising restrictions on reducing youth smoking.

A large, multinational study commissioned by the New Zealand Government found that the greater a government's degree of control over tobacco promotion, the greater the annual average fall in tobacco consumption and in the rate of decrease of smoking among young people.[103]

The report found that in countries where advertising has been totally banned or severely restricted, the percentage of young people who smoke has decreased more rapidly than in countries where tobacco promotion has been less restricted.[104]

The report concluded that there appeared to be a greater decrease in smoking uptake in those countries with the most stringent measures compared with those countries where advertising had not been affected.[105]

Another study conducted by the Chief Economic Advisor, Department of Health, of the Government of Great Britain found that restrictions on advertising tend to decrease tobacco use beyond what would have occurred in the absence of such restrictions.[106] An in-depth analysis of various forms of advertising restrictions in four Western European countries showed that such restrictions, including bans on some or

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[101] See "No Sale: Youth, Tobacco and Responsible Retailing, "Findings and Recommendations of a Working Group of State Attorneys General, December 1994; DiFranza and Brown, "The Tobacco Institute's 'It's the Law' Campaign: Has It Halted Illegal Sales to Children? American Journal of Public Health 1992, 82 (9): 1271-1272.

[102] The University of Michigan, Monitoring the Future Study, Ann Arbor, MI, Survey Research Center, 1995.

[103] "Health or Tobacco--An End to Tobacco Advertising and Promotion," Toxic Substances Board Wellington, New Zealand, May 1989.

[104] Id.

[105] Id.

[106] Smee, C., Effect of Tobacco Advertising on Tobacco Consumption--A and Operational Research Division, London. 1992. (Draft).

all forms of advertising, led to a reduction in consumption.[107]

POLICYMAKERS MUST RESPOND

After reviewing the mountain of evidence developed by independent researchers and reinforced by internal industry documents, one can not help but conclude that the time for policymakers to take action is now. So concluded the Institute of Medicine in its comprehensive report on youth and tobacco:

> [T]he substantial convergent evidence that advertising and promotion increases tobacco use by youths is impressive and, in the Committee's view, provides a strong basis for legal regulation."[108]

Attributions: This report is based in large part on the preamble and cited studies in "Regulations Restricting the Sales and Distribution of Cigarettes and Smokeless Tobacco Products to Protect Children and Adolescents," Department of Health and Human Services, Food and Drug Administration, 60 Federal Register 41314-41451 (August 11, 1995), and on the comments filed thereto by the American Heart Association, the American Lung Association and the American Cancer Society, United as the Coalition on Smoking or Health, January 2, 1996.

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[107] Id.

[108] Institute of Medicine Report, p. 130.

Tobacco Control 1997;6:122–127

Trends in adolescent smoking initiation in the United States: is tobacco marketing an influence?

Elizabeth A Gilpin, John P Pierce

Abstract

***Objective*—To compare recent trends in smoking initiation by adolescents with trends in inflation-adjusted cigarette pricing and tobacco marketing expenditures.**

***Design*—We examined smoking initiation trends in demographic subgroups of adolescents aged 14–17 years during the decade 1979–1989. Data on cigarette pricing and tobacco marketing expenditures were adjusted for inflation and plotted over this same period.**

***Setting*—Large population surveys, United States.**

***Subjects*—140 975 ever-smokers aged 17–38 when surveyed in 1992 or 1993, who reported on age of smoking initiation during the decade 1979–1989.**

***Main outcome measure*—Initiation rate was calculated as the number in an age group who reported starting to smoke regularly in a year, divided by the number of never-smokers at the start of the year. Trends were evaluated by linear and quadratic models.**

***Results*—From 1979 to 1984, adolescent initiation rates decreased, but increased thereafter, particularly among males, whites, and those who, as adults, reported never having graduated from high school. Cigarette price increased throughout the decade as did tobacco marketing expenditures, especially for coupons, value-added items, and promotional allowances.**

***Conclusion*—Availability of cheaper cigarettes is not likely to be a cause of increased smoking initiation by adolescents. Although other influences cannot be ruled out, we suspect that the expanded tobacco marketing budget, with its increased emphasis on tactics that may be particularly pertinent to young people, affected adolescent initiation rates.**

(*Tobacco Control* 1997;6:122–127)

Keywords: adolescents, smoking initiation, tobacco marketing

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Introduction

The slow rate of decline in smoking prevalence in developed countries is strongly related to the persistent recruitment of new smokers.[1–4] Over the past 30 years, the public health movement has been very successful in convincing adults not to start smoking, but adolescents remain a challenge.[3 5 6] Public health programmes designed to influence young people not to start smoking must play against opposing influences, such as the more than $6 billion that the tobacco industry spent in 1993 to market its products in the United States.[7]

In the context of public health action to restrict the tobacco industry's marketing activities, it would be useful to investigate the possible association between increased tobacco marketing and increased smoking initiation by adolescents. Such an investigation requires appropriate surveillance of adolescent smoking. The most common measure of smoking activity by adolescents relies on self-reporting the smoking of a cigarette in the past month.[3] Both positive and negative responses pose interpretative difficulties with respect to the rate of adolescent smoking. A young person who eventually becomes an addicted smoker may be in a pre-experimentation stage or in an intermittent period of abstinence when surveyed, or an individual labelled as a smoker may be one of the approximately 30% of new experimenters who do not proceed to becoming addicted smokers.[8] Complicating this issue is the tendency (in some settings) for adolescents to exaggerate or deny any cigarette use.

In the light of these difficulties, we have developed a measure of the incidence of smoking initiation that is based on recall by adults who became established regular smokers.[5 9 10] This measure, computed from the age at which smokers or former smokers recall having started smoking regularly, appears to be insensitive to the age of the respondent when surveyed,[5] and has proved useful for examining age- and gender-specific trends over time in smoking initiation among both adults and adolescents.[5 6 9 10] From this work, we determined that, in 1980, initiation of regular smoking was greatest among adolescents aged 14–17 years,[9] or alternatively, that this age range is when most smokers start smoking regularly.

This study uses more recent data to examine trends in rates of smoking initiation among demographic subgroups of adolescents, aged 14–17 years, throughout the 1980s. As in another report documenting an increase in initiation for this group as a whole,[6] initiation rates were calculated from the continuous Current Population Survey, which included a smoking supplement during selected months in 1992 and 1993. In addition, we present trends over this period in inflation-adjusted cigarette pricing and in the tobacco industry's budget for marketing. We then comment on the temporal association of these trends.

Methods

DATA SOURCES

Initiation of regular smoking

We combined data from three recent Current Population Surveys (September 1992, January 1993, and May 1993) that contained a special supplement on tobacco use. The Current Population Surveys are continuously conducted by the US Census Bureau for labour force monitoring; they cover the civilian, non-institutionalised population aged 15 years and older.[11] The Current Population Survey typically surveyed about 56 000 households each month, in which interviews were conducted with a knowledgeable household member who responded for all eligible household members. About a quarter of all interviews were conducted in person; the remainder were conducted by telephone. For the tobacco use supplement, the Current Population Survey included intensive telephone follow-up efforts to maximise the proportion of respondents who completed the supplement. Response rates for the tobacco use supplement were 88.5%, 89.1%, and 86.1% for September, January, and May, respectively.

Supplement respondents were asked, "Have you smoked at least 100 cigarettes in your entire life?" Those who responded "yes" were asked, "How old were you when you started smoking cigarettes fairly regularly?" We restricted our present analysis to self-respondents who were 17–38 years old when surveyed (n = 140 975). Such people would have been in the age range 14–21 years at some time during the decade 1979 to 1989.

The public-use data tape for these three surveys includes a weighting variable for self-respondents which ensures that estimates from the combined sample will be representative of the US population by gender, age, race/ethnicity, and region. Subjects were identified only by a number on the public-use tape, so there is no way to link responses to individuals.

Cigarette price and tobacco marketing data

The Tobacco Institute publishes the weighted average price per pack of cigarettes at the state level and for the nation, as of 1 November each year.[12]

Data on tobacco marketing expenditures are from the US Federal Trade Commission (FTC).[7] Tobacco companies are required to report their expenditures on an annual basis, and the FTC reports categories for different types of expenditures: *newspapers, magazines, outdoor, transit, point of sale, promotional allowances, sampling distribution, specialty item distribution, public entertainment,* and *all other.* Starting in 1988, the *coupons and retail value added* category was added. Promotional programmes initiated that year by the tobacco industry allow individuals to redeem coupons obtained from cigarette purchases for specialty items. The value-added aspect of the new line item refers to multiple pack offers (buy two, get one free) and gifts of items, such as key chains or lighters with the purchase of cigarettes at the point of sale. Inspection of the category totals reported in 1987 and earlier indicated that this new category encompassed most of what was previously included in the *specialty item distribution* and *all other* categories, as the expenditures recorded for these categories dropped dramatically in 1988.

For our analysis, we combined the amounts for *newspapers, magazines, outdoor* (billboards), and *transit* (signs in and around public transit) into a category for traditional *print media.* We also examined the *promotional allowances* category, which includes incentives given to wholesalers and retailers to stock and promote a particular product, including trade allowances (free goods or price reductions in return for buying a specific quantity of goods) and slotting allowances (fees to encourage retailers to carry a new product or allocate premium shelf space to a given product). Finally, we combined the categories for *specialty item distribution,* which refers to items such as teeshirts, caps, and sporting equipment that are imprinted with a brand's logo, *coupons and retail value added,* and *all other* into a category designated *promotional items.*

Both the price of a pack of cigarettes and the total tobacco industry marketing expenditures were adjusted to 1989 dollars by using the annual Consumer Price Index (CPI) from the Bureau of Labor Statistics.[13]

CALCULATION OF INITIATION RATES

As described in previous research,[5 9 10] we reconstructed each respondent's smoking status for each year, starting with 1979 through 1989, from the age at which an ever-smoker reported starting to smoke regularly. Never-smokers were considered to be at risk to start smoking throughout the period, and ever-smokers were at risk only through the year in which they started. The denominator for the initiation rate for a demographic group of interest was the sum of the weights for those in the group at risk to start smoking in a given year. The numerator was the sum of the weights of those whose reported age of starting to smoke indicated they started in that year. Previously, we have shown that the age of the respondent when surveyed had no apparent effect on the age the respondent reported for when regular smoking commenced.[5] We computed initiation rates for 14–17-year-old males and females, for blacks and whites, and according to attained educational level. For educational level, we did not compute initiation rates for 1989, because some respondents were still high-school seniors when surveyed, and it was not known whether they would graduate or go on to college.

STATISTICAL ANALYSIS

The initiation rates were multiplied by the actual sample size at a given year to determine a pseudo-numerator, and then exact 95% binomial confidence intervals were computed in the usual manner.[14]

When we examined the plot of initiation rates over the decade for 14–17-year-olds, it appeared that a simple linear fit would not

adequately represent the data; there appeared to be an inflection point near the middle of the decade. Thus, we fitted both linear and quadratic models to the initiation rates. We weighted each rate by the inverse of its standard error in these analyses, and plotted the model (linear or quadratic) that best fitted the data together with the yearly initiation rates and their 95% confidence intervals. In the text below, we report probability values for determining whether the relevant model coefficients are different from zero.

Results

INITIATION RATE TRENDS IN DEMOGRAPHIC SUBGROUPS

A pattern of a decline in the first half of the decade (which was reversed in the second half) was observed both in males, and to a lesser extent, in females (figure 1). The quadratic fit for males showed an improvement (P = 0.020) compared with the linear fit (P = 0.103). For females, neither the linear model (P = 0.943) nor the quadratic one (P = 0.102) produced significant coefficients, although the quadratic model came closer. By 1989, the incidence rate among males was 5.8% compared with a rate of 5.3% in females.

Initiation was highest among high school dropouts and lowest among those who eventually attended college (figure 2). Quadratic models performed better than linear ones for all three educational groups. For high-school graduates, however, neither model produced significant regression coefficients. For dropouts, the significance of the linear coefficient in the linear model was P = 0.562, and for the quadratic term of the quadratic model, it was P = 0.035. For high-school graduates, these significance levels were P = 0.782 and P = 0.184, and for those with some college they were P = 0.081 and P = 0.014. In 1988, the rate of initiation was 9.9% for those who did not graduate from high school, 6.9% for high-school graduates reporting no college, and 3.7% for those reporting at least some college.

Initiation in black adolescents is considerably lower than in white adolescents (figure 3). For whites, initiation first decreased and later increased, with the quadratic model (P = 0.023) showing a better fit than the linear one (P = 0.092). For blacks, however, the linear model was superior (P = 0.014 compared with P = 0.092 for the quadratic). In 1989, the initiation rate for whites was 6.0%, in comparison with only 2.2% for blacks.

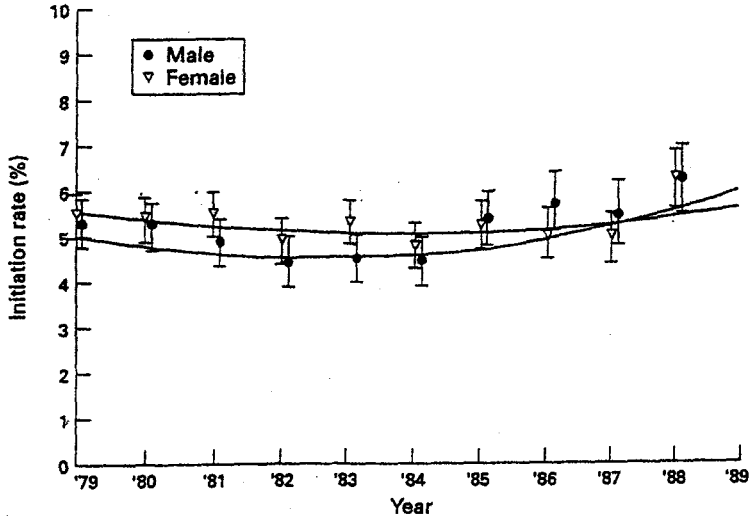


Figure 1 Initiation rates in male and female adolescents aged 14–17 years.

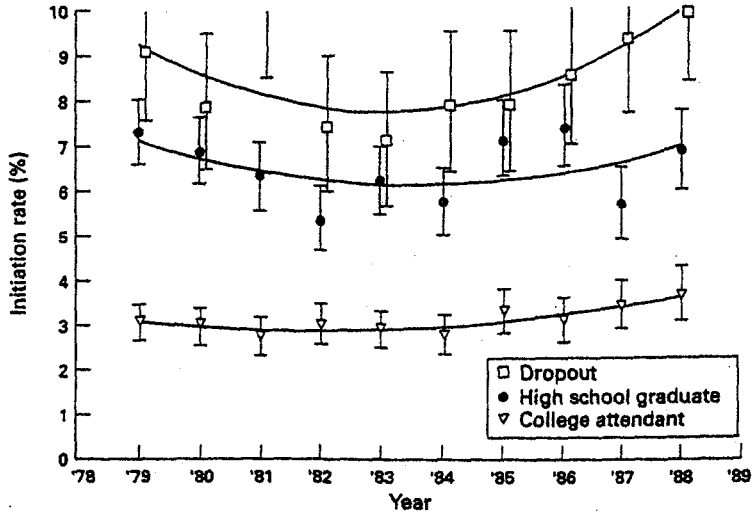


Figure 2 Initiation rates in respondents reporting less than 12 years of education, 12 years with no college education, and more than 12 years with some college education as adults. Rates are for the adolescent years (ages 14–17 years) of these adult respondents.

CIGARETTE PRICE TREND

Figure 4 shows the average price paid for a pack of cigarettes during the decade. The prices plotted have been adjusted by the CPI. Over the decade, the adjusted price per pack (in 1989 dollars) rose from $1.02 to $1.44, which was an increase of 40%. From 1979 to 1984, the percentage increase was 14%, and from 1984 to 1989, it was 23%.

COMPONENTS OF TOBACCO MARKETING

The type of marketing activity emphasised as a percentage of the total advertising budget changed markedly during the decade (figure 5). In 1979, almost two thirds of tobacco marketing expenditures paid for *print media*. By 1989, less than 25% of the total budget was allocated to that category. The percentage of the budget allocated to promotional allowances increased from 12.7% of the total in 1979 to 27.6% in 1989. From 1979 to 1984, the percentage increase in the portion of the budget devoted to these activities was 38.0%, and this accelerated to 59.5% during the second half of the decade from 1984 to 1989. The combined categories we designate as *promotional items* increased from 10.2% of the total in 1979 to 36.3% of the total in 1989. The percentage increase was 100% from 1979 to 1984 and 77.9% from 1984 to 1989.

MARKETING AND INITIATION

Figure 6 (right axis) shows the total marketing budget. From 1979 to 1984 the percentage increase in the total budget was 35.2%, compared with 44.6% for the period from 1984 to 1989, demonstrating an acceleration in total expenditures even after adjustment for

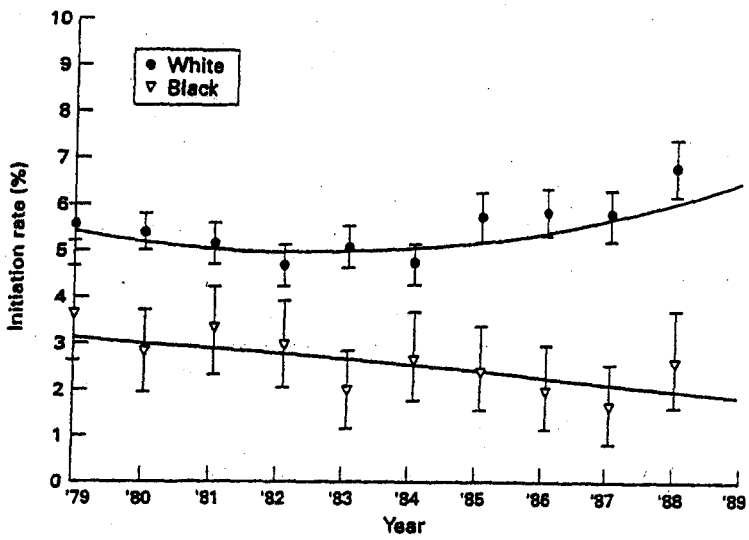


Figure 3 Initiation rates in white and black respondents aged 14–17 years.

inflation. The left axis of figure 6 shows the overall initiation among adolescents 14–17 years. Overall, the quadratic model fits the data better (P = 0.020) than the linear one (P = 0.397). By 1989, the initiation rate for adolescents reached 5.5%, which was up from its lowest rate of 4.6% in 1982 and 1984; this was a nearly 20% increase compared with the 15% decline observed in the first part of the decade.

Discussion

In the early 1980s, the rates of smoking initiation among both adolescents (aged 14–17 years) and young adults (aged 18–21 years) were decreasing.[6] However, in mid-decade the downward trend was arrested only in adolescents,[6] suggesting some change in the external influences for starting to smoke that may be specifically meaningful to adolescents, but not to young adults. Our analysis shows that the increase in initiation was particularly marked among male adolescents, white adolescents, and those who eventually did not graduate from high school.

There are a number of external factors that could potentially account for the increased initiation in adolescents. Some of these are difficult to measure, such as enforcement of laws regarding sales of cigarettes to minors, changes in the social image of smoking derived from peers, or changes in community norms regarding smoking, including preventive education. Certainly during the 1979 to 1989 decade, ever-increasing non-smoker activism and associated public education and awareness would have been expected to produce a downward trend in smoking initiation, as observed in young adults.[6] It is not known whether it was these messages or other cultural influences that contributed to the continuing decline of smoking initiation among black adolescents. Considerably lower smoking rates among black adolescents compared with whites have been documented previously.[3,15] Rates of use of street drugs and alcohol among high-school seniors declined during the decade, especially between 1985 and 1989.[16] The same study showed that a decline in the prevalence of current smoking (use in the past 30 days) observed in the very early part of the decade was arrested in the latter part.[16] In our study, we present data regarding cigarette price and tobacco marketing expenditures, and we comment below on how these factors might influence smoking uptake.

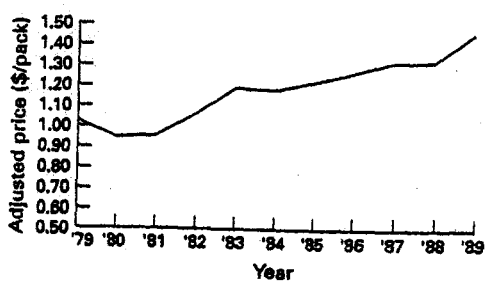


Figure 4 Price per pack of cigarettes adjusted by Consumer Price Index (CPI) to 1989 dollars.

Some data indicate that adolescents may be much more sensitive to pricing than young adults, with a price elasticity as high as −1.2; that is, each 10% increase in real cigarette price will be associated with a 12% decrease in adolescent smoking prevalence.[2,17,18] Thus, we could expect that the upswing in adolescent-specific initiation might be temporally associated with a downturn in cigarette price. However, as the data of figure 5 indicate, cigarette price (adjusted for inflation) increased throughout the decade, which should have driven adolescent initiation rates lower, assuming they bought their own cigarettes. Although experimentation usually occurs with cigarettes obtained from friends, or perhaps pilfered from adults, by the time adolescents smoke more than a few cigarettes a day, they are probably buying their own. A recent survey of 13–16-year-olds, who are under the legal age for buying cigarettes in the United States, showed that 88% of daily smokers brought their own cigarettes, compared with only 41% of those who had smoked in the past 30 days, but not daily.[19]

Perhaps adolescents had different purchase practices in the early 1980s, or perhaps their disposable income has increased. Low-priced generic cigarettes were introduced into the market in 1985, so it is possible that adolescents were strongly attracted to these alternatives to the premium brands. However, a recent analysis has demonstrated that adolescents and young adults preferentially smoke premium cigarette brands, and that generic cigarettes are more popular among smokers over the age of 45 years, particularly those with high levels of consumption.[20] Thus, it is unlikely that the price of cigarettes can explain the turnaround in smoking initiation among adolescents that we have documented.

Other data associate tobacco marketing activity with adolescent smoking uptake.[9,21–24] During periods when the tobacco industry sought to broaden their market by targeting particular groups with vigorous and novel marketing campaigns, initiation among youth increased. The first major cigarette marketing campaign of this century occurred in the 1910s, when RJ Reynolds launched the Camel

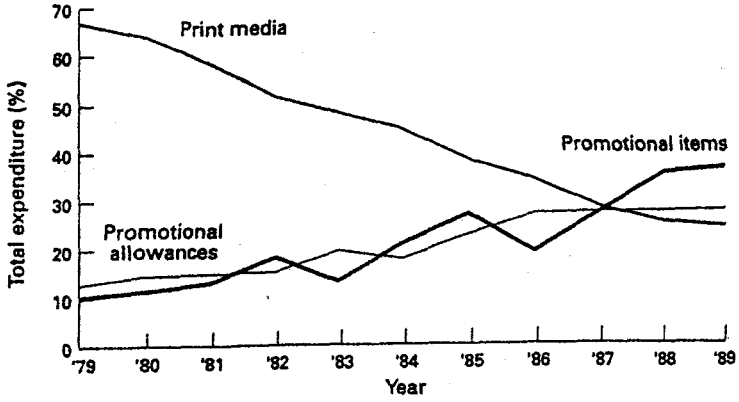


Figure 5 Percentage of total annual expenditures for different components of the tobacco industry marketing budget.

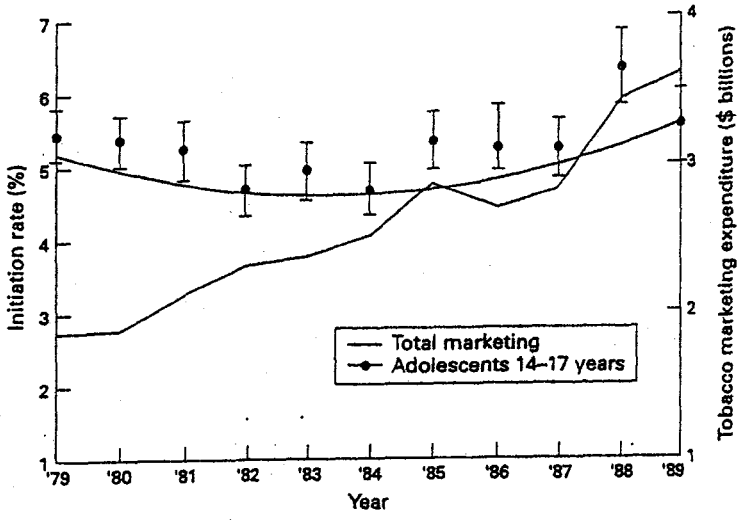


Figure 6 Left axis: initiation rates in adolescents aged 14–17 years; right axis: total tobacco marketing expenditures adjusted by Consumer Price Index (CPI) to 1989 dollars.

brand with an unprecedented marketing campaign.[25] The brand quickly gained market leadership as sales soared,[25] and initiation increased among both adolescent and young adult males.[24] Females did not begin to take up smoking until the 1920s, when Lucky Strike and Chesterfield brands were pitched to women with such slogans as "Reach for a Lucky instead of a sweet" and "Blow some my way". As sales of these brands increased,[26] so did initiation in adolescent and young adult females, but not males.[24]

Another period with a temporal association between increase in smoking initiation and tobacco marketing occurred between 1968 and 1973, when tobacco companies launched major advertising campaigns to introduce various new brands of cigarettes specially for women.[10 27] This time, however, initiation increased only among adolescent girls, whereas initiation in young adult females actually decreased. The advertising effect appears specific to adolescent females; young adult females apparently heeded the warnings about the health consequences of smoking.[5 24] The tobacco industry commented that this correlation simply reflected the *Zeitgeist* of women's liberation, "the time when bra-burning women were abandoning traditional roles".[28]

During the 1980s, the tobacco industry both increased the amount of its marketing budget and radically changed its marketing approaches (figures 5 and 6). The increase in the budget began shortly after the federal ban on cigarette advertising in the electronic media was implemented in 1971. But most of the increase occurred after 1979. The CPI-adjusted percentage increase in the total budget from 1970 to 1978 was 44% or a yearly average of 5.5%; from 1979 to 1989, it was 95.5% or a yearly average of 9.5%. The decline in smoking among adolescents in the late 1970s and early 1980s[3 16] might have been even greater if the industry had not increased its marketing expenditures. Given the history outlined above, it would be surprising if the acceleration in the rate of expenditures observed in the 1980s did not eventually contribute to the reversal of the downward trend. When the data become available, it is very likely that a further increase in smoking initiation by adolescents will be observed, and will corroborate recent reports documenting increased smoking prevalence.[16]

Changing marketing strategies also may have played a role. Throughout the decade 1979 to 1989, less emphasis was placed on print media. An interesting area for future research would be to characterise the placement of such advertisements. For example, are the remaining elaborate advertisements (multiple page or pop-up advertisements) more likely to appear in magazines with a substantial youth readership? The increased emphasis on promotional allowances, particularly in convenience stores where young children often purchase sweets, ice cream and soft drinks, delivers the advertising message to these young customers even before adolescence. Finally, the promotional item component, especially coupon redemption (which is based on the airline industry's successful frequent flyer marketing programme), has had an impact on youth.[29 30] These programmes have escalated considerably since 1989. A recent study showed that 10.6% of adolescents 12–17 years of age reported possession of a promotional item, and 35% either had an item, had collected coupons, or had a catalogue for such items.[29] In another school survey, 39.1% of high-school students had heard of Camel Cash, 8.6% had used the cash, and 5.2% indicated that they had bought cigarettes specifically to obtain the cash.[30] It is unlikely that the industry would devote so much of its marketing resources to these activities if it did not attract new smokers.

The question of why adolescents appear to be vulnerable to tobacco marketing tactics when adults (even young adults) are not may be related to the developmental stages that characterise adolescence.[3] Adolescents sometimes seek to assert their independence with a symbol, such as a cigarette, which is associated with adulthood. Possession of a promotional item with a brand logo also provides such a symbol. In addition, adolescents are continuously seeking to define themselves as individuals and trying on various images. Tobacco

advertising and promotions provide a multitude of such images: the tough independent, the slim sophisticate, the "party animal", and the sportsman or athlete (association of tobacco with the sponsorship of sporting events). Adolescents tend to live for the moment, to be self-indulgent, and to think of themselves as invulnerable; consequently, health warnings are not heeded. Tobacco companies have carried out considerable research on the young, and they have carefully characterised the traits mentioned above and the best methods for exploiting them.[3 31]

The unprecedented scale of the recent expenditures for tobacco marketing and the increased emphasis on tactics that are particularly appealing to youth should be cause for national concern. Data from surveys conducted in California in 1993 and 1994 indicate that 12–17-year-old adolescents show as much interest in possessing promotional items as 18–24-year-old adults, although fewer adolescents actually own them.[32] It is noteworthy that boys, white adolescents and those who report that their school performance is below average express more interest in having these items, and these groups are more likely to own them than girls, minorities, or those who rate their school performance as average or above.[32] These findings, together with the historical data[10 21–24] and the evidence from the present study, indicate that hypothesising a causal association between current tobacco marketing practices and the upward trends in adolescent initiation is reasonable.

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Are Adolescents Receptive to Current Sales Promotion Practices of the Tobacco Industry?[1]

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Background. **The tobacco industry increased the portion of its marketing budget for sales promotion to $2.5 billion in 1993. Although it claims not to target those under age 18 years, it is important to determine the extent to which adolescents are affected as participation may lead to smoking initiation.**

Methods. **California population surveys, conducted in 1993 among youth ages 12–17 years ($N = 5,531$) and in 1994 among both youth ($N = 1,735$) and adults ($N = 4,170$), asked questions regarding possession and willingness to use promotional items.**

Results. **In 1994, young adults (18–24 years) were the most likely to *possess* a promotional item (27.5 ± 4.1, ± 95% confidence limit). However, willingness to *use* an item was highest among those ages 15–17 years (35.4 ± 3.4%) and was also high among those ages 12–14 years (24.4 ± 2.7%). Among youth, ownership or willingness to use promotional items was more likely for boys, whites, those reporting below average school performance, and those smoking or susceptible to smoking. Youth ownership of promotional items increased from 1993 to 1994, as did the frequency of their obtaining items from coupons.**

Conclusions. **Promotional marketing undertaken by the tobacco industry was effective in capturing the interest of adolescents, although actual acquisition was highest among young adults. The rapidly increasing interest in tobacco promotional items from 1993 to 1994 may soon translate into increased adolescent smoking rates.** © 1997 Academic Press

Key Words: **adolescent smoking uptake; tobacco marketing; sales promotion.**

INTRODUCTION

Since cigarette advertising was banned on broadcast media in 1971, the tobacco industry has increased the size of the marketing budget almost exponentially: Between 1992 and 1993 it increased by $800 million to a total of over $6 billion [*1*]. This dramatic change in cigarette marketing is also apparent in a shift of expenditures to different marketing tactics. In the early 1970s almost two-thirds of tobacco marketing budgets were spent on traditional advertising in print media, on billboards, and in and around mass transit. By 1993, well over three-quarters of marketing expenditures focused on activities that included direct sales promotion. In 1993, the largest expenditure was in the category classified by the Federal Trade Commission as coupon and retail value added [*1*]. This category includes cents-off coupons, multiple pack price breaks, and retail value added offers of specialty items through coupon redemption and at the point of sale. Expenditures for these sales promotion activities increased from approximately $426 million in 1984, or 20% of the total marketing budget, to $2.5 billion in 1993, representing 42% of the total [*1*].

Standard advertising and sales promotion practices work in tandem: Advertising primarily builds brand image and promotes brand loyalty, and sales promotion encourages product trial and increases purchase volume [*2–7*]. The sales promotion arsenal of the tobacco industry and others [*3,4*] has long included positioning products in shops to be psychologically appealing and readily available, product giveaways, and distribution of specialty items such as clothing, accessories, and gear with brand names and logos. An item with a brand logo provides a walking advertisement. In the case of tobacco products, the advertisement is without a health warning [*2,8*] and conveys the idea that smoking is an acceptable activity more prevalent than it actually is [*2,9*]. Redemption of coupons for such items not only increases sales to obtain the coupons but creates a vast database for further direct marketing activities [*5,10*]. People who redeem coupons or send in for free samples must indicate that they are old enough to legally purchase cigarettes, but there is no mechanism to verify their ages.

The increased emphasis on these marketing strategies by the tobacco industry in recent years requires

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careful monitoring by the public health community interested in preventing smoking uptake among children and adolescents. The tobacco industry maintains that it targets its marketing activities only to adults. However, if the content and emphasis of most marketing is any indication, the intended target is the youthful groups of the population [*11,12*]. The models and settings in most cigarette marketing emphasize youth and youthful pursuits. Phillip Morris appears to have retired the seasoned Marlboro man in favor of the Adventure Team featured as part of their Marlboro Miles coupon redemption scheme modeled after the frequent flier programs of the airline industry [*8*]. R.J. Reynolds specifically pitched its new brand of cigarettes, Dakota, to young women 18 to 20 years of age (Promotional Marketing, Inc., Dakota field marketing concepts, September 21, 1989) [*13*]. This marketing campaign followed its successful campaign for the Camel brand featuring the cartoon character Joe Camel, who gained wide recognition even among young children [*14*]. A recently leaked confidential R.J. Reynolds memorandum from 1971 indicates that the "age 21 and under" market is the market it must capture. The memorandum outlines characteristics of the "beginning" smoker that it might "exploit" in future product development and marketing (Teague CE Jr. Confidential research planning memorandum on some thoughts about new brands of cigarettes for the youth market. R.J. Reynolds, 1973).

Only a longitudinal study that follows adolescents receptive to current tobacco promotional practices can determine whether such receptivity leads to future tobacco use. In this article we use data from cross-sectional random population surveys conducted in California in 1993 and 1994 to identify the extent to which demographic subgroups of youth and adults are receptive to these promotional practices and whether receptivity is changing over time. We also characterize the types of promotional items received.

METHODS

Data Sources

As part of the ongoing evaluation of the California Tobacco Control Program [*15*], two random-digit-dialed telephone surveys were conducted in California, one in 1993 and another in 1994. For the 1993 survey, Westat, Inc., under our supervision, conducted a 5-min screener call to an adult in each of 30,910 randomly selected households in California. This survey was in the field from January to May 1993. The selection process and weighting procedure ensured that the resulting sample was representative of 18 regions in the state [*16*]. Enumeration of household membership identified 6,892 youth between the ages of 12 and 17 years. Interviewers sought verbal permission from a parent or guardian to interview each of these minors and completed interviews were obtained with 5,531 of them, or 80.6% of those attempted. The survey yielded a household response rate of 70.0% when calculated using the Council of American Survey Research Organizations (CASRO) guidelines, which assume that a portion of telephone numbers that could not be reached because of busy signals or unanswered rings represents eligible households. The product of the adolescent response rate and the household response rate is the CASRO response rate for the youth survey, 56.4%. Although the adult providing the screener information was interviewed, the interview was brief and did not include questions on tobacco marketing and promotion. This survey is referred to as the 1993 California Tobacco Survey (1993 CTS). Details of the survey methodology are presented elsewhere [*16*].

The 1994 survey was conducted by the California Department of Health Services, Cancer Surveillance Section. For the adult component of this survey, approximately 550 randomly selected households were contacted each month of 1994. After household members were enumerated, one adult was randomly selected for interview. The sample selection and weighting procedures allowed population estimates to be calculated, and details of the survey design and methodology are available in a technical report [*17*]. In 1994, completed interviews were obtained for 4,170 adults, representing a CASRO response rate of 60.0%.

The California Department of Health Services used a separate random-digit-dialed sample for their 1994 youth survey. Approximately 1,050 households were contacted and enumerated in each of the 12 months. If there was more than one youth between the ages of 12 and 17 years in a household, one was randomly selected for interview after parental approval was obtained. Completed interviews were obtained from 1,735 youth, 70.2% of those selected, for a CASRO response rate of 46.0%. As with the 1994 adult survey, the sampling and weighting procedures allowed population estimates to be calculated. Further details concerning the 1994 youth survey can be obtained from the California Department of Health Services Surveillance Section (see Acknowledgments). The adult and youth surveys are collectively referred to in this study as the 1994 California Department of Health Services Survey (1994 CDHSS).

Questions about Promotional Items

Each of these surveys asked respondents the following: "Some tobacco companies provide promotional items to the public that you can buy or receive for free. Have you ever bought or received for free any product which promotes a tobacco brand or was distributed by a tobacco company?" Those answering yes were then

asked what types of products they had received. The choices were (1) T-shirt, sunglasses, cap, jacket, shorts, sweatshirt or sweatpants, headband, scarf, beach towel, tube socks; (2) cigarette lighter; (3) mug or can cooler; (4) poker dice, cassette tape, camera or film, flashlight, watch; (5) radio, headphones; (6) poster; (7) sports bag, inflatable raft; and (8) other. The first 3 items mentioned were analyzed since the 1993 CTS allowed 3 responses and the 1994 CDHSS allowed 10. Next, those who had received an item were asked, "What tobacco brand provided the *most recent* item that you bought or received for free?" Finally, these respondents were asked "How did you obtain the *most recent* promotion item that you have?" Choices were: (1) handout at fair, festival, or event, (2) gift from friend or relative, (3) prize, (4) from sending in coupons or parts of a tobacco package, (5) found, (6) as part of a cigarette purchase, or (7) other. Respondents were also asked, "Do you think you would *ever* use a tobacco industry promotional item such as a T-shirt?"

Demographics

We examine two age groups of adolescents (12–14 and 15–17 years) and three age groups of adults (18–24, 25–34, and 35+ years). Gender was analyzed in all surveys. Because of the larger sample size for the 1993 Youth CTS, we analyzed race/ethnicity and self-reported school performance. Respondents are first asked whether they are Hispanic. If not, they are asked for their race. School performance is assessed by the question, "How do you do in school? Would you say much better than average, better than average, average, or below average."

Smoking Status

Adults from the 1994 survey were classified as current smokers if they answered yes to the following questions: "Have you ever smoked 100 cigarettes in your lifetime?" and "Do you smoke now?" Adults who answered no to either or both questions were considered nonsmokers.

In previous research, we developed a measure of adolescent susceptibility to smoking [*18,19*]. Among never smokers, susceptibility can be considered a marker of which adolescents have started the uptake process [*19,20*] and, among experimenters, susceptibility appears to be a marker of which adolescents may progress to regular smoking [*21*]. For the present paper, adolescents who report any cigarette use in the past 30 days are categorized as smokers. Never smokers who are sure that they will *not* (a) try a cigarette soon or in the next year or (b) smoke one if it were offered by a best friend are considered nonsusceptible to smoking. Those who have experimented are considered nonsusceptible if they are sure that they will not smoke at any time during the next year. Thus, anyone who cannot definitely rule out smoking is considered susceptible to smoking.

Statistics

All percentages are weighted and, when cited in the text, we provide 95% confidence intervals. For the 1993 CTS the 95% confidence intervals are computed using a special jackknife technique for variance estimation [*22*]. This was necessary because of the design effect introduced by the sampling methods. For the 1994 Adult and Youth CDHSS, the sampling methods were such that special variance estimation techniques were not required [*17*]. All estimates were computed using weights representative of the California population in 1994. For selected comparisons of subgroups from the 1993 CTS, we performed a special χ^2 test based on the jackknife technique [*23*]. Any comparisons among subgroups in the 1994 CDHSS are by standard χ^2 tests. All tests are two-tailed.

RESULTS

The population reporting receipt of promotional items is described below by age group, smoking status, and sex. Next, we examine the population who would be willing to use a promotional item, again by age group, smoking status, and sex. In addition, because of the larger sample size for the 1993 Youth CTS, we report more complete demographic characteristics of adolescents with or willing to use a promotional item. Finally, we examine the characteristics of the promotional items received (brand promoted, type of item, and how the item was obtained) according to survey and age group or smoking status.

Who Has Received a Promotional Item?

The age group in the 1994 CDHSS most likely to have received a promotional item was young adults 18

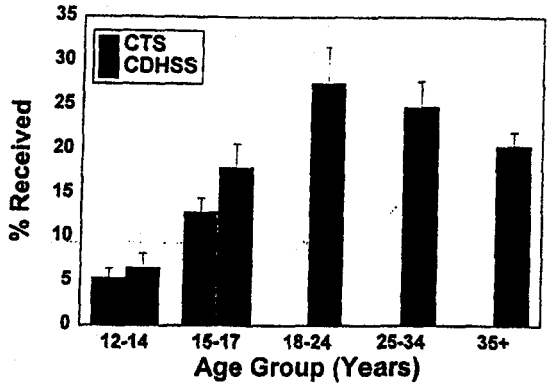


FIG. 1. Possession of promotional items by age group. CTS is the 1993 Youth California Tobacco Survey and CDHSS is the 1994 Youth and Adult California Department of Health Services Survey.

to 24 years of age among whom 27.5 ± 4.1% had received them (Fig. 1). In addition, 17.9 ± 2.7% of adolescents 15 to 17 years of age and 6.5 ± 1.6% of adolescents 12 to 14 years reported having such items. The percentages for these adolescent age groups from the 1993 CTS were slightly lower, 12.8 ± 1.7% and 5.4 ± 1.0%, respectively.

Examination of data from the 1993 CTS (Table 1) showed that more boys than girls 12 to 17 years of age had received a promotional item, ($P < 0.001$). This sex difference was also present among both youth and adults in the 1994 CDHSS, which found that 14.5 ± 2.4% of boys compared with 9.0 ± 1.9% of girls ($P < 0.001$), and 26.6 ± 2.0% of men compared with 18.3 ± 1.6% of women, reported possession of an item ($P < 0.001$). Proportionately more white adolescents in the 1993 Youth CTS than black, Hispanic, or Asian adolescents owned a promotional item ($P < 0.001$). Ownership was more prevalent among those reporting below average school performance ($P < 0.02$).

Figure 2 shows the percentages of adolescents from the 1993 CTS who had received a promotional item by smoking status and age group; again data from the 1993 CTS are used for this analysis because of the larger sample size. Current smokers were significantly ($P < 0.001$) more likely (30.7 ± 6.1% for those 15 to 17 years and 20.0 ± 10.5% for those 12 to 14 years) to report possession of a promotional item than those not currently smoking (4.8 ± 1.0% for those 12 to 14 years and 9.8 ± 1.8% for those 15 to 17 years). Among young adolescent nonsmokers, having a promotional item appeared to be associated with susceptibility to smoking; fewer 12- to 14-year-olds who were nonsusceptible reported possession of a promotional item than did those susceptible to smoking (3.8 ± 1.3% vs 6.8 ± 2.2%, $P < 0.05$).

TABLE 1

Demographic Characteristics of 1993 CTS Adolescents 12–17 Years of Age Receiving or Willing to Use Promotional Items

Demographic characteristics	*N*	Possession of promotional items (%)	Willingness to use promotional items (%)
Overall	5,531	8.9	23.3
Sex			
Male	2,814	11.4	30.2
Female	2,717	6.5	16.5
Race/ethnicity			
White	3,064	11.1	24.2
Black	318	6.4	20.7
Hispanic	1,522	7.6	24.6
Asian/PI	627	5.6	17.4
School performance			
Much better than average	1,065	7.6	17.4
Better than average	2,108	8.2	25.6
Below average	290	14.9	38.1

Note. CTS, California Tobacco Survey (youth).

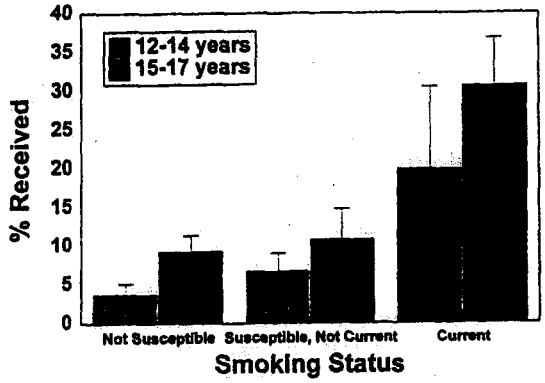


FIG. 2. Possession of promotional items by age and smoking status. 1993 Youth California Tobacco Survey.

Who Would Use a Promotional Item?

Respondents were asked whether they would be willing to use a promotional item. For the 1994 CDHSS, the modal age group for willingness to use an item appears to be 15 to 17 years (35.4 ± 3.4%; Fig. 3). Although young adults also show a fair degree of interest in promotional items (32.6 ± 4.1% for those ages 18 to 24 and 25.8 ± 2.8% for those ages 25 to 34), only 13.8 ± 1.3% of adults 35 years and older would be willing to use an item. Adolescents 12 to 14 years of age showed about the same degree of interest (24.4 ± 2.7%) as those 25 to 34 years of age (25.8 ± 2.8%). Again, for the 1993 CTS more 15- to 17-year-old adolescents were interested in using an item (27.3 ± 2.5%) than 12- to 14-year-olds (19.6 ± 2.2%, $P < 0.001$).

The same sex differences were present for willingness to use an item as for actual possession of one. In the 1993 CTS (Table 1), more adolescent boys than girls would be willing to use a promotional item ($P < 0.001$). In the 1994 CDHSS, 36.5 ± 3.2% of boys compared with 22.2 ± 2.7% of girls ($P < 0.001$), and 26.3 ± 2.0% of men compared with 12.3 ± 1.3% of women, thought they might use a promotional item. Again, the percentage of 1993 CTS adolescents willing to use an

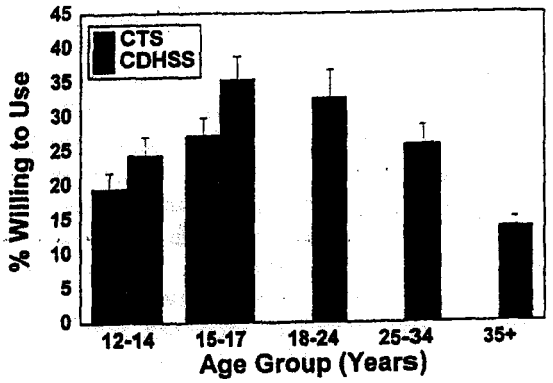


FIG. 3. Willingness to use a promotional item by age group. CTS is the 1993 Youth California Tobacco Survey and CDHSS is the 1994 Youth and Adult California Department of Health Services Survey.

item was higher among whites than the other racial/ethnic groups ($P < 0.001$). Willingness to use an item was inversely related to reported school performance ($P < 0.05$), with twice as many adolescents reporting below average than much better than average school performance willing to use an item.

In the 1993 CTS, about half of adolescent current smokers indicated a willingness to use one (53.4 ± 6.4% for 15- to 17-year-olds and 42.2 ± 13.1% for 12- to 14-year-olds; Fig. 4). The percentage dropped to about 30% regardless of age for those susceptible to smoking and was lower still (18.9 ± 2.8% for 15- to 17-year-olds and 12.3 ± 2.8% for 12-to 14-year-olds) for those not susceptible to smoking. Overall, there was a strong relationship between smoking status and willingness to use a promotional item, ($P < 0.001$).

Characteristics of Promotional Items Received

Table 2 shows the frequency of either Camel or Marlboro as the brand promoted by the most recent item received. Together these two brands accounted for the great majority of the most recent item received. Camel items appeared to be more popular than Marlboro among adolescents in 1993, but Marlboro-promoting items were received more frequently among all age groups in the 1994 CDHSS.

The types of items received by respondents who reported receiving them are described in Table 3. Up to three items were analyzed for each respondent. Most of the items were clothing, a cigarette lighter, or a mug or can holder. In the 1993 CTS, adolescent nonsmokers were much more likely to report an item of clothing with the next highest percentage being for cigarette lighters. In the 1994 CDHSS, cigarette lighters, rather than clothing, appeared to be the most frequent item reported by adolescent smokers. However, nearly 20% of nonsmoking adolescents in both surveys reported receiving a lighter. Younger adult smokers were more likely to report receiving clothing, but in the older age group, lighters were just as frequently reported.

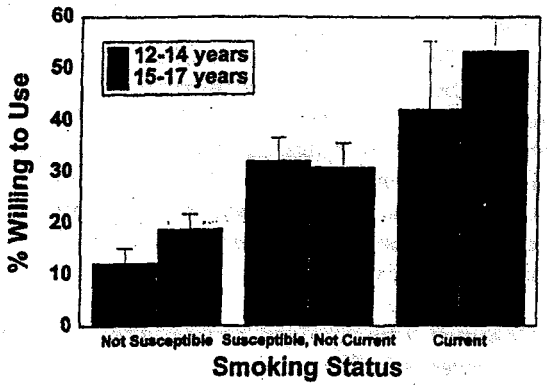


FIG. 4. Willingness to use a promotional item by age and smoking status. 1993 Youth California Tobacco Survey.

TABLE 2

Brand Promoted by *Most Recent* Item Received[a]

Survey/age group	N	Camel (%)	Marlboro (%)	All others (%)
1993 CTS[b] youth 12–17 years	529	44.9	17.1	27.3
1994 CDHSS[c] youth 12–17 years	210	30.4	40.4	22.2
1994 CDHSS[c] adults				
18–24 years	130	24.9	45.3	22.6
25–34 years	231	22.4	42.8	26.8
35+ years	570	16.5	20.7	37.9

[a] Percentages do not total 100% because some respondents could not name the brand promoted.
[b] CTS, California Tobacco Survey (youth).
[c] CDHSS, California Department of Health Services Survey.

Adolescents, in both the 1993 CTS and the 1994 CDHSS, most often reported receiving promotional items as a gift from family or friends (Table 4). However, it appears that more adolescents reported using coupons in the 1994 CDHSS than in the 1993 CTS. Coupons were cited by 17.6 ± 5.2% of youth 12 to 17 years in the 1994 Youth CDHSS but by only 12.3 ± 3.3% of such youth in the 1993 CTS. Although the sample sizes are small, it is of interest that youth 12 to 14 years of age who currently smoked were the most likely to report coupon use, 43.5 ± 27.6% compared with 15.7 ± 7.6% for smokers 15 to 17 years of age. Adults more often obtained items when purchasing cigarettes or from coupon redemption. These findings were fairly consistent among all age groups of adults. Under 1.5% of adolescents or adults reported receiving an item as a prize or finding the item (data not shown). The category that included all other sources of items that were not explicitly categorized by the survey accounts for about a quarter of all items received.

TABLE 3

Types of Items Received[a]

Survey/age group	Current smoker	N	Clothing (%)	Cigarette lighter (%)	Mug or can holder (%)
Youth 12–17 years					
1993 CTS[b]	Yes	374	48.7	37.5	18.1
	No	155	52.2	19.3	14.0
1994 CDHSS[c]	Yes	51	25.8	39.9	3.2
	No	159	49.4	18.4	11.7
Adults 1994 CDHSS[c]					
18–24 years	Yes	69	56.2	43.2	11.5
	No	61	58.9	15.3	2.9
25–34 years	Yes	146	55.8	36.9	12.6
	No	85	47.1	18.8	16.2
35+ years	Yes	416	28.6	29.8	6.5
	No	152	28.7	11.8	6.0

[a] Percentages do not total 100% because other types of items are not included in the table and up to three items could be included for each repondent.
[b] CTS, California Tobacco Survey (Youth).
[c] CDHSS, California Department of Health Services Survey.

TABLE 4
Source of Most Recent Item Obtained[a]

Survey/ age group	N	Handout at fair or event (%)	Gift from family or friends (%)	Coupon (%)	With purchase (%)	Other (%)
1993 CTS[b] youth 12–17 years	529	14.9	28.5	12.3	9.4	27.3
1994 CDHSS[c] youth 12–17 years	210	13.3	32.2	17.6	7.9	23.7
1994 CDHSS[c] adults (years)						
18–24	130	17.3	15.3	25.1	15.8	21.9
25–34	231	18.6	12.2	20.6	18.8	25.0
35+	570	21.0	9.7	19.8	13.3	29.3

[a] Percentages do not total 100% because some respondents could not name the source of the most recent item received.
[b] CTS, California Tobacco Survey (Youth).
[c] CDHSS, California Department of Health Services Survey.

DISCUSSION

The results of this study indicate that young adults 18 to 24 years of age are the group most likely to possess a tobacco promotional item. However, willingness to use a promotional item is highest in adolescents 15 to 17 years of age. In addition, younger adolescents (12 to 14 years) show a greater interest in these items than adults age 35 years and older. Males more often possessed an item or showed willingness to use one than females. Among adolescents, whites were more receptive than other racial/ethnic groups and receptivity increased with poorer school performance. As would be expected, smokers showed more receptivity than nonsmokers. However, nonsmoking adolescents who are susceptible to smoking appear to show more interest than those who are not susceptible.

Interest in sales promotion items is present in all demographic groups we examined. Why promotional items appeal more to males than females may relate to the types of items offered. Males are probably more likely to wear baseball hats or T-shirts than females. Adolescent boys often have a cigarette lighter to light fire crackers or cherry bombs even if they don't smoke. The greater appeal among white adolescents may simply reflect greater interest about tobacco; smoking prevalence is higher among white youth [*24,25*]. Poor school performance is also a risk factor for smoking [*24,26*].

Among adults, promotional items are preferentially used by younger current smokers. Among adolescents, those who have received a promotional item are also more likely to be smokers. Obviously, smokers are more likely to be exposed to or have opportunities to acquire promotional items. Although this study does not allow us to identify whether receipt of the promotional item preceded cigarette use, 30% of adolescent never smokers who were susceptible to start smoking were prepared to use a promotional item. This result supports speculation that receptivity to marketing may precede first experimentation with cigarettes [*27*]. We have postulated that one of the effects of tobacco marketing is to weaken the resistance to cigarettes, which is common in children at the completion of elementary school [*27*]. The fun of owning and using an appealing promotional item may create the impression that smoking is acceptable or even "cool." Longitudinal studies are needed to clarify these issues. Increases in adolescent smoking initiation have occurred during novel and well-funded marketing campaigns in the past [*28,29*]. Although the results of the present study cannot demonstrate causality, the increasing receptiveness of youth to tobacco sales promotion demonstrated in this study may be reflected in the major increases in adolescent smoking that have been reported recently both in California and in the rest of the nation [*25,30,31*].

R.J. Reynolds in 1991 was the first company in this decade to place major emphasis on coupons (Camel Cash, otherwise known as C-notes) to obtain promotional items featuring their Camel brand of cigarettes. In 1992, a school study indicated that some adolescents purchased Camel cigarettes specifically to get Camel Cash [*10*]. In 1993 in California, more adolescents reported receiving items promoting Camel cigarettes than any other brand. However, the Philip Morris company, the traditional market share leader among adolescents, was quick to introduce its own Marlboro Adventure Team promotional catalogue in 1992 that uses the Marlboro Miles proof-of-purchase bar code and logo from the side of cigarette packs [*6*]. By 1994, the Marlboro campaign resulted in items promoting this brand being the most prevalent among adolescents. The quick response time to such promotional tactics emphasizes the need for continuous monitoring of tobacco marketing activity.

Between 1993 and 1994, the proportion of California adolescents who received promotional items from coupons increased. Though it can be argued that adolescents who received an item as a gift may not have actively sought it, there is little doubt that adolescents

who redeem coupons for promotional items are actively seeking them. Coupon use was relatively high among 12- to 14-year-old smokers compared with other groups, suggesting that this marketing strategy may be very effective with this young age group. The large proportion of survey respondents for whom the source of their promotional item could not be classified in the preset coding list also indicates an area where more monitoring is needed.

The present study adds to the growing list of other studies and survey results that suggest that current tobacco marketing strategies are reaching young adolescents [*2,9,10,32*], and it suggests that the problem is growing. In particular the number of youth using coupons appears to have increased from 1993 to 1994. Our results concerning the percentage of California adolescents in 1993 [*8.9%*] that possess a promotional item is consistent with figures from a recent nationwide study [*9*]. In that study, 10.6% of adolescents 12 to 17 years of age reported possession of a promotional item, and 35% of that age group possessed an item, had collected coupons, or possessed a catalogue for such items. The rate of these activities for young adults 18 to 24 years of age was 50.6%. However, awareness of tobacco promotion campaigns was the same for adolescents (83.5%) and young adults (83.8%).

The vast majority of new smokers comes from the adolescent age range [*24*]. Once addicted, half of these smokers will not quit successfully for at least 16 to 20 years [*33*]. Half of those who have not quit by this median interval (i.e., one-quarter of all newly addicted adolescent smokers) will die from a smoking-related disease [*34*]. Given the public health consequences, there is a strong argument for regulating the stimulation of demand among those to whom it is illegal to sell cigarettes [*9,10*].

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Goldstein et al (1987)

Relationship between high school student smoking and recognition of cigarette advertisements

We report the results of a study examining the level of advertisement recognition and tobacco experimentation in a group of U.S. high school students. Students who smoked as few as one cigarette per week were found to identify a preferred cigarette brand. One brand of cigarettes accounted for 76% of all preferred brands. A dose-response relationship was found between smoking level and cigarette advertisement recognition, with regular smokers recognizing 61.6% of advertisements, compared with only 33.2% for nonsmokers. These data have potential implications for youth smoking prevention programs. Future research is needed to explain this association and to establish whether cigarette advertising and adolescent smoking are causally related. (J PEDIATR 1987;110:488-91)

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Despite undebatable evidence of the harmful effects of tobacco, millions of Americans continue to smoke.[1,2] Many of these smokers, including most new smokers, are adolescents.[3,4] There is wide agreement that individual smoking patterns are nearly universally established before adulthood.[3,5,6] Advertising is often cited as having a role in the initiation of smoking, yet the effects of cigarette advertising on adolescent smoking have been the focus of very little scientific research. In most smoking research the influence of cigarette advertising has either been ignored or included among other factors such as "peer pressure."[7-11] In 1983, cigarette manufacturers spent almost two billion dollars in the United States to promote more than 200 brands.[12] The majority of cigarette advertisements feature young, healthy people having a good time. This advertising overtly and subliminally associates smoking with good looks, success, and independence.[13-19]

In the only study of its kind, Chapman and Fitzgerald[13] showed that cigarette brand preference and recall of advertising were important indicators that could distinguish Australian adolescent smokers from nonsmokers. There has been no similar study in the United States. subsequent research to explain these findings. Furthermore, these data have not been widely used development of smoking prevention or cessation programs. The purpose of our study was to examine and verify relationships between cigarette brand preference, advertising recall, and smoking level in a population of U.S. school students.

METHODS

The study was conducted as part of a 2-day, health awareness program in a private senior high school. The sample included all 306 students in grades 9 through 12 who attended classes on the study date. The data were collected with a 40-item questionnaire administered at the beginning of the first session. The questionnaire included a self-report level of smoking, questions about personal cigarette brand preference, and a slide advertising recognition section. The level of smoking scale was divided into nonsmokers (never experimented with or smoked a cigarette), experimenters (tried cigarettes, but now smoking less than one cigarette per week), light smokers (currently

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Table. Smoking levels for students by sex and grade

		Nonsmoker (%)	Experimenter (%)	Light smoker (%)	Regular smoker (%)
Total	(n = 306)	24	54	7	16
Male	(n = 146)	29	58	4	9
Female	(n = 160)	19	49	9	23
9th Grade	(n = 101)	24	59	7	10
10th Grade	(n = 81)	27	53	8	12
11th Grade	(n = 63)	30	44	2	24
12th Grade	(n = 61)	12	53	12	23

All values given as percent.

smoking from one cigarette to one pack per week), and regular smokers (smoking one pack or more per week).

To assess cigarette brand name recognition, students were shown a series of nine slides of advertisements with all brand name identifying words deleted. These advertisements were for nine different brands of cigarettes and were selected from several popular magazines (*Sports Illustrated, People, Glamour,* and *Cosmopolitan*). All advertisements had been published within the month prior to the study and reflected the predominant advertising theme used by the particular brand at that time. A second series of nine slides was then shown that had been edited to delete the slogans commonly associated with the advertisements. These slides were prepared from different advertisements for the same nine brands.

Students were given 15 seconds per slide to record their answers for brand or slogan identification. If the answer was unknown, they were asked to mark through that question, thereby eliminating later guessing. Questionnaires were collected immediately after the last slide, before the health education presentation. The presentation was made to all grades on the same morning to prevent contamination of responses.

A brand name recognition rate was calculated for each student on the basis of the number of correct answers for the nine slides from which the brand name had been edited. A slogan recognition rate was similarly calculated for the slogan-edited slides. A total ad recognition rate was determined by the number of correct responses for all 18 edited slides. For the purposes of statistical analysis, the four smoking levels were assigned values of 1 through 4. The Pearson correlation coefficient was then calculated for the variables of smoking level and total ad recognition rate.

RESULTS

Light and regular smoking were more than twice as common among female than male students (Table). For each of the four school grades, the largest percentage of students claimed to have tried cigarettes but were currently smoking less than one cigarette per week (i.e., "experimenters"). The percentage of "regular smokers" increased from 10% of the ninth grade students to 23% of the twelfth-graders. Of note is the low frequency of students who claimed to smoke at least one cigarette per week but less than one pack per week (i.e., "light smokers").

Fifty-two percent of all students who had used cigarettes identified a single preferred brand. This included 32% of the experimental smokers, 100% of light smokers, and 98% of regular smokers. Identification with a single preferred brand was therefore found in most students who smoked as few as one cigarette per week. One brand of cigarettes (Marlboro) accounted for 76% of all preferred brands.

The Figure illustrates the relationship between the level of smoking and the total ad recognition rate (i.e., brand name recognition plus slogan recognition). Increasing levels of tobacco use correlated with increased total ad recognition (correlation coefficient 0.5, $P < 0.001$). This association was found at each grade level. The students who smoked more than one pack per week recognized nearly twice as many advertisements as students who were nonsmokers (61.6% compared with 33.2%).

DISCUSSION

The tobacco industry's arguments that cigarette advertising is not targeted to young people and that this advertising affects only brand choice and not the decision to use tobacco have been challenged frequently. Teenagers buy the most heavily promoted cigarettes.[19] Cigarette advertising is placed in adolescent-oriented magazines, and tobacco sponsorship of sports and youth activities is common.[15,16] Candy cigarettes with obvious brand name recognition are sold to children, a trademark violation never challenged. Documents subpoenaed by the Federal Trade Commission from Brown and Williamson, the third largest cigarette manufacturer in America, recommended that advertisers "present the cigarette as one of the few initiations into the adult world."[20] As one advertising

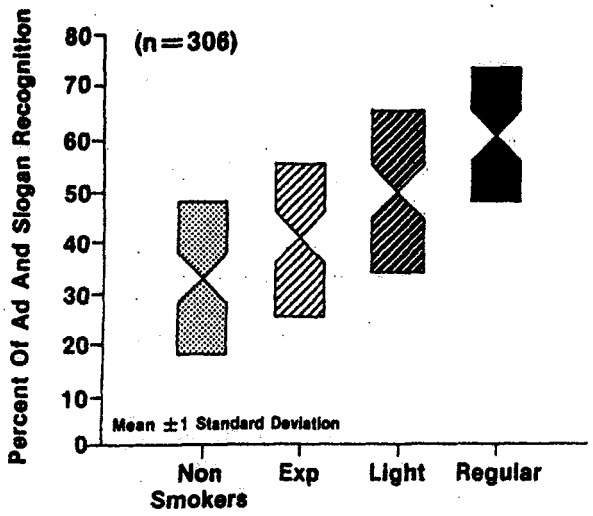


Figure. Levels of smoking experimentation.

executive explained, "In New York the stuff we handled was virtually all visual imagery . . . masculine . . . feminine . . . youth. Where I worked . . . we were trying very hard to influence kids who were 14 to start to smoke."[21]

The argument, made by the tobacco industry, that cigarette advertising affects only brand choice, goes against widely held advertising concepts.[22] The effects of advertising are limited to brand choice only in a static market situation. Such a static market is found among adults, in whom the percentage of smokers is fairly constant. In a nonstatic market, advertising may influence product consumption.[23] Such markets are found among adolescents, and it is in these markets that advertising is most likely to have its broadest impact.

We surveyed a group of U.S. senior high school students. The high rate of teenage female smokers, the large percentage of students that claimed to have tried cigarettes, and the high percentage of regular smokers in the higher grade levels are findings consistent with other reported studies.[3,5]

The data from our study indicate that adolescents using as few as one cigarette per week have a preferred brand. One brand (Marlboro) accounted for the overwhelming majority of all preferred brands. These findings are consistent with one Australian study that showed four of 130 available brands accounting for 79% of all adolescent smokers, and with a recent study of English schoolchildren in which 97% of adolescent smokers preferred a single brand.[13,19] Further research will be needed to determine if brand preference is a marker for identifying those students at risk for developing more regular smoking habits.

The study by Chapman and Fitzgerald[13] on Australian students showed a difference in advertisement recognition rates between smokers and nonsmokers. Our [illegible] strengthens this observation by showing a dose-response relationship between advertisement recognition and level of smoking. However, the data do not identify which is cause and which is effect. It could be argued that [illegible] simply pay more attention to cigarette advertising [illegible] of the brand selection process or that smokers are [illegible] likely to recognize their own brands. The latter explanation is unlikely to explain the observed findings totally, because questions about any single brand represented only 11% of the recognition items.

An additional limitation to the study is its generalizability. We studied students at only one private U.S. high school. The students were predominantly white upper middle class. Further studies will be needed to assess whether these data hold for other adolescent populations.

The potential implications of these data on smoking prevention and cessation programs for youth are multiple. The developers of these programs should analyze cigarette brand preference in their targeted populations. If this analysis indicates that the majority of students smoke one brand, then a potentially effective health promotion technique could be to focus on the inconsistencies of tobacco health risks and the Madison Avenue image associated with that particular brand. One such intervention has used the film "Death in the West" to demythologize the "Marlboro Man."[24] Similarily, counteradvertising and brand image spoofing have been used by the health promotion group Doctors Ought to Care.[25,26]

Many health professionals now believe that advertising plays an important role in the addiction of children to tobacco. Our study provides some of the first evidence for a relationship between these variables. Further research will be necessary to determine if advertising is causally related to adolescent smoking.

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Determinants of Cigarette Smoking

Debra Haire-Joshu, PhD, Glen Morgan, PhD,† and Edwin B. Fisher, Jr, PhD‡*

MULTIPLE DETERMINANTS OF SMOKING

According to the 1990 Surgeon General's Report, "Smoking cessation is a dynamic process that begins with a decision to stop smoking and ends with abstinence from cigarettes maintained over a long period of time."[129] This explanation suggests that smoking cessation is not a simple event that merely begins, persists, and then ends. Rather, numerous research studies have characterized the movement of smokers through a series of stages or changes that may ultimately lead to abstinence. This emerging and changing career of smoking is determined by multiple causes, no one sufficient or necessary. Physiologic addiction as well as social and psychologic determinants may each encourage smoking.

It is the recognition of the interaction among the several causes of smoking, and of how these interactions exacerbate the career of the smoker, that is most critical to understanding the persistence of smoking. The purposes of this article are, first, to characterize the smoker's career and how it is influenced by, and intertwined with, the multiple determinants of smoking and second to focus on the persistence of smoking and the multivariate relations that encourage it. Finally, we examine variations in the persistence of smoking across several disease types.

The Smoking Career

The concept of the "smoking career" clarifies the idea that smoking is a complex, evolving process, the stages of which may be differentially influenced by the interplay of social or environmental, psychologic, and biologic factors.[40,43,130] The stages of the smoking career include initial use, experimentation, and habitual use.[14] Precontemplation and contemplation of quitting, action, maintenance, and relapse are stages of cessation.[109] These stages are not explanations but rather descriptions of smokers' and quitters' behavior. The stages develop over time; their order is not rigid, and they can be repeated. For instance, some smokers proceed from the stage of transition to habitual use to the stage of action and then maintenance without ever going through the phases of habitual use, precontemplation, or contemplation.

The smoking career entails intrinsic factors (such as addictive factors, core skills, or habits), social reactions to those intrinsic factors, and the interaction of the intrinsic and social factors.[11,51] For example, the biologic potency of nicotine may make the habits that comprise smoking patterns stronger and more resistant to change. At the same time, the plenitude of daily circumstances, activities, and emotions conditioned to smoking tie this addiction to so many circumstances of daily life as to contribute to its being an unusually difficult addiction to break. This

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As can be seen, the many ways in which smoking is conditioned to circumstances around it explain ". . . the thorough interweaving of the smoking habit in the fabric of daily life."[107] The sheer repetition of smoking strengthens such interweaving. It is estimated that the average pack-a-day smoker of 20 years has inhaled cigarettes more than 1 millions times,[41] each inhalation providing opportunity for conditioning smoking to many settings or situations of daily life. As the person recently retired from a job or business may not know "what to do" with himself or herself, so the quitter may feel overwhelmed by the ubiquity of cues and cravings, complaining that smoking is almost constantly "on my mind."

Cigarette Marketing

Cigarettes are the most heavily marketed consumer product in our nation. (Marketing includes advertising as well as other promotions such as distribution of samples, point-of-sale displays, or distribution of product-related goods such as cigarette lighters and T shirts.) In 1986, $2.38 billion was spent marketing cigarettes in the United States.[39] Adjusting for inflation, Davis[31] estimated a threefold increase from 1974 to 1984, leaving the average citizen to conclude that cigarettes are "not really all that bad," because otherwise, "the government wouldn't let them advertise."

The direct effects of tobacco marketing are hard to characterize. Recruitment of new or reenlistment of former smokers is suggested by the extent of the marketing effort and the apparent need to replace smokers who quit, 50% of all adults who have ever smoked.[130] For example, media campaigns now target female concerns (e.g., weight control and thinness) via the selling of brands such as Virginia Slims.[36] In contrast, the tobacco industry maintains that advertising is directed to brand preference among current smokers, not to recruiting new smokers. However, only 10% of smokers switch brands each year; this seems a modest objective for the most extensive marketing effort in our culture.

Promotional activities that reinforce adult smoking apparently also reinforce smoking in teenagers. Armstrong and colleagues found that nonsmoking minors who believed they were influenced by smoking advertisements were significantly more likely to initiate smoking than those who did not perceive that advertising had an effect.[7] This finding was independent of other important predictors of smoking such as peer, sibling, or parental modeling. In addition, Aitken and Eadie found teenage smokers were more adept at recalling or identifying cigarette advertisements than were nonsmokers, with strong preferences cited for brands smoked by adults.[3]

Promotional activities make it difficult for recent quitters. As an example of the interdependencies among wide-ranging determinants of the smoking career, consider the response of a recent quitter coming across a cigarette advertisement in a magazine. He or she may find within the ad a number of symbols closely associated with his or her own recent smoking habits. The symbols and the conditioned responses to them may serve as strong cues for smoking, enhanced by the biologic potency of nicotine as an unconditioned stimulus.

Of course, the placement of advertisements, billboards, point-of-sale marketing displays, free samples, and other instances of cigarette marketing at numerous points in the daily life of the smoker is supported by the great profits associated with the sale of cigarettes. These advertisements and promotions trigger numerous biologic and psychologic responses that make it hard to stay off cigarettes. Thus, the smoking career is maintained by forces ranging from physiology to corporate profits.

Economic Factors and Public Knowledge

Warner[133] has documented the persistent efforts of tobacco companies and their representatives to suppress media coverage of the uniquely risky nature of smoking. The possibility of loss of advertising revenues from non-tobacco products, as well as from cigarettes, is an effective threat to print and electronic media and may discourage coverage of cigarette-related risks and disease. Warner and Goldenhar[134] compared coverage of smoking and health-related issues by print journalists during an 11-year period preceding and following the cigarette broadcast advertising ban. There was a 65% decrease in the coverage of smoking and health issues by

Smoking, drinking and drug taking in the European Region

by Anna May Harkin, Peter Anderson and Cees Goos



Alcohol, Drugs and Tobacco Programme
WHO Regional Office for Europe
Copenhagen, Denmark
1997

TARGET 17
TOBACCO, ALCOHOL AND PSYCHOACTIVE DRUGS

By the year 2000, the health-damaging consumption of dependence-producing substances such as alcohol, tobacco and psychoactive drugs should have been significantly reduced in all Member States

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ABSTRACT

The use of tobacco, alcohol and drugs has a tremendous impact on public health. This is reflected in target 17 of the WHO European Region's strategy for health for all. A key role of the Regional Office for Europe in the pursuit of the strategy for health for all is monitoring progress towards achievement of the health for all targets. This report seeks to provide an overview (from data available in 1994-1995) of trends in consumption, the harm arising from such consumption, and corresponding policy responses in the 50 countries of the WHO European Region. It is the first time that a comprehensive review like this one, covering alcohol, drugs and tobacco, has been made. An important issue highlighted in the process of developing this report has been the need for standardization in data collection systems within and between countries so as to facilitate trend analysis and intercountry comparisons.

KEYWORDS

ALCOHOL DRINKING
ALCOHOLISM
SMOKING
SUBSTANCE ABUSE
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2

Tobacco Control Policy

In pursuit of the tobacco aspect of target 17 of the 38 targets set by WHO as part of its health policy for Europe, the first European Action Plan on Tobacco in 1987 called for a comprehensive approach to tobacco control and set out a number of important elements of such an approach – controls on advertising and sponsorship, limitations on tar and nicotine content, labelling, control on sales to minors, control on the sale of oral tobacco products, smoke-free environments, and price control through taxation as well as public information and education, and training and sensitization of key actors such as health professionals, teachers and journalists. The 1993 Action Plan for a Tobacco-free Europe, in the light of a review of the implementation of the first Action Plan, detailed further how such issues might be approached. This chapter presents an overview of the policy measures currently in place in the Region.

While the vast majority of countries in the Region have some element of tobacco control policy, the extent and comprehensiveness of their approaches vary considerably. Some, for example, have comprehensive tobacco control legislation while others have incorporated some elements into their legislation as isolated regulations or presidential decrees. This needs to be borne in mind in reading the following sections, which attempt to summarize the situation in the Region in relation to various policy measures. Before discussing national tobacco control measures, the existence in one part of the Region (the European Union) of a supranational framework in relation to tobacco control policy should be mentioned. The European Union has issued directives, which are binding on member states, on some aspects of tobacco control policy and has given opinions (non-binding guidelines) on other aspects. Reference will be made to these in the relevant sections below.

Advertising

Controls on advertising are implemented through legislative bans, legislative restrictions or voluntary agreements with the tobacco industry. About 16 countries have (in law at least) a legislative ban on direct advertising on television (TV), radio, billboards, and in the press and cinemas (Table 2.1): Belarus, Bulgaria, Croatia, Finland, France, Hungary, Iceland, Italy, Lithuania (since 1996), Latvia, Monaco, Norway, Portugal, San Marino, Slovakia and Tajikistan. However, in about five of these implementation is inadequate. In Bulgaria, direct advertising is officially banned except in places of production and (wholesale and retail) trade, but international tobacco companies reportedly still advertise indirectly on TV and in public places. Hungarian legislation bans the advertising of tobacco products except on international TV channels and in foreign language publications. Several other countries (including Latvia and Tajikistan) have such bans, but since late 1995 advertising has appeared on Russian TV which can be widely seen. In Lithuania all forms of tobacco advertising were banned by special government decree in June 1993 but this has been poorly observed, particularly in the press. A comprehensive Tobacco Control Law, including a complete ban on advertising and promotion, was passed by Parliament in December 1995 and signed by the President in February 1996 (the ban on sponsorship is limited to events for those under 18 years), but in July 1996 the advertising ban was reportedly still not being enforced. In December 1995 the Slovenian Parliament passed the second stage of a Bill proposing a complete ban on advertising.

Table 2.1. Controls on the advertising of tobacco products in Member States of the WHO European Region, mid-1990s

Member State	Television	Radio	Billboards	Press	Cinema	Sponsorshi
Albania[1]	Banned	Banned	No control	No control	No control	No informatio
Armenia[2]	Banned	Banned	No information	No information	No information	No informatio
Austria[3]	Restricted	Restricted	Restricted	Restricted	Restricted	No informatio
Azerbaijan	No information	No information	No information	No information	No information	No informatio
Belarus[4]	Banned	Banned	Banned	Banned	Banned	No informatio
Belgium[5]	Banned	Banned	Restricted	Restricted	Banned	No informatio
Bosnia and Herzegovina	No information	No information	No information	No information	No information	No informatio
Bulgaria[6]	Banned	Banned	Banned	Banned	Banned	No informatio
Croatia[7]	Banned	Banned	Banned	Banned	Banned	No informatio
Czech Republic[8]	Banned	Restricted	Restricted	Restricted	Restricted	No informatio
Denmark[9]	Voluntary agreement	Voluntary agreement	Voluntary agreement	Voluntary agreement	Voluntary agreement	Voluntary agreement
Estonia	Banned	Banned	No information	No information	No information	No informatio
Finland[10]	Banned	Banned	Banned	Banned	Banned	Banned
France [11]	Banned	Banned	Banned	Banned	Banned	Banned
Georgia[12]	No information	No information	No information	No information	No information	No informatio
Germany[13]	Banned	Banned	Voluntary agreement	Voluntary agreement	Voluntary agreement	No informatio
Greece[14]	Banned	Banned	No information	No information	Restricted	No informatio
Hungary[15]	Banned	Banned	Banned	Banned	Banned	Banned
Iceland[16]	Banned	Banned	Banned	Banned	Banned	Restricted
Ireland [17]	Banned	Banned	Banned	Restricted	Banned	Restricted
Israel	Banned	Banned	No information	Restricted	No information	No informatio
Italy[18]	Banned	Banned	Banned	Banned	Banned	Banned
Kazakhstan[19]	No information	No information	No information	No information	No information	No informatio
Kyrgyzstan[20]	No control	No control	No control	No control	No control	No informatio
Latvia[21]	Banned	Banned	Banned	Banned	Banned	No informatio
Lithuania[22]	Banned	Banned	Banned	Banned	Banned	Restricted
Luxembourg[23]	Banned	Banned	Restricted	Restricted	Banned	No informatio
Malta[24]	Banned	Banned	No information	No information	Banned	No informatio
Monaco[25]	Banned	Banned	Banned	Banned	Banned	Banned
Netherlands	Banned	Banned	Banned	Voluntary agreement	Banned	Restricted
Norway[27]	Banned	Banned	Banned	Banned	Banned	Restricted
Poland[28]	Banned	Banned	Restricted	Banned	Banned	No informatio
Portugal[29]	Banned	Banned	Banned	Banned	Banned	Banned
Republic of Moldova[26]	Restricted	Restricted	Restricted	Restricted	Restricted	No informatio
Romania[30]	Banned	Banned	No information	No information	No information	No informatio
Russian Federation[31]	Restricted	Restricted	Restricted	Restricted	Restricted	No informatio
San Marino[32]	Banned	Banned	Banned	Banned	Banned	Banned
Slovakia[33]	Banned	Banned	Banned	Banned	Banned	No informatio
Slovenia[34]	Banned	Banned	Banned	Banned	Banned	Restricted
Spain[35]	Banned	Restricted	No control	No control	No control	No informatio
Sweden[36]	Banned	Banned	Banned	Banned	Restricted	Restricted
Switzerland[37]	Restricted	Restricted	Restricted	Restricted	Restricted	No informatio
Tajikistan[38]	Banned	Banned	Banned	Banned	Banned	No informatio
The Former Yugoslav Republic of Macedonia	No information	No information	No information	No information	No information	No informatio
Turkey[39]	Banned	Banned	No information	No control	No information	No informatio
Turkmenistan[40]	Restricted	Restricted	Restricted	Restricted	Restricted	No informatio
Ukraine[41]	Banned	Banned	Restricted	Restricted	Restricted	Restricted
United Kingdom[42]	Banned	Banned	Voluntary agreement	Voluntary agreement	Voluntary agreement	Voluntary agreement
Uzbekistan	Banned	Banned	No information	No information	Banned	No informatio
Former Yugoslavia	No information	No information	No information	No information	No information	No informatio

[1] Increased advertising reported on billboards and in kiosks selling cigarettes.

[2] Russian TV, widely seen in Armenia, still carried advertising in late 1995.

[3] Advertisements in magazines and cinemas and on billboards must have a clear health warning. Advertisements are not allowed in/near schools or youth centres, directed at young people or showing people under 30 years. No advertisements allowed just before or after news programmes. No advertisements for filterless cigarettes allowed. Indirect advertising not allowed.

[4] Banned in mass media but foreign cigarettes are widely advertised.

[5] Prohibited in the press for minors. Indirect advertising for products is banned but for services still continues. In June 1996 the Parliamentary Health Committee voted by an overwhelming majority in favour of a total ban on advertising and sponsorship of tobacco products. The proposal to ban advertising has still to be adopted in a plenary session of Parliament which was expected to take place in late 1996 (situation as reported to WHO in June 1996).

[6] Banned since 1993 except in places of production and (wholesale and retail) trade. Indirect advertising by transnational companies continues on TV and in public places.

[7] Partial ban on advertising of tobacco products. Direct advertising is banned under the Food Safety Act 1992. Allowed in technical publications and as consumer information in wholesale and retail outlets.

[8] 1993 law on general advertising bans tobacco advertising on TV only and imposes minor restrictions on advertising to protect juveniles.

[9] By voluntary agreement advertising is banned on TV and radio and may not be aimed at young people or placed in sports publications. There are restrictions on the size of advertisements in the press.

[10] Advertising and sales promotion banned since 1978. Updated Tobacco Act explicitly bans indirect advertising but reasonable product information for those in the trade is still allowed.

[11] Since 1993 direct and indirect advertising and sponsorship is banned except at points of sale. At the end of 1992 an amendment was adopted allowing the TV broadcasting and publication of written press reports of sports competitions taking place in countries where tobacco advertising is allowed.

[12] Tobacco control is difficult at present.

[13] Banned by law on TV and radio. Also some legal restrictions on content of advertisements. Banned by voluntary agreement on billboards, bus stops, close to schools and youth centres, in youth magazines and sports centres and on public transport. By voluntary agreement there is a ban on advertisements creating the impression that tobacco products are harmless to health or improve physical performance or wellbeing. By voluntary agreement there are also some restrictions on the size and content of advertisements, and there is no distribution of free samples.

[14] Advertising is also prohibited in the health services, in public and private educational establishments of all levels and in youth and sports centres. Sales of tobacco products are not permitted in restaurants in public hospitals or private clinics.

[15] Under 1978 legislation advertising of tobacco products is forbidden. Exceptions are only allowed on international TV channels and for publications in a foreign language.

[16] Total ban on all advertising and promotion of tobacco products since 1971. Indirect advertising occurs on a small scale.

[17] Advertising is only allowed internally in retail outlets and in the press directed at adults. There is a ceiling on the amount which companies can spend on advertising and sponsorship. Other controls on sponsorship include restrictions on where advertisements for sponsored events can be placed. Minimum price control mechanism and no free samples.

[18] Total ban on advertising of tobacco since 1962. Since 1991 both direct and indirect advertising are prohibited on TV but the ban on indirect advertising is proving difficult to enforce.

[19] Much advertising, particularly in the streets. Since April 1994 all advertising of tobacco has been banned in the capital, Almaty, under a law "On the health protection of the population".

[20] Since 1995 there has been little advertising of tobacco in the mass media, but it is likely to increase with the arrival of the transnational tobacco companies. There is no formal ban on advertising. Advertising is seen on Russian TV and there is indirect advertising on items such as clothes, commercial booths and posters.

[21] Despite the ban, the law is disregarded by foreign manufacturers. Advertising is also seen on Russian TV.

[22] The February 1996 Tobacco Control Law bans advertising completely. However, in July 1996 it was reported that the ban was not being enforced. A 1993 ban was poorly observed in the press but there were no advertisements on TV, radio or billboards. There was much indirect advertising on umbrellas, plastic bags, kiosks, cars, etc.

[23] Advertising is also banned on air or water transport, in stadiums, public and private sports grounds and at swimming pools. It is allowed internally at points of sale and on billboards as long as it only shows the brand name. Since 1995 billboard and newspaper advertisements have included health warnings. The distribution of free samples is banned.

[24] Indirect promotion through media coverage of sponsored events is common.

[25] See under France (11) above.

[26] Ban on advertising of locally produced brands, but not on imported brands.

[27] Restricted advertising is permitted at points of sale. A new Tobacco Control Act 1995 which came into effect in January 1996 extends the existing ban to include indirect advertising.

[28] A ban on TV, radio and press advertising targeted at young people was passed in 1992 to come into effect in 1995. The Tobacco Control and Health Protection Act 1996 bans the advertising or promotion of tobacco products and accessories as well as products imitating tobacco products and accessories and tobacco-related symbols on TV and radio, in cinemas, newspapers and magazines, cultural and educational facilities, institutions of higher learning and sports facilities. The bans in the latter places render sponsorship impractical.

[29] Advertising has been banned since 1983 except at points of sale. A derogation from this total ban has been granted until 1996 allowing the sponsorship of motor sports vehicles competing in organized events which were part of a European or world championship.

[30] Advertising, including indirect advertising, is a hotly debated issue. In November 1995 the municipal authorities in Bucharest banned advertising on streets, buildings and transport in its jurisdiction. Since January 1993 10% of the money spent on advertising tobacco and alcohol and a proportion of the sales revenue must be allocated to a health fund.

[31] Tobacco advertising was prohibited in 1993 but the ban was ignored. A Presidential decree of February 1995 bans tobacco and alcohol advertising in the mass media. Two versions of an anti-advertising law have been considered by Parliament, the first pre-

pared by the Ministry of Health and Medical Industry, banning all kinds of tobacco advertising, and the second prepared by the State Anti-monopoly Committee, limiting advertising in the mass media. Both versions were considered within the framework of the Draft Law on Advertising. The second version was adopted by Parliament but was not being implemented in December 1995. It prohibits the showing of TV advertisements from 7.00 a.m. to 10.00 p.m. and the use of tobacco images and characters smoking in youth-oriented programmes. Also any printed tobacco advertisement must carry a health warning taking at least 5% of the advertisement's surface. It was anticipated that the more stringent first version of the law would be adopted on 1 January, 1997.

[32] See under 18 above for Italy.

[33] Advertising is banned. Some success has been realized with selective compliance with this law but advertising still continues on city trams and in some other locations.

[34] A draft Tobacco Control Law which passed its second reading in Parliament in December 1995 prohibits all direct advertising and sports sponsorship.

[35] Advertising on radio is allowed for a period of two years after the launch of new, low-tar and low-nicotine brands. In the autonomous regions of the Basque country, Castile Leon, Catalonia and Galicia advertising regulations are stricter and range from a total prohibition to varying more limited restrictions.

[36] Special moderation must be observed in forms of advertising other than those that are banned, e.g. outdoor advertising and promotion or advertising at sports arenas is forbidden. The Government is considering banning indirect advertising and promotion.

[37] A 1995 ordinance on tobacco under a new Federal Foodstuff law permits the Government to limit publicity for tobacco products solely to protect minors. This ordinance bans publicity in places where young people gather and in the youth press.

[38] In late 1995 advertising was continuing on Russian TV, which is widely available. It is not known how well the new advertising restrictions on Russian TV will be observed.

[39] Advertising is also banned in Government buildings. Indirect advertising can be seen on TV.

[40] In theory there is a ban on advertising but it is not detailed in law. Tobacco companies advertise their names but not cigarettes *per se*. Since late 1995 advertisements are seen on Russian TV, which is widely available. It is not known how well the new advertising restrictions on Russian TV will be observed.

[41] In July 1996 a law was passed banning the advertising of tobacco (and alcohol) on TV and radio and in the youth press. There had been a complete legislative ban for some time before that but there were no regulations to give effect to it, so advertisements were widely seen, particularly on Russian TV.

[42] Advertising of tobacco products is banned on TV and radio. Otherwise advertising, promotion and sponsorship is regulated by voluntary agreements. Advertising is not allowed in magazines whose readership is more than 25% women aged 15–25 years. By the end of 1996 all permanent shop-front advertising was to be removed. No poster advertising is allowed within 200 metres of schools. The expenditure permitted on some forms of advertising has been reduced and sponsorship budgets have been capped. There is tight control on the use of humour in advertising so that it is unlikely to appeal to the young. Sponsorship of events where the majority of participants or the target audience is aged under 18 years is banned.

In addition to the 16 countries mentioned above which have a complete ban on direct advertising in the mass media, a number of others have a virtually complete ban. These include Ireland, which allows direct advertising only in the adult press and internally at points of sale, and the Netherlands which bans advertising everywhere except in the press, where it is subject to voluntary restrictions – the ban on advertising in cinemas has been in effect since January 1996.

Several countries with a complete or virtually complete ban on direct advertising also ban indirect advertising (advertising through association with other products), including Finland, France, Ireland, Italy (on TV), Lithuania (since early 1996), Norway (since January 1996) and Poland (since early 1996). A draft Bill which passed its second reading in the Slovenian Parliament in December 1995 proposes a ban on indirect advertising. Belgium bans indirect advertising for products but still allows it for services (e.g. travel agencies). In June 1996 the Health Committee of the Belgian Parliament voted by an overwhelming majority in favour of a total ban on advertising and sponsorship of tobacco products, which it was expected would be adopted in a plenary session of Parliament in late 1996. Although Austria does not have a complete ban on direct advertising, there is a ban on indirect advertising.

In addition to the 16 countries with complete legislative bans on direct advertising and the two countries with virtually complete bans, a number of others have legislative bans in selected areas of the media. For example the following countries ban advertising on TV and radio: Albania, Armenia, Belgium, Estonia, Germany, Greece, Israel, Luxembourg, Malta, Poland, Romania, Spain (except for two years after the launch of a new low-tar, low-nicotine brand), Sweden, Turkey, Ukraine, the United Kingdom and Uzbekistan. Armenia and Sweden also ban

advertising in the press (and Ukraine in the youth press), while Belgium, Luxembourg, Malta and Uzbekistan also ban it in cinemas. In July 1996 a law was passed in Ukraine banning advertising of tobacco (and alcohol) on TV, radio and in the youth press. There had been a complete legislative ban for some time before that but there were no regulations to give effect to it, so advertisements were widely seen, particularly on Russian TV.

In the Czech Republic the legislative ban extends to TV only. In Poland, under the Tobacco Control and Health Protection Act 1996, there is a prohibition on the advertising or promotion of tobacco products and accessories as well as products imitating tobacco products and accessories and tobacco-related symbols on TV and radio, in the cinema, newspapers and magazines for children and teenagers, and in health care establishments, cultural and educational facilities, institutions of higher learning and sports facilities.

There are legislative restrictions on direct advertising in all media in Austria. In the Russian Federation two versions of an anti-advertising law have been considered by the State Duma (Parliament): (1) a law which bans all kinds of tobacco advertising, prepared by the Ministry of Health and Medical Industry, and (2) a law which limits advertising delivered through the mass media, prepared by the State Anti-monopoly Committee. Both versions were discussed within the framework of the Draft Law on Advertising. At present, the second version of the law has been adopted by the State Duma but in December 1995 it had not been implemented. It prohibits the airing of TV tobacco advertising clips from 7.00 a.m. to 10.00 p.m., and the use of tobacco images and characters smoking in youth-oriented programmes. Also, any printed tobacco advertisement is required to carry a health warning taking at least 5% of the advertisement's surface. It was anticipated that the first, more stringent version of the anti-advertising law would be adopted on 1 January, 1997. In the Republic of Moldova, the advertising of local brands is prohibited but there are no restrictions on advertising imported brands. In addition to bans in selected areas of the media, a number of countries also have legislative restrictions in other areas: in Belgium on billboards and in the press, in Greece in the cinemas, in Ireland in the adult press, and in Israel, Poland and Switzerland in the press.

As well as legislative bans and restrictions in some areas of the media, some countries have restrictions through voluntary agreement in other areas, e.g. Germany and the United Kingdom on billboards and in the press and cinemas, and the Netherlands in the press. Denmark appears to be the only country in the Region to operate a system of voluntary agreements covering all the media in this connection. In some countries, regions or cities have moved to have more stringent regulations than those operating at national level, e.g. some of the autonomous regions of Spain. In Kazakhstan, all advertising of tobacco has been banned in the capital, Almaty, since April 1994, and in Romania, advertising has been banned on the streets, buildings and transport in the jurisdiction of Bucharest since November 1995. Information on tobacco advertising was not provided for Azerbaijan, Bosnia and Herzegovina, Georgia or The Former Yugoslav Republic of Macedonia.

A number of countries identified problems with indirect advertising, including Bulgaria, Italy, Kyrgyzstan, Lithuania, Malta and Turkey. The recent proliferation of private kiosks selling cigarettes in the NIS provides opportunities for highly visible advertising of tobacco products. In Poland about 50% of all billboard advertising is taken by tobacco companies. Another issue of concern is spillover advertising from transnational media. While this is of concern in western Europe, through satellite channels, it appears to be of particular concern in the CCEE and NIS where Russian TV, which in late 1995 was still carrying cigarette advertising, is widely available.

This raises the issue of supranational solidarity on the control of tobacco advertising. One example of such solidarity is the EU, which has banned the advertising of tobacco products on TV since October 1991 (Directive 89/552/EEC). The European Commission has also proposed the introduction of a total ban on the advertising of tobacco products except within specialized tobacco sales outlets. A draft Directive to this effect has been approved by the European Parliament and the final decision now rests with the Council of Ministers of Health. Although the proposal has the support of the majority of member states, four countries (Denmark, Germany, the Netherlands and the United Kingdom) are currently forming a blocking minority.

Sponsorship

Finland, France, Italy, Monaco, Portugal and San Marino ban sponsorship by tobacco companies. In June 1996 the Health Committee of the Belgian Parliament voted by an overwhelming majority in favour of a total ban on the advertising and sponsorship of tobacco products, which was expected to be adopted in a plenary session of Parliament in late 1996. There are legal restrictions on sponsorship in Iceland, Ireland, Luxembourg and the Netherlands and some voluntary restrictions in Denmark and the United Kingdom. 1996 legislation in Norway and Poland banning advertisements in sports facilities and cultural and educational facilities have rendered sponsorship impractical. In Ukraine, a law passed in July 1996 prohibits the sponsorship of events aimed mainly at young people aged under 18 years if the name or image of tobacco products (or alcohol beverages) is used. In Lithuania, the Tobacco Control Law of February 1996 includes a ban on the sponsorship of events aimed at young people aged under 18 years. In Slovenia, the draft Tobacco Act which passed its second reading in Parliament in December 1995 proposes a ban on sports sponsorship. In France, sponsorship was banned in 1993 but an amendment allows the transmission on TV and publication in the press of reports of sports competitions taking place in countries where tobacco advertising is allowed. In Portugal, a total ban was imposed in 1983 but a derogation was granted in 1987 until March 1996, allowing sponsorship of motor sports vehicles competing in organized events which are part of a European or world championship.

The imposition of bans on sponsorship raises the question of alternative sources of funding for sports and cultural events. In Switzerland a coalition of health agencies is actively promoting the idea of creating a health promotion foundation funded by new tobacco taxes to fund sports and cultural events. This is happening in Geneva, where the local Tobacco Education and Prevention Centre (CIPRET) sponsors sports and cultural events, ranging from rock concerts to motorcycle races, with funds from the municipal government. In Slovenia, health promotion interests are also proposing an alternative funding foundation for sports events since a ban on sports is one of the proposals in the draft tobacco law mentioned above.

Health warnings

Countries have frequently adopted systems of compulsory health warnings on cigarette packets and, in some cases, on the wrappers of other tobacco products. At least 40 of the 49 Member States of the Region have such a policy (Table 2.2). Slovenia is considering mandatory warnings in its draft tobacco law. Seven countries (Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Kazakhstan, The Former Yugoslav Republic of Macedonia and Turkmenistan) did not provide information on this point; two countries – Belarus and Estonia – have warnings on domestically produced cigarettes only. IHealth warnings are not apparently required in Romania, although the health sector has made recommendations to the legislature on the matter. The 15 EU countries plus Iceland, Monaco, Norway, San Marino and Switzerland have rotating warnings.

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Tobacco advertising and children's smoking: a review of the evidence

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Introduction

The possibility of a link between tobacco advertising and children's smoking has always been a contentious issue, partly because such cause and effect relationships are notoriously difficult to untangle, and partly because considerable vested interests are involved. Notwithstanding these pressures, this article reviews the evidence for such a link and draws the conclusion that, within the confines of doubt that will always exist in social scientific research, it now has to be accepted that tobacco advertising *does* influence children's smoking behaviour.

The debate

There is no single, simple explanation as to why many children take up the smoking habit. However, it is clear that children are more likely to smoke if they are encouraged to do so by the examples and pro-smoking or permissive attitudes of parents, siblings and peers[1-5]. It seems reasonable to assume that children will also be more likely to smoke if they are encouraged to do so by wider social or cultural pressures outwith the immediate circle of family and friends. Advertising is part of this wider social influence.

An alternative view, typically expressed by the tobacco industry, is that advertising has only one effect: to encourage existing adult smokers to change or maintain brand preferences[6,7]. From this perspective tobacco advertisements do not promote or reinforce smoking *per se*, whether by children or anyone else. The argument runs that advertising can only increase consumption in markets that have not reached maturity, that is, become static or reached a ceiling, and that the market for tobacco is mature[6].

There is a fundamental flaw in this thesis. The idea of a single, mature market for tobacco goes against basic marketing theory (e.g.[8]). There are in fact many markets for tobacco – young smokers, old smokers, female smokers, male smokers, smokers in developing countries and so on. Some of these markets are growing, some are not, but a key group for the tobacco industry is young smokers, who have to be recruited for the industry to flourish. In no sense can this market be said to be mature.

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It is also worth noting that the notion that tobacco advertising does not expand markets goes against one of the major functions of advertising. An Australian agency executive put it this way:

> We have the ironic situation of the Advertising Federation of Australia on the one hand saying that advertising in general helps expand markets, and thereby reduces the costs of products; and on the other hand claiming that cigarette advertising keeps the market in a miraculously static state[9].

However, despite the weaknesses of the tobacco industry's public position, and the fact that it has been questioned by critics from within the advertising and media industries as well as by other commentators[10-12], this controversy cannot be resolved on theoretical considerations alone. The relationship between advertising and smoking must also be considered from an empirical perspective.

The research evidence

It is of course impossible to *prove* that advertising encourages smoking among the young. For this reason researchers, in common with social researchers in other fields, have proceeded by building a plausible case on the basis of circumstantial evidence, rather than seeking elusive proof.

With tobacco advertising the case is as follows[13]. If children are influenced by cigarette advertising then it should be possible to demonstrate that they are very much aware of such advertising. It should also be possible to demonstrate that there are important differences between under-age smokers and non-smokers. If advertising has a rewarding or reinforcing effect on smoking, one would expect under-age smokers to be more aware and more appreciative of such advertising. This would suggest that cigarette advertising is encouraging under-age smokers to continue with the habit. Furthermore, if advertising has an effect on the uptake of smoking then it should be possible to show that it is children who are more familiar with, and more appreciative of, cigarette advertising who then go on to smoke.

Past research in each of these three areas will be reviewed in turn, before examining investigations of branding and of how cigarette advertising seems to work. Finally, studies adopting two alternative approaches to this problem – econometric analyses and investigations of the impact of advertising bans – will be examined.

Children's receptiveness to cigarette promotion

Advertising Research in several countries has shown that children are adept at recalling, recognizing and identifying cigarette advertisements. For example, many children can identify edited or cryptic cigarette advertisements that do not show brand names[4,5,14-18]. A survey conducted by the UK Office of Population Censuses and Surveys[5] found that 84 per cent, 64 per cent, 45 per cent and 41 per cent of fourth-year secondary school children correctly

identified advertisements for Silk Cut, Benson and Hedges, Rothmans and Dunhill, respectively.

There is even evidence that pre-school children are aware of cigarette advertising. Fischer *et al.*[19] found that 30 per cent of three-year-olds and 90 per cent of six-year-olds correctly matched "Old Joe", the cartoon character promoting Camel cigarettes, with a picture of a cigarette. They concluded that "by the age of 6 years, Old Joe is as well recognised as Mickey Mouse".

Of even more concern, research has also shown that children are often more aware of cigarette advertising than adults are[18,20,21]. For example, DiFranza *et al.*[18] found that teenagers shown examples of the cartoon character "Old Joe" were better at recognizing the cartoon character (89 per cent teenagers versus 72 per cent adults), identifying the product being advertised (90 per cent versus 67 per cent) and identifying the brand name (94 per cent versus 58 per cent). The teenagers also found the advertisement more appealing: 58 per cent of the teenagers versus 40 per cent of the adults found them "cool" and 74 per cent versus 55 per cent found them "interesting".

Sponsorship and other forms of promotion. Children are also receptive to other forms of cigarette promotion. The majority of UK children of 12 years and above are able to name cigarette brands and sponsored sports and they tend to be most aware of brand names and sports shown on television[22,23]. This indicates that many children learn about connections between cigarette brand names (or their visual cues) and sports by watching television. This is probably one of the reasons children and adults often claim to have seen cigarette advertisements on television[24,25]. Thus as Ledwith[22] has suggested, television sports sponsorship by cigarette manufacturers acts as cigarette advertising and thereby circumvents the UK law banning cigarette advertisements on television.

The imagery associated with cigarette sports sponsorship seems to be very effective. A Scottish study found that children as young as six tended to associate John Player Special and Marlboro brands, both of which sponsored motor racing, with "excitement and fast racing cars"[16,23]. Furthermore, these associations were triggered by simple John Player Special (JPS) and Marlboro advertisements which made no mention of motor racing. Six-year-olds have no "defences" against sponsorship: they show little understanding of its commercial and persuasive aims[23].

There is also evidence that children can identify cigarette brand imagery in "brand-stretching" advertisements for other products and services. In another Scottish study[15] children were shown a glamorous advertisement for JPS Grand Prix Holidays. Although the advertisement did not mention "cigarettes" or show a Government Health Warning, 22 per cent of the six- to ten-year-olds and 91 per cent of the 12- to 14-year-olds said it advertised cigarettes or cigarettes and holidays.

These findings suggest that a strategy outlined in a 1979 British American Tobacco (BAT) memorandum[11] is particularly effective with children:

> Opportunities should be explored by all companies so as to find non-tobacco products and other services which can be used to communicate the brand or house name, together with their essential visual identifiers. This is likely to be a long-term and costly operation, but the principle is nevertheless to ensure that cigarette lines can be effectively publicized when all direct forms of communication are denied...[11].

Clearly, many Scottish children can identify the "essential visual identifiers" of John Player Special at a glance.

Can cigarette advertising reinforce smoking?

What is reinforcement? Advertising practitioners maintain that one of the most important functions of advertising is to reward existing customers[10,26-28]. For example, advertising congratulates people for having bought this car, or reminds them how fashionable they are for buying that pair of jeans. In this way, it reinforces behaviour. Good reinforcing advertisements will generate greater awareness and appreciation among those who use the relevant product. Thus, if cigarette advertising reinforces under-age smoking, one would expect under-age smokers to be more aware and more appreciative of cigarette advertising than non-smokers. There is now considerable evidence that this is so.

The evidence for reinforcement. Research in Australia, the UK and the US has shown consistent differences between under-age smokers and non-smokers of the same age in terms of a variety of measures of awareness of cigarette advertising. Under-age smokers tend to be more adept at recalling, recognizing and identifying cigarette advertisements[3-5,14,16,17,29]. For example, in a study conducted by the UK Office of Population Censuses and Surveys[5] children who were committed smokers throughout a two-year period were twice as adept at identifying edited cigarette advertisements which did not show brand names than children who were non-smokers throughout. There is now little doubt that under-age smokers tend to pay more attention to cigarette advertising than do non-smokers of the same age.

Under-age smokers also tend to be generally more appreciative of cigarette advertising than non-smokers of the same age. They tend to have more positive attitudes towards cigarette advertising[4,30,31], are more likely to have favourite cigarette advertisements[3,4,32] and tend to rate cigarette advertisements more highly in terms of attractive qualities, such as "exciting", "eye-catching"[4,5,33]. For example, in a Scottish study, 73 per cent of under-age smokers liked an advertisement for the leading brand, Kensitas Club, compared with 34 per cent of non-smokers[4]. In a study in England, 61 per cent of under-age smokers compared with 15 per cent of non-smokers had a favourite cigarette advertisement[3].

The role of other factors. Many factors, not just advertising, are associated with under-age smoking. For example, children are also influenced by parents, siblings and peers. However, two of these studies showed that under-age smokers' greater awareness and/or greater appreciation of cigarette advertising was independent of other important predictors of under-age smoking[4,30]. The

most recent study[4] found that under-age smokers' greater awareness and appreciation of cigarette advertising was independent of sex, age, socio-economic group, appreciation of advertising in general, attitudes towards smoking and smokers, perceived parental attitudes towards under-age smoking, and smoking by parents, siblings and peers. Therefore it is extremely unlikely that associations between awareness/appreciation of cigarette advertising and under-age smoking can be explained in terms of uncontrolled associations with other, perhaps more important, variables.

These findings indicate that under-age smokers are paying more attention to cigarette advertising and getting more pleasure, reward or reassurance from it than are children who do not smoke. This is likely to reinforce their smoking. In other words, cigarette advertising appears to be encouraging children who smoke to continue with the habit.

Can cigarette advertising recruit children to smoking?

Cause and effect. The findings described above do not necessarily mean that advertising plays a part in inducing children to start smoking. Cause and effect relationships are always difficult to disentangle. For example, children may become more aware and appreciative of cigarette advertising after they start smoking. Indeed, research in Australia has shown that changes in attitudes do tend to occur after children start smoking[34].

However, there are good reasons for suggesting that cigarette advertising has predisposing as well as reinforcing effects. In a survey of children in England, non-smokers who had a favourite cigarette advertisement were more likely to believe that smoking has benefits such as making you look tough and grown-up than non-smokers who did not have a favourite cigarette advertisement[32]. Charlton suggested the non-smokers who had a favourite cigarette advertisement could be the next recruits to smoking in that they seem to be providing themselves with "evidence" for the values of the habit[32].

A study in the US showed that children who were more approving of "Old Joe" Camel cartoon advertisements were more likely to be either ambivalent about their smoking intentions or to express a definite intention to smoke[18].

In a Scottish study, primary school children who said they would smoke when they were older tended to have more positive attitudes towards cigarette advertising than children who said they did not[31]. A subsequent survey showed that 11- to 14-year-olds who said they had tried cigarettes (but did not at that time consider themselves to be smokers) tended to be more aware and appreciative of cigarette advertising than children who said they had not tried cigarettes[4]. This greater awareness and appreciation was independent of other important predictors of smoking.

These findings are consistent with the view that perceptions of cigarette advertising play a part as precursors in the transition from non-smoker to smoker. However, more convincing evidence has been obtained from longitudinal surveys indicating that children who are more appreciative and/or more aware of cigarette advertising are more likely to go on to become smokers.

Longitudinal studies. In a study conducted in Australia[34], children who approved of cigarette advertising were twice as likely to become smokers during a follow-up year than children who disapproved. Smokers who approved were less likely to give up than smokers who disapproved of cigarette advertising. The "approval of cigarette advertising" effect was independent of a number of other important influences on under-age smoking (for example, smoking by parents, siblings and peers).

In another longitudinal survey in Australia[35] non-smokers who thought cigarette advertisements "make you think you like to smoke a cigarette" were more likely to become smokers in each of two follow-up years. Again, the effect was independent of other influences on smoking (for example, smoking by parents, siblings and peers and intentions to smoke). Again, it was substantial. After adjustments for the effects of other predictors, there was a difference of 15 per cent in the prevalence rates of smoking after two years for children who thought they were influenced by cigarette advertising compared with those who did not.

The respondents in the survey were questioned again in early adulthood[36]. Perceptions of the power of cigarette advertising among 12-year-olds were an important predictor of later adult smoking. Again, this association was independent of several other predictor variables.

A study in the UK[5] found that girls who became smokers by the end of a two-year follow-up period were more aware of cigarette advertising at the beginning of the survey than girls who remained non-smokers throughout. This association was not apparent among the boys. Unfortunately, the variables describing perceptions of cigarette advertising were not entered into the analysis of factors predicting the uptake of smoking. Therefore we do not know if perceptions of cigarette advertising would have been predictive of smoking uptake when other important variables were controlled or held constant.

Most longitudinal studies have examined the predictive value of perceptions of cigarette advertising over quite long periods. However, a study in England[3] found that cigarette brand awareness was a significant predictor of the uptake of smoking over a relatively short period of four months. This association was independent of a number of other predictors of smoking uptake (for example, attitudes towards smoking, parental smoking and best friends' smoking).

Finally, a longitudinal survey in Scotland examined the extent to which measures of awareness and appreciation of cigarette advertising were predictive of changes in intentions to smoke when older among under-age smokers, triers and non-smokers[37]. Two findings were clear-cut. Children whose intentions to smoke became more positive over a one-year follow-up period tended to be more aware of cigarette advertising at the time of the first interview. Second, children whose intentions to smoke became more negative between the interviews tended to be less appreciative of cigarette advertising at the time of the first interview.

These associations were independent of a number of other predictors. Of particular interest, they were independent of smoking status at the first

interview. This indicates that perceptions of cigarette advertising may influence subsequent changes in intentions about future smoking among smokers as well as non-smokers. This is consistent with findings in the Australian study described above[34] indicating that perceptions of cigarette advertising are predictive of giving up smoking as well as the uptake of smoking.

Studies of branding and how cigarette advertising works

Branding and young people. The tobacco industry claims that cigarette advertising merely encourages existing adult smokers to change or maintain brand preferences. However, there seems to be no a priori reason why advertising should not affect brand choice among under-age smokers. As we have suggested, there is good evidence that cigarette advertising and other forms of promotion are getting through to the young and to under-age smokers in particular.

In fact, there is considerable evidence from research in Australia, the UK and the US that under-age smokers tend to show enhanced or heightened preferences for heavily advertised brands[4,5,14,17,38,39]. For example, research in Glasgow[4] found that 95 per cent of under-age smokers, compared with 53 per cent of adult smokers, usually smoked Kensitas Club, a brand heavily advertised in the West of Scotland[39].

These findings indicate that promotional devices which help determine and reinforce adult cigarette brand choice have an even greater effect on under-age smokers and provide further support for the research summarized above indicating that cigarette advertising reinforces smoking among the young.

How branding works. Researchers investigating how this reinforcement may work emphasize young people's fundamental ambivalence about smoking, and the potential for advertising to reduce this. For example, Marsh and Matheson[25] found that 44 per cent of smokers (but only 26 per cent of non-smokers) agreed that "smoking can't really be dangerous or the Government would ban cigarette advertising".

It is also likely that under-age smokers are more directly reinforced by certain forms of cigarette advertising. Recent qualitative research in Glasgow[40,41] suggests that young smokers attempt to reduce some of the dissonance between knowledge that smoking is harmful and the pleasures obtained from cigarettes by paying attention to or seeking out features in advertisements that give them reassurance.

There is good evidence that smoking has a symbolic appeal for many young people. Several studies have shown associations between under-age smoking and precocious, rebellious behaviour; young smokers also tend to be perceived as tougher or more rowdily extrovert[1,2,42]. Given this, it does seem reasonable to suggest that under-age smokers enhance the symbolic appeal of smoking by paying attention to the imagery used in cigarette advertisements.This seems to be particularly important with respect to highly advertised brands preferred by under-age smokers. The qualitative research in Glasgow[40,41] indicates that brand imagery appears to be an important element in young people's smoking

behaviour; they will, for example, readily identify with some brands but shun others.

Econometric studies

The problems. Econometric studies have attempted to specify variables (such as income, price, advertising expenditure, levels of advertising controls, measures of anti-smoking publicity) that can effectively account for changes or differences in aggregate measures of cigarette or tobacco consumption (such as per capita expenditure on cigarettes or per capita weight of tobacco sales).

The major problems in this kind of research are concerned with the specification and measurement of variables. Inaccurate measurements and omission of relevant variables can lead to misleading conclusions[43]. It is especially difficult to obtain measures of promotional expenditure. For example, research by McGuinness and Cowling[44,45], which found a significant association between advertising and total demand for cigarettes, has been criticized for not considering poster and other promotional activities[46]. In fact, the cigarette companies refused to release this information without obtaining from the researchers the right to veto any results obtained[45]. Furthermore, data used in the Metra studies[47], funded and extensively publicized by the tobacco industry, have not been made available to independent researchers[43,48].

Despite these problems, independent critical reviews suggest that econometric analyses have shown small positive associations between advertising and cigarette consumption[48-50]. For example, the recent Economics and Operational Research Division (EORD) report[49], which included additional analyses of available data, concluded that lower levels of advertising controls and higher levels of tobacco advertising expenditure are associated with higher levels of tobacco consumption.

Small but significant. It is true that associations between advertising and cigarette consumption in econometric studies tend to be small. However, this does not necessarily mean that a ban on tobacco advertising would have little influence on demand. As Cox[51] has pointed out, econometric studies indicate merely that minor short-term fluctuations in high levels of tobacco advertising have only a small influence on total demand. A comprehensive ban on tobacco promotion is likely to have much more dramatic effects.

Furthermore, and most important in the present context, econometric studies have little to say about youthful smoking because they have examined aggregate measures of cigarette or tobacco consumption. They have not examined relationships between advertising and under-age smoking. It is possible that the small associations between advertising and tobacco consumption obtained in econometric studies represent averages of small associations in mature markets of older smokers and larger associations in immature or dynamic markets of younger smokers. In fact, this is likely to be so because several studies described above indicate that cigarette advertising has a greater effect on children than on adults.

Advertising bans

The EORD report[49] suggests that studies of "advertising bans provide the most reliable test-bed, as they involve large changes in advertising volumes and there are no doubts about the direction of causation". There are complications, in that advertising bans are rarely introduced in isolation from other measures designed to discourage smoking – such as price increases, stronger health warnings and restrictions on sales to young people. However, after due consideration of evaluations of bans in four countries (Norway, Finland, Canada and New Zealand), which included additional analyses of data for three of them (Norway, Canada and New Zealand), the EORD researchers came to the following conclusion:

> In each case the banning of advertising was followed by a fall in smoking on a scale which cannot reasonably be attributed to other factors[49].

The EORD analysis of advertising bans was concerned mainly with overall levels of tobacco consumption because suitable data referring to short-term fluctuations in under-age smoking are not available, although the report did mention that there are incomplete figures indicating that the ban in Norway was followed by a decrease in under-age smoking. Furthermore, the higher awareness and appreciation of cigarette advertising among children compared with adults, shown in some of the studies described above, suggests that advertising bans will exert their greatest influence on under-age smoking.

Conclusion

An extensive range of evidence now points to the conclusion that advertising does encourage smoking, especially among the young. Studies of children show that cigarette advertising is getting through to them; that young people who smoke are more aware of, familiar with and appreciative of cigarette advertising than are their peers who do not; and that their awareness of cigarette advertising *predicts* the uptake of smoking. Econometric studies show that the overall amount of advertising correlates with levels of smoking. Studies of the impact of advertising bans show that forbidding cigarette advertising leads to a reduction in tobacco consumption. Furthermore, in each of these types of study other dependent variables have been appropriately controlled.

Given these findings, it is not surprising to learn that there is documented evidence indicating that the tobacco industry does not believe its own public pronouncements that tobacco advertising has no influence on children. DiFranza *et al.*[18] have provided detailed references to tobacco industry documents and statements by its personnel indicating that its public denial that advertising influences young people is not taken seriously in private. Taylor[11] and Ferriman and Macrae[52] have produced evidence that the tobacco industry is deliberately targeting young people. For example, documents laid before a Canadian court and later passed to the UK Observer newspaper[52] show that children as young as 12 were targeted in the marketing and advertising strategies of a subsidiary of BAT Industries. If the tobacco industry genuinely

believes that cigarette advertising does not influence the young it would not engage in such activities.

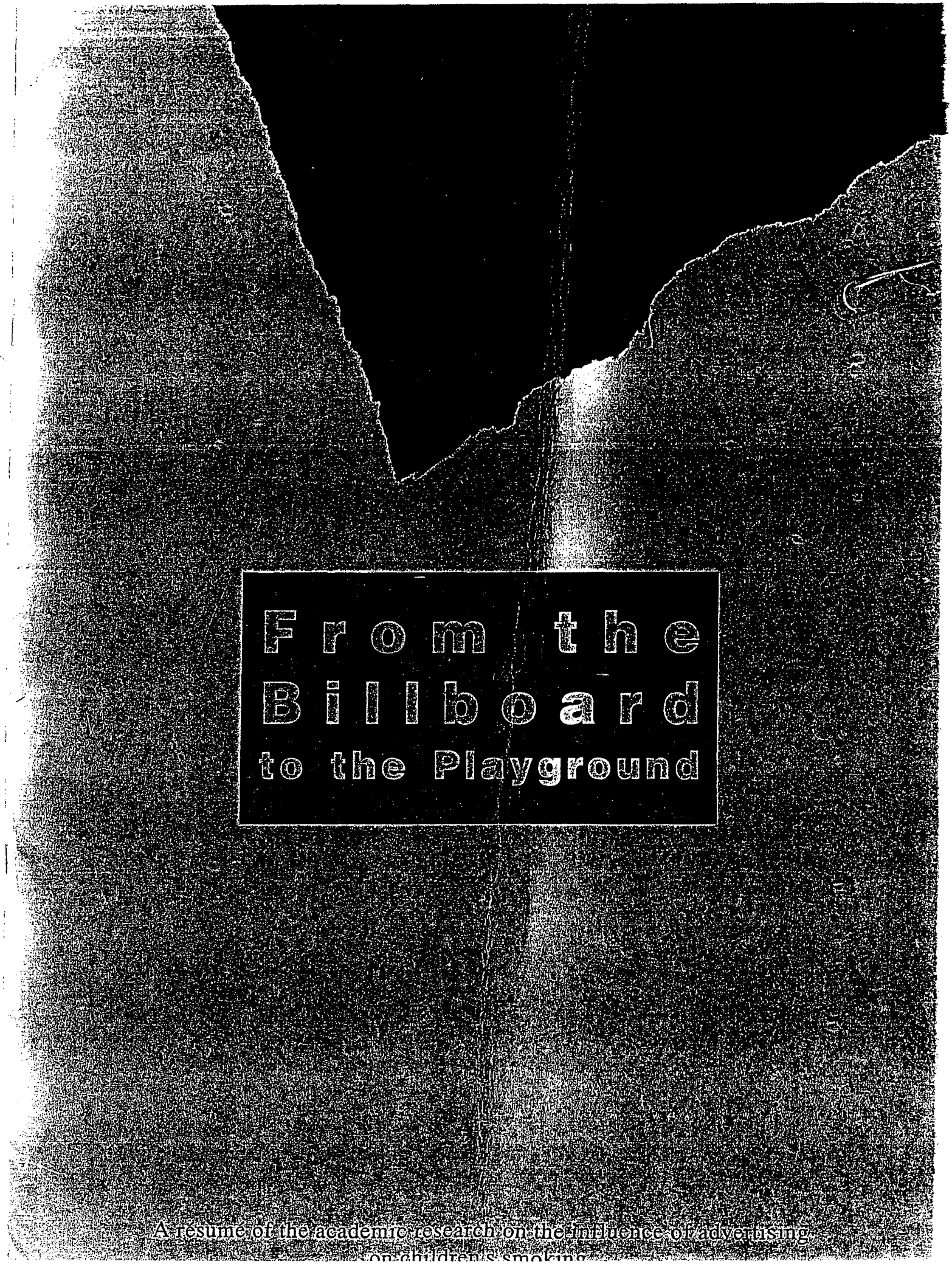
The tobacco industry has an obvious vested interest in continuing to dispute what is now compelling evidence. The rest of the marketing world does not have the same pressures on it and should now acknowledge that, within the inevitable confines of social science research, the hypothesis that cigarette advertising influences young people's smoking is proven.

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A resume of the academic research on the influence of advertising on children's smoking

From the Billboard to the Playground

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THE TOBACCO LOBBY'S FLAWED CLAIMS

The Tobacco Lobby claims that advertising only affects the **brands** of cigarettes that are smoked and not overall levels of smoking. In other words, whilst it might influence sales of, say, Benson & Hedges versus Embassy Regal, it does not influence overall sales of cigarettes. This assertion is often backed up with claims that the market for tobacco is "mature" – that is, that the number of smokers has reached a ceiling and will not increase whatever the industry's marketing people do (1).

There are three flaws in these claims:

Flaw One Whilst advertising does undoubtedly influence brand choice, it has also been shown to have **other** important effects. There is now hard evidence that it is **getting through** to children, encouraging those of them who already smoke to **continue** doing so, and even helping those who do not **to start**. All these effects are discussed further below.

Flaw Two The idea of a mature tobacco market – a market that can grow no more – cannot be supported. In fact, as any marketing manager will tell you, there are actually many markets for tobacco – young smokers, old smokers, female smokers, male smokers, cigar smokers and so on. Some of these markets are growing, some are not. The key group here for the tobacco industry is young smokers. They have to be recruited and retained for the industry to flourish. In no sense can this market be said to be mature.

Flaw Three The tobacco lobby's assertions assume that effects on brand choice – the only advertising effects they will admit to – are harmless. What they are arguing is that advertising helps the consumer to make better informed decisions. It tells them what brands are available, what qualities they have, what they cost, etc. But such information is an important part of being an effective and sophisticated consumer of any product, not just tobacco. So the argument that tobacco advertising affects brand choice can be re-stated as "advertising makes the smoker a more effective and sophisticated consumer of tobacco."

Is this acceptable?

When this argument is applied to children there are real grounds for concern. All the evidence is that the brand choice effects of cigarette advertising are **more** marked amongst children than adults. The most heavily advertised brands are even more popular amongst under-age smokers than they are amongst adult smokers (2, 3, 4, 5, 6). In short, advertising is making children more effective consumers of tobacco.

Again, is this acceptable?

"A PUBLIC POSITION"

The tobacco lobby's stance has been questioned and rejected not just by those with an interest in health, but also by experts in the advertising world (7). For example, Emerson Foote (8), former chairman of the advertising agency McCann Erickson, dismissed the brand effects claim as a "public position" which he did not think "anyone really believes". He went on to say that the industry was much more concerned with "*creating a positive climate of social acceptability for smoking, which encourages new smokers to join the market.*"

THE HARD EVIDENCE AGAINST TOBACCO ADVERTISING

These doubts about the tobacco lobby's posture are now backed by hard evidence that advertising **is** encouraging under-age smoking. This is not to suggest that advertising is the only thing that leads children to smoke. Many factors do that – their parents' attitudes, their age, whether their friends smoke, and so on (see for example (6)). Nor does it imply that children are passive dupes who can be manipulated at will by advertisers.

However, children are vulnerable, and research done in the UK, the USA and Australia, shows that cigarette advertising is:

- getting through to children
- encouraging children who smoke to carry on smoking
- recruiting children to smoking

Cigarette Advertising is Getting Through to Children

It is now beyond doubt that, whatever the intentions of the tobacco industry, children are very familiar with cigarette advertisements and that they take positive messages about smoking from them. In a recent Scottish survey (6, 9):

- 83% of 11–14 year-olds could **recall** seeing at least one cigarette advert and over half of them could remember two or more

- when the same children were shown examples of cigarette adverts, on average, they were able to **recognise** as many as **five** different adverts

The sorts of messages they took from these advertisements can best be expressed in the children's own words (10):

> "Hard men smoke this cigarette ...
> Not hard but tough, like John Wayne."

> "[the advert] is telling you that if you smoke them, you're gonna be a macho he-man."

> "It's colourful like all cigarette ads, trying to associate their products with glamour."

> "it's glamorizing cigarettes ... cocktails and all that fanciness."

> "You'll have a relaxed time if you smoke this cigarette."
> "It must be cool to smoke ... like a cowboy ... relaxed ... nothing gets you going, nothing bothers you."

> "It (a particular cigarette advertisement) is for anyone who can see himself as a racing driver. The dreamers of the world."

Cigarette Advertising is Encouraging Children to Continue Smoking

Advertisers maintain that one of the most important jobs of advertising is to 'reward' their existing customers (11). For example, advertising congratulates people for having bought this car, or reminds them how fashionable they are for buying that pair of jeans. In this way, it **reinforces** behaviour. Good reinforcing advertisements will generate greatest awareness and appreciation amongst those people who use the relevant product. This is precisely what happens with tobacco advertising and children.

Research in the UK, the USA and Australia shows that, when compared with non-smokers, children who smoke are more aware and appreciative of cigarette advertising (12). In a recent Scottish survey (6) children who smoke:

- were consistently better at recalling and recognising cigarette advertisements. For example, 85% of young smokers recognised five or more cigarette ads, compared with only 63% of non-smokers.

- were consistently more able to identify brands in cigarette advertisements which do not show brand names. For example, 46% of young smokers could identify the imagery in five or more cigarette ads, compared with only 12% of non-smokers.

- consistently expressed a greater liking for cigarette advertisements. For example, 73% of young smokers liked the leading cigarette brand's advertising, compared with only 34% of non-smokers.

Furthermore, these differences were independent of all the other factors that are known to influence smoking, and of attitudes to advertising in general. They show that under-age smokers are paying more attention to cigarette advertising, and getting more pleasure and reward from it than children who do not smoke. This reward helps reinforce their smoking. In other words, cigarette advertising is encouraging children who smoke to continue with the habit.

Cigarette Advertising is Recruiting Children to Smoking

If advertising does affect the uptake of smoking, then it should be those children who are most familiar with, and appreciative of, cigarette ads who go on to smoke. A number of separate research studies have shown this to be so.

- Children who say they are going to start smoking in the future, or who are just beginning to experiment with cigarettes, know and like tobacco advertisements more than other children (13, 6).

- Non-smoking children who like cigarette advertising are more likely to believe that smoking has benefits such as making you look tough and grown up (14).

- Children who approve of cigarette advertising are **twice** as likely to become smokers in the future as children who disapprove of it (15).

Most damning of all, a recent Scottish study interviewed children about smoking twice, with a year between the interviews. It showed that the children who changed their attitudes **in favour** of smoking, paid more attention to cigarette advertising than other youngsters did **before** this change took place (16). For example, twice as many of them were able to identify the imagery in five or more different cigarette advertisements compared with children who remained consistently anti-smoking. These differences were again independent of other factors that are known to influence smoking. The only logical explanation for these findings is that advertising is playing a part in the change process and that the youngsters are using it to support their move towards smoking. In short, advertising is helping children to start smoking.

SPONSORSHIP AND OTHER PROMOTIONAL TACTICS

The tobacco industry knows that the days of direct cigarette advertising are numbered despite their arguments. Consequently, they are focusing their attention on two alternatives to advertising – "brand stretching" and sponsorship.

Brand stretching was eloquently described in a 1979 British American Tobacco memorandum (7):

> 'Opportunities should be explored by all companies so as to find non-tobacco products and other services which can be used to communicate the brand or house name, together with their essential visual identifiers.'

Their motives were also made clear in the same memorandum:

> ' ... the principle is to ensure that tobacco lines can be effectively publicised when all direct forms of communication are denied.'

Hard research evidence shows that this strategy works well with children. For example, when shown an advertisement for JPS Grand Prix Holidays, which did not mention cigarettes or carry a Government health warning, 91% of 12–16 year-olds said it advertised cigarettes (10).

Sponsorship has provided a similarly indirect but effective promotional opportunity for the tobacco industry. Another Scottish study (17, 18) has shown that children as young as six clearly associate the John Player Special and Marlboro brands – both of which sponsor motor racing – with 'excitement and fast racing cars.' Furthermore, these associations were triggered by simple JPS and Marlboro advertisements, which made no mention of motor racing. It should also be noted that six year-olds have no 'defences' against sponsorship. They are completely unaware of its commercial and persuasive aims (17).

A TIME FOR ACTION

In summary, the evidence shows:*

- tobacco advertising **is** getting through to children
- by the industry's own logic, tobacco advertising **is** making children more effective consumers of tobacco
- tobacco advertising **is** reinforcing the habit amongst children who already smoke
- tobacco advertising **is** encouraging children to start smoking
- 'indirect' promotions such as 'brand stretching' and sponsorship also get through to children

It should be recognised that a ban will significantly reduce the pressure on children to smoke. This is not to say that a ban will by itself stop children smoking: as we have already said many factors, not just advertising, lead children to smoke. Furthermore, experience from other countries, especially Norway, shows that advertising bans need to be combined with positive health education programmes. Nonetheless it is clear that without cigarette advertising fewer children would become, and remain, smokers and fewer would ultimately die of smoking related diseases. Decisions about a ban should be made in the light of these facts.

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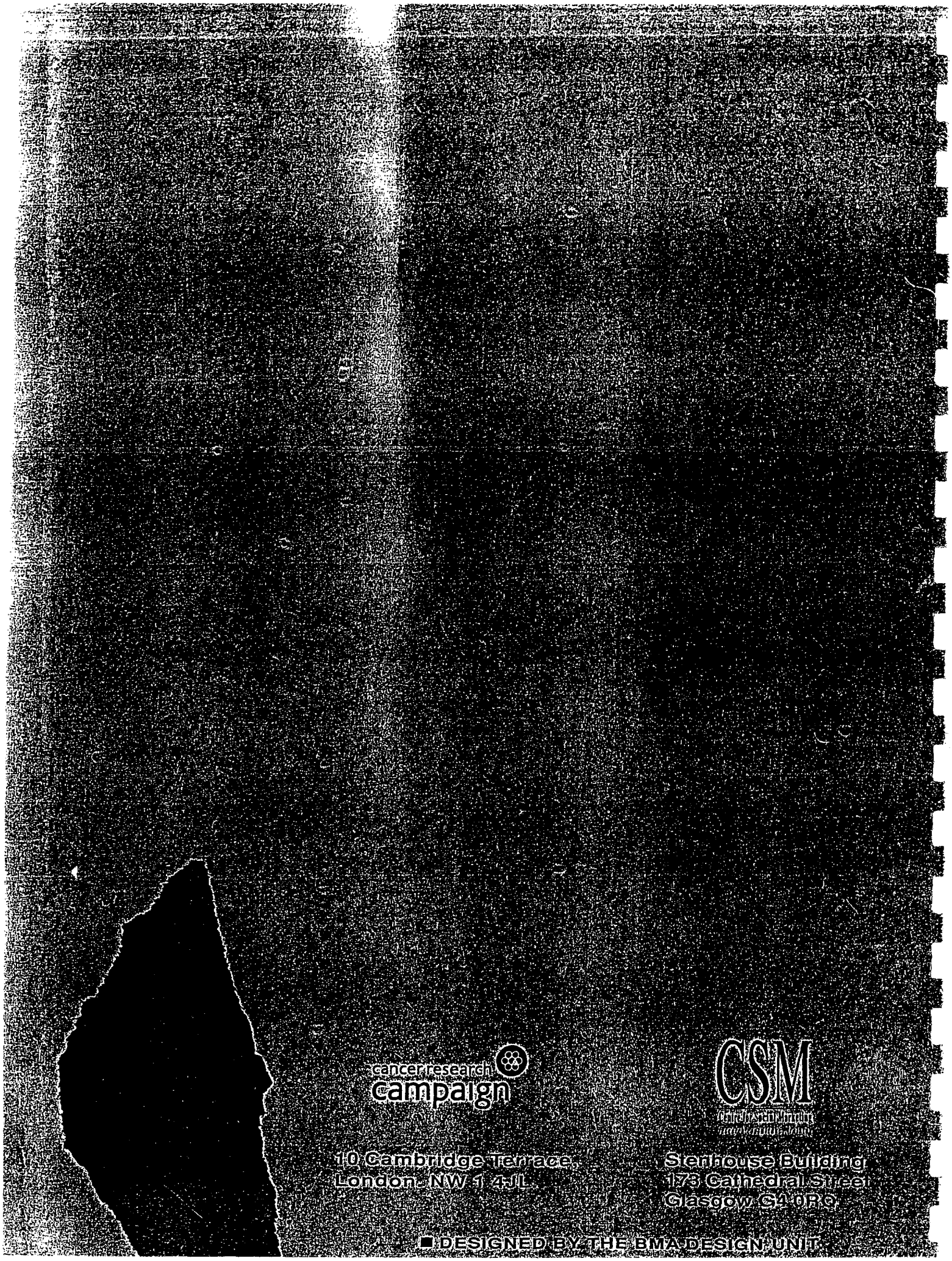
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Cigarette advertising and children's smoking: why Reg was withdrawn

G B Hastings, H Ryan, P Teer, A M MacKintosh

See editorial by S Chapman

Abstract

Objective—To examine the appeal of the Embassy Regal "Reg" campaign to young people.

Design—Three quantitative surveys and one piece of qualitative research: (*a*) self completion questionnaire administered in classrooms, (*b*) questionnaire led interviews with children, (*c*) questionnaire led interviews with adults, and (*d*) group discussions with children and adults.

Settings—(*a*) Secondary and middle schools in England; (*b*) north of England, Scotland, and Wales; (*c*) north of England, Scotland, and Wales; and (*d*) Glasgow.

Subjects—(*a*) 5451 schoolchildren aged 11-15 recruited by stratified random sampling; (*b*) 437 children aged 5-10 recruited by quota sampling; (*c*) 814 adults aged 15-65 recruited by quota sampling; and (*d*) 12 groups of children aged 10-15, three groups of adults aged 18-24, and three groups of adults aged 35-55.

Results—Children were familiar with cigarette advertising and in particular the Reg campaign. Although younger children struggled to understand the creative content of the adverts, older and smoking children could understand and appreciate the humour. They considered Reg to be amusing and could relate to the type of joke used in the advert. In addition Reg's flippant attitude towards serious issues appealed to the children. While adults aged 18-24 understood the campaign they did not identify with it, and 35-55 year olds (the campaign's supposed target) were unappreciative of the campaign.

Conclusions—The Reg campaign was getting through to children more effectively than it was to adults and held most appeal for teenagers, particularly 14-15 year old smokers. It clearly contravened the code governing tobacco advertising, which states that advertising must not appeal to children more than it does to adults, and it may have had a direct impact on teenage smoking. In view of these findings the Advertising Standards Authority's decision to withdraw the Reg campaign seems appropriate.

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Introduction

Imperial Tobacco recently withdrew its advertising campaign featuring the character Reg (see figure), which had been supporting their Regal brand in the north of England, Scotland, and parts of Wales. This followed a complaint to the Advertising Standards Authority by the Health Education Authority. This paper describes the method and findings of the research that supported this complaint and ultimately contributed to the decision that Reg had to be withdrawn.

The publication of the Smee report has confirmed that tobacco advertising both induces and reinforces children's smoking.[1] In the absence of a complete ban there is a need to identify and guard against campaigns that, contrary to the voluntary agreement on tobacco promotion,[2] have a particular appeal for young people. Anecdotal evidence suggested that Reg, although purportedly aimed at people aged over 35, comprised such a campaign. Research was therefore conducted to investigate children's and adults' response to the Reg adverts, covering levels of awareness and knowledge as well as deeper feelings about the campaign such as interest, likes and dislikes, and what if anything people might do as a result of seeing it. Answering these questions required both qualitative and quantitative research.

Subjects and methods

QUALITATIVE RESEARCH

The qualitative research was conducted with small group discussions. This procedure involved bringing together six to eight respondents, who were carefully selected in social demographic terms, in an informal setting under the direction of a psychologist or group moderator to discuss in depth the subject of interest. The method has been more fully described previously.[3]

One hundred and seventeen children and adults were interviewed in 18 groups. These groups were varied in terms of age (10-11, 12-13, 14-15, 18-24, or 35-55), gender, smoking status, and socioeconomic group (I, II, and III non-manual or III manual, IV, and V). The subjects were recruited by door to door canvassing by professional interviewers and invited to attend the group discussions at a prearranged venue. Each interviewer was supplied with strict quota controls and a recruitment questionnaire and instructed to leave at least four houses between each successful recruitment. Refusals for other than logistical reasons were minimal. Respondents were paid a standard fee for attending, and parental permission to participate was obtained for all the children. The fieldwork was conducted during March and April 1993 in Glasgow, where the Reg campaign had been run.

Each of the discussions with young people lasted about five hours. This enabled the children to relax and the researchers to use complex interviewing procedures, including a series of games about advertising. In these games the children matched products and slogans, described advertisements and products as people, and designed their own cigarette advertisement. With hindsight, the interviews were probably longer and more elaborate than necessary and the same data could probably have been retreived in less time. The adult interviews lasted about one and a half hours, and, although the games were not introduced, the format was again informal and relaxed. All the discussions were tape recorded and then transcribed.

QUANTITATIVE RESEARCH

For quantitative results, we made use of three existing, unpublished national surveys. The Health Education Authority's teenage smoking tracking survey wave 6 was one of a regular series of surveys of

schoolchildren aged 11-15 in England that used a nationally representative sample of secondary and middle schools. The sample size for the survey was 5451 children recruited by stratified random sampling within the schools. Data were gathered in classrooms with self completion questionnaires, and a response rate of 95% was obtained. Two ongoing social surveys were also used, one of 437 children aged 5-10 (children's omnibus carried out by Carrick James Market Research for the Health Education Authority in 1993) and the other of 814 people aged 15-65 (adult omnibus carried out by the Market and Opinion Research Institute (MORI) for the Health Education Authority in 1993). Both were conducted in the north of England, Scotland, and Wales (where the Reg campaign had been run) by means of quota sampling and face to face interviews. Parental permission was obtained for the children's interviews.

The interviews varied slightly in content in the three surveys and covered a range of issues, including attitudes to smoking, behaviour, and perceptions of cigarette advertising. Care was taken to ensure that cigarette adverts shown to teenagers to prompt response did not contaminate questions about cigarette advertising generally or preference for cigarette brands. The use of these existing studies meant that the research had to accommodate different methodologies, which restricted the opportunities for complex statistical analyses, but they provided access to much larger sample sizes with more robust procedures for data collection than would otherwise have been possible.

Results

THE PROMINENCE OF REG

Of the 5451 schoolchildren aged 11-15 interviewed, 4491 (82%) said that they had seen poster adverts for cigarettes and mentioned several different brands (table I). In the areas where the Reg campaign ran (the north and north west of England, Yorkshire, and Humberside) advertising for the Regal brand was the second most prominent, being recalled (without examples of the campaign being shown) by 37% of young people. In other areas advertising for Regal was barely mentioned at all (2%). As the Reg campaign was the only major Regal advertising campaign taking place at this time, this impact was almost certainly attributable to it.

The qualitative research also showed that cigarette advertising in general, and the Reg campaign in particular, was well known to children. Reg was mentioned spontaneously in most of the groups before the respondents knew that the research concerned cigarette advertising. Most were able to recall at least one Reg advert at this point. The extent of recall varied by age and smoking status, with older respondents (aged 12-15) and smokers being able to remember more adverts and details than the 10-11 year old children and non-smokers. The initial advert, with its slogan, "I smoke 'em because my name's on 'em," was most commonly remembered.

Reg as a character was also familiar to the children. He was introduced into the discussion groups separately from and prior to the advertising, along with 20-30 other media characters. Most respondents were able to identify Reg with ease and quickly connected him with Regal cigarettes. Only those aged 10-11 displayed hesitancy (one or two even mispronounced his name, giving it a hard "g") and debated which brand of cigarettes he advertised. Even here, however, there was little doubt that Reg was involved in some form of cigarette advertising. When respondents were shown examples of the Reg adverts, they readily recognised not only the individual adverts but the campaign as a whole. The prompts also stimulated them to mention other examples of Reg adverts that were not presented and to describe where and when they had seen them.

The quantitative data confirmed this familiarity with Reg (table II). When young people in the Reg campaign area were shown an advert almost all 11-15 year olds recognised Reg; 91% said that they had seen it or a similar advert with Reg. Even with children aged 9-10, over half (55%) recognised the advert (63% among boys of this age).

Among the adults, awareness of Reg varied. In the qualitative research the 18-24 age group seemed almost as aware of it as the children, but the 35-55 age group were much less so. The quantitative data showed that awareness was much lower among those aged 35-55 than among teenagers; and barely half (52%) recognised Reg advertising when it was shown to them.

TABLE I—*Awareness of poster adverts for cigarettes among children aged 11-15 in 1993. Values are percentages**

	In Reg campaign area (n=1646)	In rest of England (n=3805)	Total (n=5451)
Any cigarette advert	83	82	82
Brand advertised on poster:			
Benson and Hedges	39	45	43
Silk Cut	33	40	38
Regal	37	2	13
Marlboro	11	20	17
Superkings	16	17	17

*From the Health Education Authority's teenage smoking tracking survey wave 6 (unpublished results).

TABLE II—*Recognition of Reg adverts in area where Reg campaign ran. Values are percentages*

	Age group				
	5-10*		11-15†	15-65‡	
	All (n=437)	Ages 9-10 (n=145)	(n=1646)†	All (n=814)	Ages 35-55 (n=256)
Adverts recognised	41	55	91	49	52

Data from Health Education Authority's surveys: *Children's omnibus; †teenage smoking tracking survey wave 6; ‡adult omnibus. (All unpublished results.)

ATTITUDES TO REG

Beyond its connection with selling cigarettes, children's understanding of the campaign varied by age and smoking status. The qualitative research showed that some of the non-smoking 12-15 year olds and almost all the 10-11 year olds were struggling to understand the creative content of the adverts, particularly the humour. Some children did not realise that the adverts were supposed to be funny, others did but could not get the joke.

"They named them after him. . . . It doesn't make sense." (Girl aged 10-11, non-smoker.)

"I hate they adverts 'cos most of them I don't get." (Girl aged 14-15, non-smoker.)

"Reg on public transport. . . . What's waiting at a bus stop got to do wi' anything about smoking?" (Boy aged 10-11, non-smoker.)

Many of these children felt cross and excluded. This typically led them to dismiss and reject the campaign as "daft" and "pointless."

"It frustrates you that you don't understand it." (Girl aged 14-15, non-smoker.)

"It bugs me." (Girl aged 10-11, non-smoker.)

"You think you're daft." (Girl aged 14-15, non-smoker.)

In contrast, many of the older and smoking respondents did understand the humour, and this contributed to their enjoyment of the campaign. The quantitative data confirmed the appeal of the campaign to smokers (table III). Among the 11-15 year olds who were aware of the campaign, smokers were more positive about it

TABLE III—*Response to Reg adverts in area where Reg campaign ran among subjects aware of Reg. Values are percentages*

	Age group				
	11-15*			15-65†	
	All (n=1534)	Smokers (n=236)	Non-smokers (n=1250)	All (n=409)	Ages 35-55 (n=133)
Expressed positive views about Reg	32	51	27	45	36
Thought Reg was a laugh	24	43	21	39	29
Did not understand Reg	21	15	23	34	37

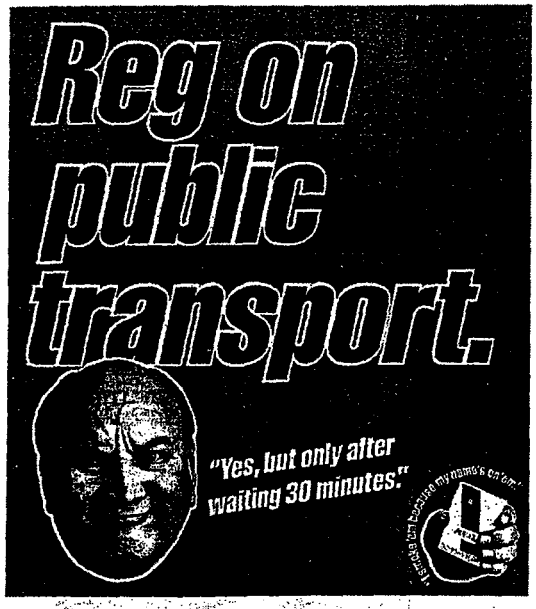
Data from Health Education Authority's surveys: *teenage smoking tracking survey wave 6; †adult omnibus. (All unpublished results.)

than non-smokers (51% *v* 27%, $P<0{\cdot}001$), were more likely to find it funny (43% *v* 21%, $P<0{\cdot}001$); and less likely to say that they did not understand it (15% *v* 23%, $P<0{\cdot}01$).

The quantitative research also showed that adults were at least ambivalent about Reg. Over a third (34%) of them said that they did not understand the adverts (compared with 15% of 11-15 year old smokers) and only 45% expressed any positive views about the advertising. The qualitative research suggested that the 18-24 age group understood the campaign in much the same way as the older children, but felt the "schoolboy" humour would appeal to people younger than them. They did not identify with the campaign. Adults aged 35-55 were unappreciative of it; they were mystified by the humour and did not identify with the campaign. Indeed, the men in this group argued that if it was aimed at them it was insulting and derogatory, portraying their age group as stupid and ignorant.

THE APPEAL OF REG

The qualitative research was able to define the nature of Reg's appeal to young smokers. In part this appeal was linked to the idea of branding, the means by which manufacturers add intangible qualities such as status and fashion to their products.[4] Advertising is recognised to play a key role in building these images.[5] Branding was clearly an important part of underage smoking. Almost all the children were aware of a wide range of different cigarette brands, and among the older smokers this awareness extended to familiarity. Respondents held strong opinions about acceptable and unacceptable brands and made extensive reference to peer influence on this acceptability.



Example of the Reg campaign

"I think you want to smoke what your pals are smoking." (Girl aged 12-13, smoker.)

"See the people we hang around with, see what they smoke. Everybody smokes the same." (Boy aged 14-15, smoker.)

"See at my school, they all smoke them [Regal and Club]. Well see if you smoke something different like Dunhill you would get a slagging, 'imagine smoking them.'" (Girl aged 12-13, smoker.)

Peer influence typically took the form of mockery and ridicule by friends if you smoked the "wrong" brand. Such treatment ("getting a slagging") was clearly something the young people sought hard to avoid. The influence that social acceptability could have on brand choice was illustrated by the reported behaviour of one respondent putting cigarettes of an unfashionable but cheap brand (Royals) into a fashionable packet (Kensitas Club). By far the most acceptable brands were Regal and Kensitas Club. Their image was ordinary and down to earth. When asked to describe the typical smoker of these brands, the respondents' comments included:

"Like me. Younger generation—hanging about the streets."
"Dead down to earth people."
"Could be either a boy or a girl."
"Just ordinary. Normal."
"He'd read *Viz*"
"He'd go on holiday to Spain." (Girls aged 14-15, smokers.)

Other brands tended to be rejected as too pretentious or down market.

"Rothmans is like sort of posh. They sponsor cars and all that. . . . You don't see Rothmans on the side of a corner shop do you?" (Boy aged 14-15, smoker.)

"[JPS Superkings] They're for old men who can nip them and come back to them later." (Girl aged 14-15, smoker.)

Among the adults, branding was much less of an issue. Although probably more aware of the different brands than the children, they were much less discriminatory in their taste. The older respondents in particular smoked a wide range of brands, switched brands quite regularly, and had virtually no sensitivity about being seen with the "wrong" brand.

Reg made his contribution to the Regal brand partly through humour. At least three aspects of the adverts were felt to be funny. Reg himself was amusing.

"He makes you laugh whenever you see him." (Boy aged 12-13, smoker.)
"He is cute. It's his wee cheeky smile, he's chubby." (Girl aged 14-15, smoker.)

The textural jokes were enjoyed, although there was often something of a love-hate reaction to them. The jokes were painfully bad, causing groans as often as laughter.

"You just laugh at them because they're so stupid." (Boy aged 12-13, smoker.)
"You laugh at them and mock them." (Girl aged 14-15, non-smoker.)

Importantly, however, they were the sort of joke the respondents themselves, or their friends, would crack.

"The sort of thing if you told it, you'd laugh at it yourself, thinking you were so funny—one of those things you laugh at no one else laughs with you." (Girl aged 14-15, smoker.)

Finally, the layout and design of the advert also caused laughter.

"It shows you his face an' then it shows you his hands over there. . . . The way they match his hand size up wi' his body size. His head's away out there an' his hands about that size." (Boy aged 12-13, smoker.)

As well as his humour these respondents also liked Reg's attitude. He continually ridiculed serious issues such as the ERM (exchange rate mechanism), the greenhouse effect, and politics. These were matters that adults, and their parents and teachers in particular, treated seriously but which they delighted in mocking and undermining. Reg joined them in this game, showing empathy for their values.

"They're [ERM, etc] things like people are worried about—things they've been talking about—folk are worried about that and he jokes about it."
"Would you be worried about things like that?" (Interviewer)
"Oh naw! It's older people like parents and that . . . taxes and politics." (Girl aged 14-15, smoker.)

This flippancy also appealed because it had a levelling effect, safeguarding the children from feeling inferior by mocking those who claimed to be knowledgeable or intelligent. In this way it mirrored their own use of a slagging as a means of social control.

Reg's attitude had one further attraction. One of the serious issues he mocked was antismoking. When he said, "I smoke 'em because my name's on 'em," he was implying that you did not have to have a good reason for smoking, you did not have to justify yourself. This struck a welcome chord with youngsters, who felt increasingly persecuted for smoking. Again Reg was transmitting empathetic messages to young people.

"It's as if he's trying to say like if he smokes them for a stupid reason, what's your reason?" (Girl aged 14-15, smoker.)

The combination of his humour and attitudes made it easy for the young smokers to identify with the Reg campaign. When 14-15 year old female smokers were asked to describe the campaign as a person they found this easy to do and saw this person as a man aged 18-20 who might take them out and who would be fun, fairly ordinary, and make bad jokes. In short, much like the boys they already knew.

"Someone that's down to earth."
"A good-time person, know what I mean, take you out 'n' that, make you laugh."
"18 to 20, something like that."
"Take you for a drink to the pub or something."
"A Vic [a reference to *EastEnders*] where he knows everyone and you don't."
"You sit there like that, and he'll stand there like that in front of you."
"Standing, leaning on the bar."
"He'll say something witty and he'll start laughing and you'll look at him."
"It's not funny funny, it's funny stupid."

The Reg campaign was also appealing because it was non-directive. Adolescents, even more than the rest of the population, do not like being told what to do. The campaign was described as putting entertainment before persuasion and being broader than just a normal cigarette advert. This non-directiveness was contrasted with the approach taken by antismoking advertising, which did not give the audience any options, was overt about its meaning, and was seldom entertaining. Reg provided the adolescents with an ally against all the antismoking pressure and propaganda, even more than other cigarette advertising.

"These adverts are saying 'smoke if you like.' "

Public health implications

- The advertising campaign for Regal cigarettes that featured the character Reg was recently withdrawn
- The campaign was considered to have broken the voluntary agreement that tobacco advertising must not appeal to children more than to adults
- This study showed that young adolescents, especially smokers, enjoyed the adverts and found Reg amusing
- In contrast, adults aged 35-55 (the supposed target group for the campaign) were unappreciative of the adverts
- The Advertising Standards Authority's decision to withdraw the Reg campaign seems to have been appropriate

"It's like revenge, like you're getting back on them saying to you 'Don't smoke.' . . . You feel you're allowed to then, when you see that." (Girls aged 14-15, smokers.)

Finally, Reg made the smokers feel special. They were being targeted by big and powerful organisations and could share in the campaign in a way that non-smokers could not.

"If you were not a smoker you wouldn't know them, but because you are and you're used to seeing them all the time you know what they are. . . . It's because you smoke you know what they are and you recognise them." (Girl aged 14-15, smoker.)
"I used to go around in my dad's car when I was going out. I used to look for all the posters and that to see if there was a new one out. I used to follow all the stories." (Boy aged 12-13, smoker.)

Discussion

The Reg campaign caught the attention of children more effectively than it did that of adults. For example, 91% of 11-15 year olds recognised the Reg adverts compared with only 52% of those aged 35-55, the supposed target for the campaign. Part of this disparity can be explained by a general tendency for children to be more aware than adults of all advertising. However, this is unlikely to provide a complete explanation, particularly given the body of evidence, summarised by Smee,[1] that cigarette advertising is disproportionately effective with young smokers. The campaign also held most appeal to teenagers, particularly smokers aged 14-15. They enjoyed its humour and its mockery of serious issues, including smoking. They clearly identified with it, and this identification probably transferred to the brand. Certainly Regal were one of only two brands that they smoked and found acceptable. It was seen to be young, ordinary, and streetwise. The Reg campaign also gave young smokers a non-directive and complimentary license to smoke. In contrast, the campaign's supposed target age group (35-55) rejected Reg, finding him difficult to understand and even offensive.

This clearly contravened the voluntary code governing tobacco advertising, which states that advertising must not appeal to children more than it does to adults.[2] In the light of the Smee report[1] it also suggests that Reg may have had a direct impact on teenage smoking. The most recent data of the Health Education Authority (teenage smoking tracking survey waves 5 and 6) suggest that this is possible. Regular smoking among 11-15 year olds increased from 8% to 10%

between 1992 and 1993 ($P<0.05$) in the north of England, where Reg was prominent, and remained stable at 7% in the south, where he did not appear. This change could, of course, be due to other factors, but it is not unlikely that the Regal campaign made a substantial contribution to this apparent increase. In view of these findings the Advertising Standards Authority's decision to withdraw the Reg campaign would seem appropriate.

We thank the respondents and schools for their cooperation, all the researchers for their hard work, and the Health Education Authority for its support and encouragement.

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Smoking and death: the past 40 years and the next 40

Richard Peto

See papers on pp 901 and 911

Smoking already kills about two million people a year in developed countries, half in middle age (35-69) and half in old age.[1,2] This number is still increasing as the death rate among women increases and populations grow larger and older (fig 1). Already smoking accounts for one sixth of the 11 million adult deaths each year in these populations. There are 1·2 billion people living in developed countries. If one sixth of their deaths continue to be caused by tobacco about 200 million of the adults and children now living in developed countries will eventually be killed by tobacco, and about 100 million of these will die while still in middle age.[2]

In developing countries there has recently been a large increase in the number of young men smoking. People in China, for example, now smoke about 30% of the world's cigarettes. This will have catastrophic effects next century as most other causes of death are likely to continue to decrease and the effects of tobacco to increase. If current smoking patterns persist—that is, if the smoking uptake rate among young adults continues to be substantial and the rate of stopping smoking at older ages continues to be low—by the time the children of today reach middle age smoking will be one of the largest causes of premature death in the world.

Over the next 40 years the annual number of deaths from tobacco will increase from about three million to more than 10 million (table I),[2] yet 40 years ago the hazards were only just beginning to be recognised. The United Kingdom's Medical Research Council (MRC) supported much of the early research, and in 1957 it was the first national institution in the world to accept formally the evidence that tobacco is a major cause of death.

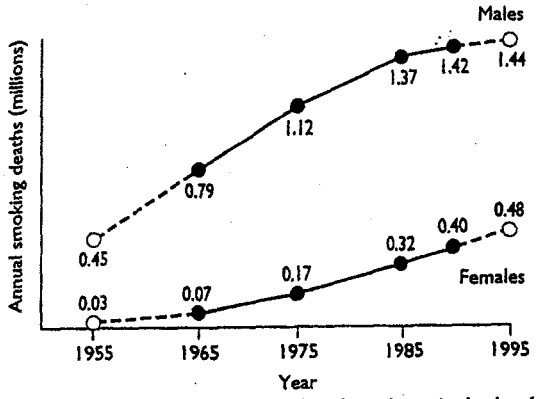


FIG 1—*Annual number of deaths attributed to tobacco in developed countries. If current smoking patterns continue, when the children of today reach middle age the annual number of deaths will have increased from 2 million to about 3 million, but in less developed countries the increase will be far larger, from about 1 million to about 7 million in around 2025, leading to a world total of about 10 million deaths a year from tobacco*[1,2]

TABLE I—*Annual deaths attributed to tobacco in 1995 and in about 2025*[2]

	Estimated annual No of deaths (millions)	
	1995	2025*
Developed countries	2	3
Developing countries	1	7
World total	3	10

*These numbers are inevitably approximate, but if present smoking patterns persist the chief uncertainty is merely when some such total will be seen: perhaps in about the mid-2020s, perhaps in the next decade.[2]

Evidence against smoking

In 1947 the MRC had called a conference to discuss the rapid increase in deaths in the United Kingdom attributed to lung cancer. Part of the increase was known to be an artefact of the improvements in the accuracy of death certificates that had resulted from better diagnostic methods. But since the increase was much steeper in men than in women changes in the real disease rates must also have occurred. Austin Bradford Hill had recently taken over as director of the MRC's Statistical Research Unit at the London School of Hygiene and Tropical Medicine, and one of his new recruits was Richard Doll. They began a large "case-control" study in 1948 in which the life histories of several hundred patients with lung cancer were compared with those of several hundred people without the disease.

Cigarette smoking was only one of several possible causes being investigated. (Doll himself originally thought the increase in cars and the tarring of the roads were more likely to be to blame.) But the results of this first study proved otherwise. The only big difference between those who had lung cancer and those who did not was that almost all those with lung cancer had been smokers. Doll and Bradford Hill published their results in the *BMJ* in 1950, and in the same year a parallel study by Wynder and Graham in the United States had independently reached similar conclusions.[3,4] This was the first clear evidence that smoking is a major cause of death.

Once it was shown that smoking was a cause of most deaths from lung cancer, the next step was to establish prospective studies in which people were first asked what they smoked and then followed for several years to monitor deaths not only from lung cancer but also from other causes. Parallel studies were again established independently in Britain and the United States.[5,6] The British study evolved into the first major

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Health Canada Santé Canada

1994 Youth Smoking Survey

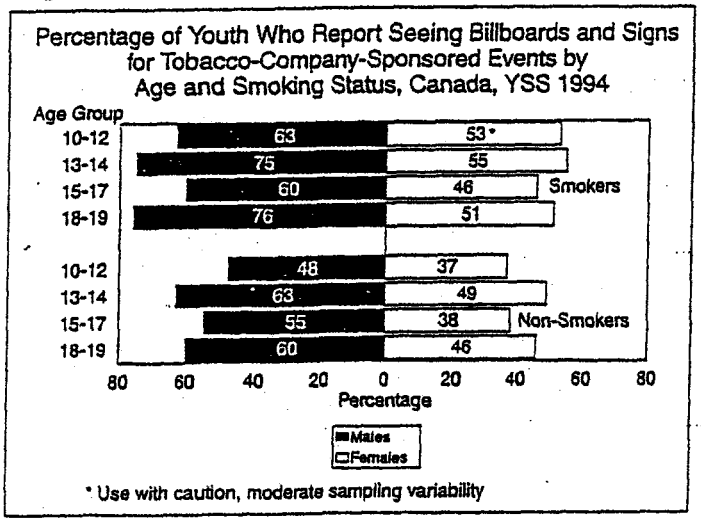
10. Marketing of Tobacco Products

Sponsorship and Promotion

Awareness by Canadian youth of events and activities sponsored or promoted by tobacco corporations is significant. Forty-nine percent of all youth aged 10-14 and 51% of those aged 15-19 report seeing advertisements for events sponsored by tobacco corporations. A higher percentage of males than females have seen these advertisements. There is very little difference between younger males, those between 10 and 14, and older males, those between the ages 15 and 19 (55% vs. 60%), as well as between younger and older females (43% for both).

Figure 10.1 presents data on those who have seen advertisements for events sponsored by tobacco corporations. A higher percentage of current smokers than non-smokers report seeing these advertisements. A higher percentage of males than females report seeing advertisements for tobacco-company-sponsored events.

Figure 10.1



Of those who have seen these advertisements (smokers and non-smokers aged 10-19), 63% report that they have seen them on television. After television, the next two highest sites where advertisements for tobacco-sponsored events have been seen are billboards at 48% and newspapers and magazines at 44%. In-store displays and buses and bus shelters round off the top five locations at 27% and 25% respectively.

While 50% of the total population aged 10-19 report seeing advertisements for tobacco-company-sponsored events, only 40% of the total population could name any particular event, with only one event ever being named by more than 30% of the total population surveyed. Again, awareness increases with age and males are more aware of these events than females. A higher percentage of smokers can name these events, at all age groups except for the youngest where high sampling variability makes the data unpublishable. For some age groups, this difference is as high as thirty percentage points (Figure 10.2).

There are significant differences between smokers and non-smokers aged 10-19 regarding their opinions of the purposes of billboards and signs for sporting and cultural events sponsored by tobacco corporations. Sixty-seven percent of smokers of both sexes and all ages agree that these "billboards and signs are a way of advertising particular sporting or cultural events". Only 54% of non-smokers share this opinion. Sixty percent of smokers and 45% of non-smokers agree that these "billboards and signs are a way of encouraging sports and culture in general".

Eighty-five percent of smokers and 83% of non-smokers agree that these "billboards and signs are a way of advertising particular brands of cigarettes".

Figure 10.2

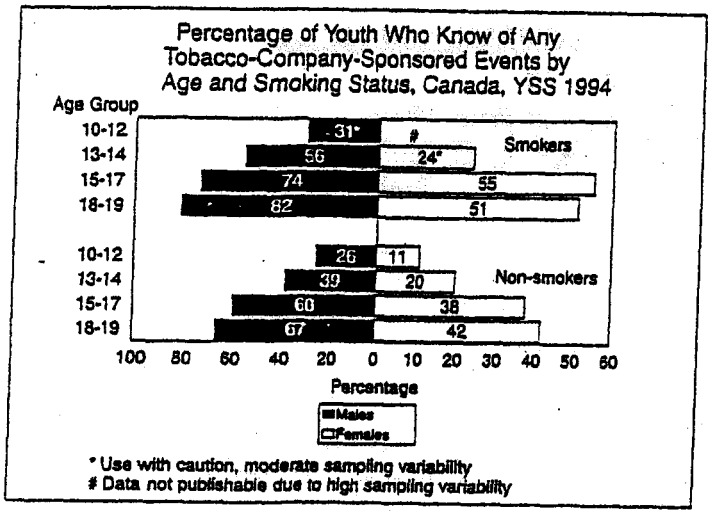
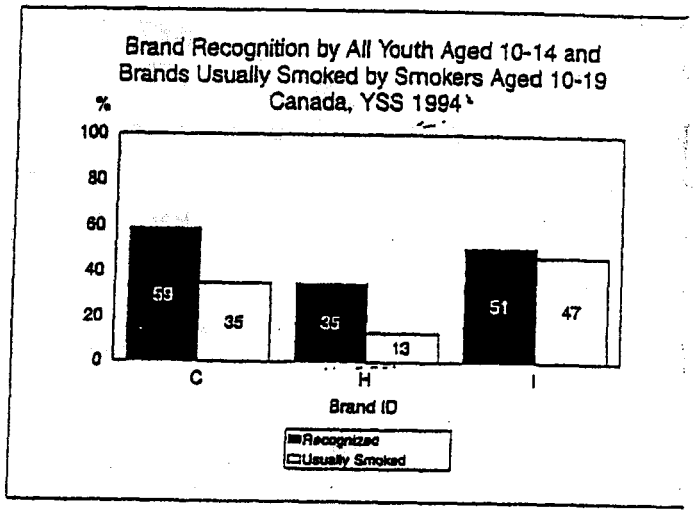


Figure 10.3



Finally, 43% of smokers and 58% of non-smokers agree that these "billboards and signs are a way of encouraging people to smoke". There is very little difference between males and females in these responses.

Brand Identification and Choice

The younger age group, 10-14, was given a sheet of paper displaying two-dimensional packages representing nine of the leading brand families sold in Canada and one plain package. A brand family is a group of brands that bear the same common trade mark and brand name with different descriptive terms, such as "light", "mild", etc. All brand names and trade marks were removed or masked. All members of this age group were asked to identify the brand families on the sheet.

Figure 10.3 presents data for the three brand families identified most times by this group. In addition, Figure 10.3 presents data for all age groups, 10-19, on their choice of brand usually smoked. Again, brand families are lumped together.

As can be seen, brands C, H and I were correctly identified by 59%, 35% and 51% of 10- to 14-year-olds with no significant difference between males and females. These same brand families were usually smoked by 35%, 12% and 47% respectively, of 10- to 19-year-old smokers with no significant difference between males and females.

Terminology

- Current smoker – has smoked at least 100 cigarettes in his/her lifetime, and includes the following:
  - Current daily – a current smoker who has smoked at least one cigarette per day for each of the 30 days preceding the survey
  - Current non-daily – a current smoker who has smoked at least one cigarette during the past 30 days, but has not smoked every day
- Former smoker – smoked 100 or more cigarettes in his/her lifetime and has not smoked at all during the past 30 days
- Never smoker – has smoked fewer than 100 cigarettes in his/her lifetime, and includes the following:
  - Beginning smoker – a never smoker who has smoked between 1 and 99 cigarettes in his/her lifetime and has smoked in the past 30 days
  - Past experimenter – a never smoker who has smoked between 1 and 99 cigarettes in his/her lifetime but has not smoked in the last 30 days
  - Lifetime abstainer – a never smoker who has smoked less than one whole cigarette in his/her lifetime
- Prevalence of smoking – the proportion of cigarette smokers in the target population
- Amount smoked – the average number of cigarettes smoked daily

Youth Smoking Survey 1994

Technical Report

Our mission is to help the people of Canada
maintain and improve their health.

Health Canada

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Chapter 8

Tobacco Purchasing and Marketing

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References

Highlights

■ Corner stores are the number one source for cigarettes. While youth aged 10-14 usually obtain cigarettes indirectly, through another person, most adolescents 15 and older usually buy their cigarettes from a corner store. In Manitoba, Saskatchewan, Alberta, and British Columbia, gas stations are also a popular source of cigarettes for youth aged 15-19.

■ About half of children aged 10-14 who have gone to a store to buy cigarettes have *never* been asked their age and have *never* been refused when trying to buy cigarettes.

■ At all ages, cigarettes are most commonly purchased in packages of 25. While it is illegal to sell single cigarettes, buying singles is popular with the younger adolescents and with current non-daily smokers. Half of those under 15 occasionally buy singles.

■ A small number of cigarette brands and brand families clearly dominate the youth market. Eighty percent of smokers say they usually smoke the same brand, and, of these, 93% named one of the three most popular brands as their usual brand. This is true of even the youngest smokers.

■ Nearly all youth are aware of the colour and other visual characteristics that differentiate and identify cigarette brands. Ninety-five percent of youth can identify at least one cigarette brand name from the colour and graphical design of its package alone. An example of generic packaging is deemed far less appealing than any of the commercially available brands.

■ Forty percent of all adolescents can recall a sports or cultural event that had been sponsored by a tobacco company. Boys are somewhat more likely than girls to recall such an event, with sporting events making up the majority of sponsored events recalled.

■ These findings have a number of important implications for tobacco control: increased enforcement of restrictions on sales to minors, increased control over sponsorship and other forms of advertising, and the introduction of generic cigarette packages.

Methods

Definitions

Source of Cigarettes

Participants in both survey components were asked where they usually get their cigarettes (SS25, HH22, that is, School Survey Question 25 and Household Survey Question 22; see Appendix A). In the household component, these questions were asked only of young people who had smoked at least one cigarette in the 30 days before the survey. In the school component, the question could be answered by everyone, but the results are reported only for those who smoked in the 30 days prior to the survey for consistency across the two components.

Attempts to Buy Cigarettes

In the household component, all respondents were asked "Have you ever gone into a store to buy cigarettes for yourself or for someone else?" (HH38). For the school component, the same information is derived from Question 28 (SS28), "Have you ever been asked your age when buying cigarettes in a store for yourself or someone else?" – for which one response option is "I have never bought cigarettes in a store." Despite the slight difference in question structure, the two versions obtained the same information.

In both components, all of those who had ever attempted to buy cigarettes were asked if they had ever been asked their age when trying to buy cigarettes in a store (SS28, HH39) and if someone had ever refused to sell them cigarettes (SS29, HH40). (Chapter 9 addresses knowledge on the part of the adolescents of legal age for purchase.) Because these questions asked about lifetime experience, rather than recent experience, the results should be interpreted with some caution. Other things being equal, older youth should be more likely to have "ever" been asked their age, since they are likely to have made more attempts in total than younger ones. It is uncertain, however, whether people of different ages would answer the question the same way. Older respondents might be less likely to say they have ever been asked their age if this has not happened recently.

Quantity Purchased and Usual Brand and Type

If a respondent had smoked in the 30 days preceding the survey, he or she was asked for more information, such as the usual pack size purchased (SS26, HH23). These questions included the option "I don't usually

buy packs," which could be taken to mean that they don't usually buy cigarettes in packages or that they do not usually buy cigarettes.

All of those who had smoked in the 30 days before the survey were asked if they occasionally bought cigarettes one at a time or "singles" (SS27A, HH24) and where they bought singles. Smokers were also asked if they usually smoked the same brand (SS21a, HH13) and the brand and type of cigarettes (SS21b, HH14).

Respondents aged 15-19 were also asked (HH14b) to describe the type of cigarettes they usually bought (e.g., menthol, "light," king size). It is important to note that this was asked as an open-ended question and that people volunteered varying amounts of information. For example, while some people indicated that they smoked filtered cigarettes, the percentage would be different from that obtained if all young people were asked "Do you smoke filtered cigarettes?"

As discussed in Chapter 2, cigarette brand names were suppressed with other sensitive or identifying information by Statistics Canada, after the data collection phase. Actual names of cigarette brands and tobacco corporations have been replaced with arbitrary letter names (e.g., Brand A, Brand B) in this technical report as well as on the public use data tape.

Brand Recognition and Perceived Attractiveness of Cigarette Packages

In the school component of the Youth Smoking Survey (YSS) (ages 10-14), additional information was obtained about recognition of the packaging of popular brands by their design and colour (SS68). This information was limited to the school sample because it required the use of a visual aid. When the students reached the end of the School Survey questionnaire, they were given a handout that depicted the packages of best-selling Canadian brands of cigarettes. The packages shown were accurate to the originals in colour and graphics but did not have any brand-identifying text. At the time of the survey, three of the brands had recently changed their package designs (although features such as predominant colours do not change when cigarette packages are redesigned). The handout also included an example of generically packaged cigarettes (not actually on the market).

Students were asked to indicate which package, identified by a coded number, matched each of the following cigarette brands presented in a list: Belvedere, Benson & Hedges, Craven A, Du Maurier, Export A, Matinée, Number 7, Player's, Rothman's, or "none of the above" (SS68). An instruction box told students to leave the boxes empty if unsure and included the words "do not guess" in bold lettering. Students were also asked which package design and colour they found the most and the least attractive (SS69 and SS70).

Because this portion of the data collection was completed after the rest of the questionnaire, the presentation of cigarette company names should not have assisted recall in other parts of the questionnaire (such as recall of tobacco company-sponsored sports and cultural events).

Knowledge of Cigarette Corporation-sponsored Events and Advertisements

In both samples, young people were asked if they knew of any events that were sponsored by corporations with a tobacco brand name as part of the corporate name (SS52a, HH58). If they could recall such an event, they were asked to name the event and the sponsor (SS52b, HH59). Up to five responses were coded. Responses were coded in such a way as to distinguish between events recalled correctly by both company name and the name of the event and incomplete answers such as just the event or just the company. Responses were also coded according to individual company sponsors. Again, corporation names are not released in this report. People were asked if they had seen ads for such an event (SS53a, HH60) and, if so, where they had seen the ads (SS53b, HH61).

For this report, two new derived variables were created by Health Canada relating specifically to either sports or cultural events. These variables classified respondents according to whether or not they were able to recall a specific sporting event sponsored by a tobacco company and whether or not they were able to recall one or more specific music or cultural events. Only "complete" answers were counted (i.e., a correct recall of both the event and the sponsoring company).

Sample and Response

Much of this chapter refers to information obtained only from a subsample of all of those surveyed, specifically those who smoked at least one cigarette in the 30 days preceding the survey (current daily and

non-daily smokers plus beginning smokers) and those who have ever purchased cigarettes. Other sections present information obtained from all respondents (e.g., recall of tobacco company-sponsored events).

It is important to note when percentages are reported on the basis of this type of subsample, as they cannot be directly related to the population as a whole. It is also important to remember that percentages based on small subsamples have much higher variability than percentages reported for the population as a whole. As a result, reporting percentages within these subpopulations by other factors such as province or individual years of age frequently results in estimates that are too variable to report. As described in Chapter 2, all estimates with a high variability (coefficient of variation of 33% or greater) have been suppressed, and those with moderate variability (coefficient of variation between 16.5% and 33%) have been marked with an asterisk, indicating that they should be used with caution.

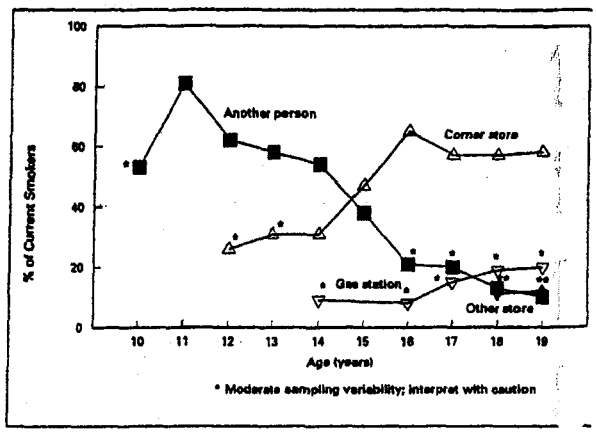
As discussed in Chapter 2, unless otherwise stated, less than 10% of the population asked a question answered with "don't know" or didn't answer the question. Where the missing values make up less than 10%, they are not reported but distributed proportionately across the other categories. In other words, the percentages are calculated on the basis of all who did give an answer to the question. The exceptions to this in Chapter 8 are the following. Overall, 10% of those surveyed said "don't know" when asked if they had seen advertising for a sports or cultural event sponsored by a tobacco corporation, and this varied widely by age and sex. Therefore, the percentage who don't know is reported in Table 8-12 and Table 8-13. Otherwise, "don't know" or other missing values typically account for 2-4% of the responses.

Results

Source of Cigarettes

Of young people who have smoked at least one cigarette in the 30 days preceding the survey, the most common sources of these cigarettes were corner stores, gas stations, or another person (Table 8-1). Few young people (value too small to be reliable) said that their usual source of cigarettes was from vending machines (Table 8-1).

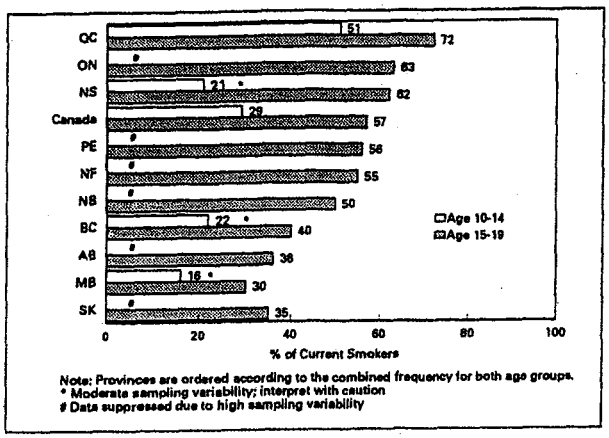
Figure 8-A
Usual Source of Cigarettes, by Age, Current and Beginning Smokers, Canada, 1994



While sex differences in purchasing behaviour were minor (Table 8-1), smokers of both sexes displayed pronounced age differences in their usual source of cigarettes (see Fig. 8-A). For youth aged 10-14, cigarettes were most often obtained through another person (66% of 10- to 12-year-olds and 56% of 13- to 14-year-olds either usually purchased them from a friend or were given cigarettes). Between the ages of 14 and 16, the percentage getting cigarettes from other people declines markedly, and reliance on stores increases (Fig. 8-A). Only 19% of those aged 15-19 usually got their cigarettes from another person. For those aged 15-19, most smokers usually buy cigarettes at corner stores (57%) or gas stations (15%), and all other types of stores account for a small part of the access to cigarettes compared to these two sources. Only among Canadian youth aged 18-19 are gas stations an important source of cigarettes (20%), like because this age group drives most often.

Not surprisingly, current daily smokers most often b their own cigarettes and tend not to rely on other people for cigarettes; 25% of current non-daily smokers and 68% of those beginning to smoke usua get their cigarettes from someone else, compared to 10% of daily smokers (Table 8-2). Among young people who had smoked in the preceding 30 days, those who have one or more smokers in their household are not more likely to get their cigarettes from another person as opposed to a retail store (data not shown). However, young people are more likely be smokers in the first place if someone else in their home is a smoker (Chapter 5).

Figure 8-B
Smokers Who Usually Get Cigarettes at a Corner Store, by Province and Age, Current and Beginning Smokers, Canada, 1994



Note: Provinces are ordered according to the combined frequency for both age groups.
* Moderate sampling variability; interpret with caution
# Data suppressed due to high sampling variability

Figure 8-C
Ever Gone to a Store to Buy Cigarettes, by Age and Sex, Canada, 1994

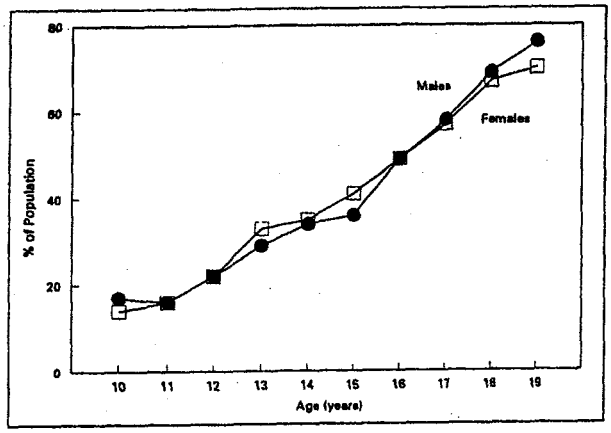
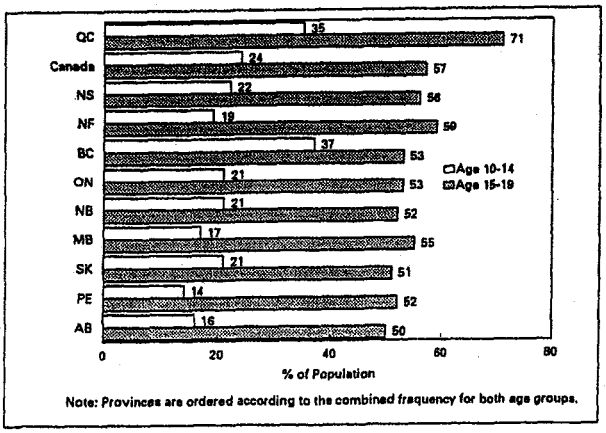


Figure 8-D
Ever Gone to a Store to Buy Cigarettes, by Province and Age, Canada, 1994



Note: Provinces are ordered according to the combined frequency for both age groups.

Comparisons at the provincial level show substantial variation in the degree to which corner stores have "cornered the market" on sales to children (Fig. 8-B). Corner stores are the primary source in both Quebec and Ontario, especially the former. Corner stores also dominate the market throughout the Atlantic provinces; in the west, gas stations are also an important source of cigarettes. In all provinces west of Ontario, 20% or more of smokers usually obtain cigarettes from gas stations. Again, it is the oldest teenagers who are most likely to buy cigarettes at gas stations (Table 8-3).

Labour force participation does not appear to be related to where smokers usually get their cigarettes. When adolescents who work fewer than 10 hours per week are compared with those who work for pay 10 or more hours per week, there are no differences in usual source of cigarettes (data not shown).

Attempts to Purchase Cigarettes

It is quite common for Canadian youth to go to a store to buy cigarettes; 41% of those aged 10-19 had done so (Table 8-4). Attempts to purchase are not found only among those who have become established smokers; more young people had ever gone to a store to purchase cigarettes (for themselves or for another person) than were current smokers at the time of the survey.

The percentage who have gone to a store to buy cigarettes increases steadily with age (Fig. 8-C). Even among 10- to 12-year-olds, 18% say they have gone to a store to buy cigarettes at least once. The percentage increases with age to 71% of 18- to 19-year-olds. There are no sex differences in trying to buy cigarettes.

At all ages, the majority of current daily, current non-daily, and former smokers have gone to a store to purchase cigarettes. Over 90% of current daily smokers aged 10-19 have purchased cigarettes. Even among 10- to 12-year-olds, 96% of current daily smokers have bought cigarettes, and 76% of current non-daily smokers aged 10-12 have done so.

Provincial differences in the frequency of reporting having ever gone to a store to buy cigarettes largely parallel provincial differences in smoking behaviour (Table 8-5, Fig. 3-H). Adolescents in Quebec are more likely than the national average to have attempted to buy cigarettes. Among 10- to 14-year-olds, Quebec and British Columbia have the highest percentages of having gone to a store to buy cigarettes (Fig. 8-D).

Adolescents in Saskatchewan, Alberta, and Prince Edward Island are somewhat less likely to have gone to a store to buy cigarettes.

Asked for Age When Buying Cigarettes

Girls and boys are equally likely to have ever been asked their age if they have tried to buy cigarettes (45%), and this does not vary consistently by age (Table 8-4). People between the ages 13 and 17 are most likely to say that someone had refused to sell them cigarettes they were trying to buy (Table 8-4), but this is still barely more than half of these young people.

Provincially, there are no striking differences in terms of the percentages of 10- to 14-year-olds who say they have ever been asked their age when attempting to buy cigarettes or who have ever been refused. In no province have more than half of the 10- to 14-year-olds who had ever tried to buy cigarettes in a store been refused (Table 8-5).

Overall, the percentage who have been asked their age does not vary substantially according to one's usual source of cigarettes, with the exception of those who usually get their cigarettes from another person. Of those aged 15-19 who smoked in the 30 days preceding the survey and have ever tried to buy cigarettes, 67% have ever been asked their age; 47% of this same group have been asked their age if they usually obtained cigarettes through another person (data not shown).

Quantity Purchased

Young people who had smoked in the 30 days before the survey were asked how many cigarettes they usually buy at one time. The most common quantity in which young people purchase cigarettes is in packages of 25 or more (Table 8-6). Less than 1% of all 10- to 19-year-olds say they usually buy cigarettes in packages of five cigarettes or 15 cigarettes (so-called "kiddie packs"). As this percentage is so small, these individuals are included with those people who usually do not buy cigarettes in packages and the very small number who buy cigarettes in any quantity other than packages (Tables 8-6 to 8-8). The sale of single cigarettes is of concern because, by making cigarettes more affordable, it may be easier for young people to get started on smoking. Overall, 29% of people aged 10-19 occasionally buy single cigarettes (Table 8-6).

Boys and girls usually buy in similar quantities, but there are significant age differences in the usual quantity of cigarettes purchased (Table 8-6). Although the majority of adolescents and teens at all ages are most likely to buy packages of 25, those aged 10-12 are somewhat less likely to buy cigarettes in full packages than older teens. Buying single cigarettes is clearly more popular among younger children than older adolescents. About half of 10- to 12-year-old cigarette purchasers occasionally buy singles, compared to only 7% (moderate sampling variability) of 18- to 19-year-old purchasers.

Provincial differences are evident in the usual size of package bought. At all ages, packages of 20 cigarettes are significantly more popular than packages of 25 in Newfoundland and British Columbia. Quebec also stands out in terms of the percentage of 10- to 14-year-olds buying packages of 25. While, nationally, only 49% of smokers aged 10-14 usually buy cigarettes in packs of 25, 70% of Quebec smokers this age do. Young people in Ontario are less likely to report buying single cigarettes than those from the other provinces; young people are somewhat more likely to report buying single cigarettes in Manitoba, Alberta, Nova Scotia, and Newfoundland, although there is substantial sampling variability in these provincial comparisons (Table 8-7).

Not surprisingly, current daily smokers tend to buy cigarettes in larger quantities (79% of daily smokers usually purchase 25-cigarette packs), but so do current non-daily smokers (Table 8-8). In contrast, those beginning to smoke are most likely to buy cigarettes in smaller quantities. Only a third of beginning smokers aged 10-14 buy their cigarettes in packs. Buying single cigarettes is not restricted to beginning smokers and current non-daily smokers. Sixty-one percent of current daily smokers aged 10-14 occasionally buy singles – 14% for current daily smokers aged 15-19.

Some association exists between the quantity of cigarettes usually purchased and the usual place a person obtains cigarettes. The most commonly purchased quantity is packages of 25, and this is true wherever someone usually obtains their cigarettes (data not shown). However, people who usually buy in small quantities are more likely to get them from non-retail sources (i.e., from another person).

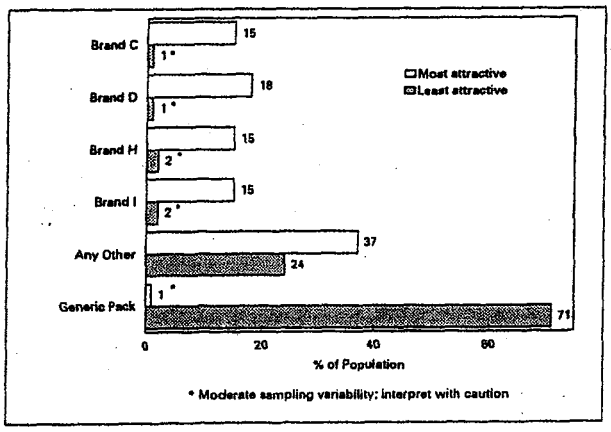
Brand Preference

About 80% of current smokers and those beginning to smoke said they usually smoke the same brand of cigarettes (Table 8-9), and brand preference is

Table 8-A
Describe Cigarettes Usually Bought as "Light" or "Extra Mild," Current Smokers Aged 15-19 Who Usually Smoke Same Brand, Canada, 1994

	Pop. Est. ('000)	% Usually Smoke "Light" or "Extra Mild" Cigarettes
Males, 15-19	**191**	**38**
15-17	86	33
18-19	105	42
Females, 15-19	**199**	**51**
15-17	105	51
18-19	94	51

Figure 8-E
Attractiveness of Masked Packages of Name Brands and of Generic Package, Age 10-14, Canada, 1994



clustered in very few brands. This is equally true of smokers aged 10-14 and 15-19. Not surprisingly, current daily smokers (91%) are most likely to have a usual brand (data not shown). Sex differences are not marked, although there is a slight tendency for the percentage with a usual brand to increase with age for girls but decrease for boys (Table 8-9).

Of those who usually smoke the same brand, 93% named one of the three most popular brands as their usual one. When the usual brand smoked is examined province by province, there is some variation in market share, but the three most common brands are most popular in every province (Table 8-10).

Type of Cigarettes Usually Bought

When smokers aged 15-19 were asked to describe the type of cigarettes they usually smoke, 38% said "regular" and 43% said "king size" (data not shown). As indicated under Methods, this was an open-ended question, and respondents gave varying amounts of information about their usual brand. Forty-five percent described the cigarettes they smoked as "filtered" cigarettes, and 45% said either "light" or "extra mild"; in all, 17% reported some other descriptor. Adolescent girls are somewhat more likely to smoke "king size" cigarettes (data not shown) and are more likely to describe the cigarettes they smoke as "light" or "extra mild" (Table 8-A).

By region, "light" and "extra mild" cigarettes were somewhat more popular in Ontario and the Prairie provinces and less popular in Quebec. "Light" and "mild" cigarettes were smoked only slightly more often by current non-daily smokers and by those beginning to smoke (50%) than by current daily smokers (43%; data not shown).

Marketing and Brands

As discussed under Methods, students were shown cigarette packages (without brand names) and asked to match the pictures to brand names. Adolescents 10-14 years of age are quite capable of recognizing a number of distinct cigarette brands from the design and colour of the packaging alone. Only 5% of children can not correctly identify any of the cigarette brands shown (Table 8-11). One in four (25%) correctly identify one brand, 35% identify two or three brands, and 34% correctly identify a minimum of four brands.

Not surprisingly, the current smokers in this group can identify more brands than those who have never smoked. Brand recognition is similar for boys and girls and across all provinces (data not shown).

Brand Found Most Attractive

There is no clear winner in terms of which of the 10 masked packages shown to students is judged to be "most attractive." Forty-five percent of youth aged 10-14 rate one of the same three most popular brands as the most attractive of the packages presented. The most popular design was selected by 19%. There is clear consensus about one brand being the least attractive, however, as it was selected as such by 71% of children aged 10-14 (Fig. 8-E). This least attractive

brand is the example of generic packaging – not on the market, but proposed as a measure to prevent smoking among children.

Knowledge of Sponsorship Advertisements

One half of all youth reported they had seen an ad for a sports or cultural event sponsored by a tobacco company (50%); boys are slightly more likely than girls to have seen such an ad (57% of boys aged 10-19 compared to 43% of girls) (Table 8-12).

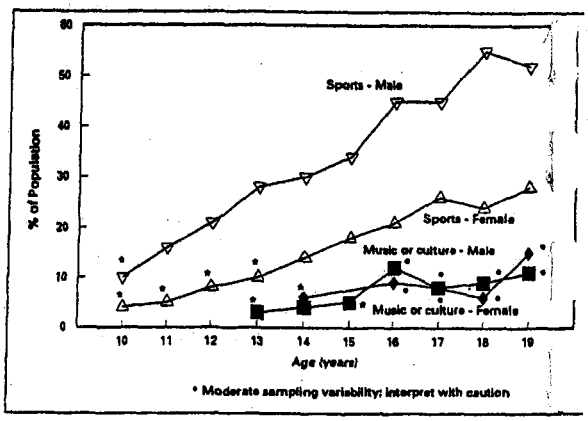
Current smokers (59%) and former smokers (66%) are more likely to report seeing such sponsorship ads than those who have not smoked as many as 100 cigarettes in their lifetimes (35%; data not shown). Young people in Newfoundland (39%) and the other Atlantic provinces (Prince Edward Island 44%; Nova Scotia 46%; and New Brunswick 42%) are somewhat less likely than the national average (50%) to have seen such ads (data not shown).

When those who had seen these ads were asked to name the tobacco corporation whose advertising they had seen, the three most commonly recalled corporations matched with the names of the three brands most often named as the ones usually smoked (data not shown).

The most common places for young people to report seeing advertising for tobacco company-sponsored events are on television (63% of those who had seen such advertising), billboards (48%), and magazines or newspapers (44%). A substantial number also reported seeing them in stores (27%) and in buses or on bus shelters (25%). For each of the various locations, males and females are about equally likely to report seeing this type of advertising of a sponsored event (Table 8-12). The largest age differences are found for store displays and signs and bus shelters, for which younger children are more likely to have seen the advertising. There is no association between smoking status and where this type of advertising has been seen. When compared to residents of other provinces, people in Quebec have seen proportionately fewer ads in print materials; residents of Newfoundland and Prince Edward Island were somewhat more likely to have seen these ads on television (data not shown).

When the type of event is considered, people who know of any events sponsored by tobacco corporations are more likely to correctly recall sporting events and their corporate sponsors than music or cultural events (Table 8-13). Sixty-three percent of people aged 10-19

Figure 8-F
Ability to Name One or More Sponsored Events with Corporate Sponsor, by Type of Event, Age, and Sex, Canada, 1994



who know of any events sponsored by a tobacco corporation can correctly identify at least one specific sporting event along with its corporate sponsor by name. In contrast, just 14% of those who know of any events sponsored by a tobacco corporation can correctly match a music or cultural event to its corporate sponsor.

Sponsored sporting events are more likely to be reported than other events, but this also varies by age and sex. Figure 8-F shows the percentage of the entire population at each age who can identify a complete match between a sporting event and its tobacco corporation sponsor as opposed to not recalling a sporting event, recalling no such events, or not able to say if they recalled such an event. Roughly one third of all young men aged 13-15 could correctly name a specific sports event by the name of a tobacco corporation sponsor; by the end of the teen years, more than half could. Young women were also more likely to have specific recall of sports events than of music or cultural events. For either sex, there was no real trend with age for greater recall of music or cultural events.

Discussion

Overview of Findings

Source of Cigarettes and Purchasing Behaviour

Results of the YSS provide clear evidence of how easy it is for young Canadians to buy cigarettes. Access to tobacco for minors is not limited to retail outlets but includes indirect sources as well (i.e., through other people). Although smokers less than 14 years old were most likely to get cigarettes from another person, by

the time one turns 16 it is most likely that the usual source of cigarettes is a corner store or gas station. Young people are not likely to be asked their age when they try to buy cigarettes in a retail store.

As a general rule, young people buy cigarettes in large quantities (full packages of 20 and 25). This is true for people aged 15-19 in all provinces except Newfoundland and British Columbia. In Quebec, 10- to 14-year-olds are more likely than elsewhere to buy large quantities. It is also clear that single cigarettes are very often purchased from another person rather than a retail outlet.

Brand Awareness, Preference, and Brand-related Marketing

Even the youngest adolescents are aware of tobacco company brand names and tobacco corporation promotional activities and can identify tobacco packages by brand name. The findings presented in this chapter also illustrate the success of the three largest Canadian tobacco companies in terms of the extent of adolescents' awareness and knowledge of their brands through promotional activities and the degree to which young people are exposed to this promotion, whether or not they are intentionally targeted.

Ninety-five percent of students aged 10-14 can name at least one brand of cigarettes and correctly match this to the colour and graphical features of the corresponding packaging. About one half of people aged 10-19 can remember seeing a specific ad for a sports, music, or cultural event sponsored by a tobacco company. Sports events are most often recalled by young people, and these ads are most likely seen on television, billboards, and magazines.

The cigarette brand names corresponding to the tobacco corporations most often recalled from sponsorship activities and deemed to have the most attractive packages are also the preferred brands and the brands usually smoked by Canadians under age 20. Thus, despite tobacco industry claims that they do not market to young non-smokers, it is clear that their marketing is well organized, highly visible, and effective with young Canadians.

It is not possible to compare these results to earlier Canadian surveys, as these questions have never before been asked in Canada. These results make it clear that such questions need to be repeated in future surveys.

Implications for Regulation and Legislation

Sales to Minors

It has been illegal for a retailer to sell cigarettes to anyone under age 16 since the *Tobacco Restraint Act* of 1908. The *Tobacco Sales to Young Persons Act*, which came into effect early in 1994, made it illegal across the country to sell or provide tobacco products to a person under age 18, although some provinces had extended the age restriction earlier. Manitoba moved to age 18 in 1990; New Brunswick and Newfoundland to 19 in 1993; Prince Edward Island to 19 in 1991; and British Columbia and Nova Scotia to 19 in 1994. Ontario moved to 19 in 1995.

The findings of the YSS correspond with other evidence showing that it is still far too easy for Canadian minors to obtain cigarettes.[1,9] For example, one recent study showed that 54% of retailers would sell cigarettes to a minor.[1] In Chapter 3, it was observed that 33% of 10- to 14-year-olds and 88% of 15- to 19-year-olds felt that it would be easy for them to get cigarettes if they wanted. Canadian youth may find it somewhat less easy to obtain cigarettes than American young people. Data from the Monitoring the Future Study conducted by the University of Michigan show that more than three quarters of 8th graders say cigarettes are "fairly easy" or "very easy" to obtain.[10,17,18] In the 1993 Teenage Attitudes and Practices Survey, 62% of young U.S. smokers aged 12-17 reported buying their own cigarettes.[3]

Greater restrictions on the sale of tobacco to minors have been identified in Canada and the United States as an important strategy to prevent the establishment of smoking among young people.[8,19] Restricting access to cigarettes may play an important role in prevention throughout the process of becoming and remaining a smoker.[19,20] Keeping cigarettes out of the hands of children may reduce experimentation. Reduced availability may slow or inhibit the onset of heavier and more regular smoking and increase the likelihood of cessation. It is noteworthy that the earliest onset of smoking occurs in Quebec (Fig. 3-H), which also has the easiest access to cigarettes in corner stores (Table 8-3). Both findings may reflect cultural differences, where smoking among young people is more widely tolerated.

While restrictions on sales to minors already exist in all provinces, achieving full compliance remains the challenge. There are a number of measures that may be taken on a national or provincial basis to increase compliance with sales-to-minors regulations. Research

on deterrence generally indicates that compliance with regulations is greatest when the consequences of non-compliance are severe, swift, and certain.[7,15] Increases in the severity of the consequences for selling to minors may increase compliance, but these changes may have a negligible impact if the retailer is unaware of the penalty or convinced that charges are unlikely to be laid. It has been observed in Canada and the United States that court costs and delays have made police reluctant to act on complaints. Legislators may be reluctant to enact legislation seen as potentially harmful to businesses. Therefore, some provinces have moved in favour of fines and other deterrents that do not require the use of the criminal courts; this reduces barriers to laying charges and ensures that fines are applied swiftly, so that retailers see and hear evidence of enforcement activities. Some municipalities have also created conditions on retail licences such that a retailer who persistently sells to minors can lose the privilege of selling tobacco.

Other approaches may increase the likelihood of voluntary compliance with the regulations. These include mandatory signage – reminding the retailer of the law, but also letting the purchaser and others know about the restriction and possibly discouraging purchase attempts. Indeed, research has shown that retail outlets without a warning sign are almost twice as likely to sell cigarettes to minors.[5] It has been suggested that this may be because the presence of a sign gives the operators an excuse to ask customers for identification. Another measure is aligning tobacco sales-to-minors legislation with the legal age to purchase alcohol, which would allow tobacco retailers to request provincial photo-identification as proof of age.

Another type of legislative approach could be seen as reducing the demand for cigarettes at the point of sale – that is, reducing influences on the potential purchaser within the retail setting. Health Canada[8] has proposed a number of measures to reduce the influences on cigarette purchase at point of sale, including the elimination of all promotional materials from retail stores, placing the product out of sight, and eliminating countertop displays.

Effective measures have already been taken to reduce access to tobacco for minors through sources other than regular retailers. Results of the YSS indicate that vending machines are not now a significant source of cigarettes for young people after a national ban was placed on cigarette vending machines in unmonitored areas with the *Tobacco Sales to Young Persons Act.*

Product Regulation

Greater restrictions on the way tobacco products are manufactured, labelled, packaged, and sold could have beneficial effects. Naming cigarettes "light," "mild," or "extra mild" gives them the semblance of being less harmful[19,21] and may make experimenters more likely to try them. Smokers may switch to low-tar brands in the mistaken belief that this reduces their risk of health problems. Misleading labels should be banned by legislative means, as "light" cigarettes are not safe cigarettes.[11,12] It is unclear whether young girls are more readily persuaded by this kind of labelling, but the YSS did find them to be more likely than boys to use "light" or "mild" brands.

Another example of product control is regulation of the number of cigarettes sold in packages and separating cigarettes for sale. In 1994, the federal government passed legislation prohibiting the sale of cigarettes in small packages (packages less than 20 cigarettes, or so-called "kiddie" packs) in an effort to reduce levels of experimentation. In the YSS, few older adolescents said they ever buy single cigarettes. Single cigarettes were more often bought by current non-daily smokers and those beginning to smoke, providing indirect evidence that the availability of single cigarettes might be used as a way of easing into smoking, both by lessening the cost and by increasing the likelihood of experimentation. However, the fact that single cigarettes are most often purchased from another person, and not a retailer, illustrates a limitation to this type of control measure.

It should also be noted that smokers are four times as likely to purchase a pack of 25 as a pack of 20 cigarettes. The "pack-a-day" smoker who buys cigarettes in 25-cigarette packages is consuming 25% more tobacco than one buying cigarettes in packages of 20 and 66% more than in a 15-pack. Package size may not be particularly important when friends share cigarettes, but large-size packages may encourage sharing and experimentation.

Promotion and Marketing

Research has shown that young people are susceptible to advertising for tobacco products, possibly more so than adults.[14] Children become sensitive to the adult-oriented positive imagery associated with tobacco through lifestyle-type advertisements between the ages of 10 and 14.[2] Exposure to advertisements is

associated with more positive beliefs about smoking and a greater chance of smoking or becoming a smoker.[16,19]

Before the Supreme Court rendered its decision ruling that a total ban on advertising was contrary to the Canadian Charter in 1995, the Canadian tobacco industry had been involved in a number of less direct marketing activities. The findings of the YSS and similar research conducted in Canada around this time offer a unique opportunity to examine the impact of specific types of marketing activity. The young people who participated in the YSS had not been exposed to direct advertising of Canadian cigarettes (other than in some instances as small children). The *Tobacco Products Control Act*, which banned advertising, was introduced in 1987 and implemented in 1989. Data collection for the YSS was completed before tobacco advertisements reappeared in 1996.

In spite of the lack of direct advertising, the vast majority of young people who participated in the YSS were able to correctly identify the visual characteristics of cigarette packages (with the name removed) and match these to cigarette brand names, even in some cases where the package design had been altered. Similarly, many of the youth could name the corporations (with a tobacco brand name as part of the corporate name) who had advertised to promote sports and cultural events of which they were sponsors.

In this respect, the YSS confirms the more detailed findings of an Expert Panel Report to Health Canada.[6] The Expert Panel Report showed that the colour and design of cigarette packages conjured up positive imagery that was specific to brand names and that corresponded to the type of promotional activities undertaken by the corresponding tobacco brand name corporation. This research also showed that young people perceived sponsorship activities to be a form of advertising and one that links corporation names with specific positive images such as sports or fashion. The juxtaposition of a corporate name with positive imagery is what is referred to as "lifestyle advertising," which is a powerful marketing tool.[13] The desirability of the lifestyle portrayed is transferred to the product or company name.

Young people also do not appear to be naive about the fact that sponsorship is a promotional activity for the corporation. In Chapter 6, it was shown that a sizeable majority of Canadian youth (ages 15-19) believe such ads are used by tobacco corporations to promote their public image. The majority of people surveyed in the YSS believed that billboards advertising such a sponsored event encourage people to smoke and advertise a brand of cigarettes.

Effective control of sponsorship activities of tobacco corporations may have a beneficial effect in reducing the uptake of smoking among young people. Promotional materials for sponsored events, particularly paraphernalia and giveaways, may have more of an appeal to young people than regular advertisements and are likely to get into the hands of children.[4]

Three brand families of cigarettes repeatedly stand out as the most popular. The same three brands top the list in terms of brand usually smoked, the brand most often recognized, and the brand most often recalled from corporate sponsorships. This would indicate that the marketing activities carried out by a small number of tobacco corporations have clearly reached young people and influenced their behaviour, at least as far as brand loyalty is concerned. Goldberg et al.[6] also observed that two tobacco brands rated very highly in terms of youth awareness of the product, the imagery evoked in the corporation's marketing strategies (i.e., sporting or fashion and lifestyle), and the visual elements of the packaging (i.e., colour and graphical design), which link the marketing efforts to the product itself. This is consistent with U.S. findings that show that one or two tobacco companies will tend to hold a large portion of the market of young people in a given area and that product preference is related to the extent of marketing activities.[14,19] This is especially important, since the tobacco companies insist that they do not market to youth.

A number of measures have been proposed to reduce the exposure of young people to all kinds of promotional activities of the tobacco industry.[8] The first priority is to ensure that youth are protected from inducements to smoke, such as advertisements and promotional activities. Other proposed measures include the prohibition of sponsorship advertising in places where tobacco is sold. One part of this strategy is to remove all elements of positive imagery from the point of purchase. The visual features of the package itself (i.e., colour and design) are a form of marketing that links the product to other promotions. Therefore, it is proposed that counter displays be banned and that the packages be stored out of view. Further, that the majority of youth in the YSS who have seen sponsorship advertisements have seen them on

television lends support to the government's proposal to prohibit such sponsorship promotion on broadcast media.[8]

Finally, it has been proposed that cigarettes be sold only in generic packages of a uniform colour and bearing only the brand name, contents information, and required government warnings.[6,8] A plain package cannot be linked to the positive imagery promoted by direct or indirect means and has been demonstrated to hold less appeal to young people.[6] The findings in this chapter provide clear support for this measure.

Other promotional activities that should be prohibited include those that have a particular appeal to young people, including product endorsements by individuals who are influential to young people (such as sports heros) and symbols of childhood (such as cartoon characters). Experience in the United States has shown that giveaways (t-shirts, caps, and recreational equipment) are particularly effective with young people. In Canada, until the Supreme Court's decision, these activities were prohibited under the *Tobacco Products Control Act*. Another priority is to deal with this issue.

Implications for Education and Message Promotion

Retailers and the general public need to understand both the law and the purpose behind the law when it comes to restrictions on sales to minors. In addition, both need to be made aware of how the regulations are enforced. Concerned members of the general public may be more likely to take action against sales to minors if they are aware of the regulations and the process for filing complaints.

Information about enforcement activities should be made public. This may have a number of positive results. First, demonstrations that the public supports sales-to-minors regulations may increase voluntary compliance.[5,19] Many retailers will be motivated to maintain a positive public image incompatible with being identified as a source of cigarettes for children. Awareness of cases where fines have been laid may lead to the belief that one is likely to be fined or charged.

For beginning smokers and those under the age of 15, however, the major source of cigarettes is from another person. Consequently, total or near total compliance by retailers does not guarantee that youth will not take up smoking. In order to effectively deal with this problem, it is important to design education programs that encourage smokers not to provide cigarettes to underage or beginning smokers. This becomes the primary message once the desired level of retailer compliance is achieved.

Education campaigns may be used to good effect to inoculate the public against the marketing strategies of tobacco corporations. Examples of this include alerting the public to the fact that sponsorship promotes the corporate sponsor as well as the event or program being supported. Another example is attempting to dispel the misconception that "light" cigarettes are less harmful than cigarettes by any other name.

Implications for Future Monitoring and Further Research

The information provided by the YSS on access to tobacco by minors is only a small part of that needed to track compliance with restrictions on tobacco sales. Because of the way the questions were asked (i.e., in terms of lifetime experience rather than in, say, the year preceding the survey), it is somewhat difficult to monitor to what extent young people are being turned away when they try to buy cigarettes or to produce age-specific rates in asking for proof of age.

Other research methods complete the picture. One of the best ways to demonstrate levels of compliance makes use of planned attempts to purchase cigarettes by minors acting on the authority of researchers or a health agency. One recent study across Canada demonstrated that compliance with sales-to-minors regulations was low and varied greatly.[2] The complexity of the retail environment and large regional differences make it difficult to effectively monitor trends in sales to minors or the impact of measures to improve compliance. Provincial and local governments and their health agencies should be encouraged to use consistent methods to track compliance and disseminate their findings. If conducted on a regular basis, these monitoring studies would allow one to observe how effective legislation is at protecting young people from addiction to nicotine and evaluate efforts to increase compliance. As well, such studies may themselves influence compliance.[19] The 1994 U.S. Surgeon General's report on *Preventing Tobacco Use Among Young People*[19] summarizes a number of U.S. studies that show that publishing information on the rates of compliance can reduce the rate of sales to

minors in follow-up studies, although it is not at all clear that such efforts will have a long-lasting impact. Similar marked changes in retailer compliance have been demonstrated in Canada, as well.[5]

Corner stores are of pivotal importance as a source of cigarettes for young people. No other retail source is more important than corner stores. Further research is needed to understand the market forces that encourage retailers to sell to minors and the predictors of compliance with the law. It is extremely important to have research that evaluates the effectiveness of different legislative or educational interventions aimed at improving compliance. Gas stations, too, deserve attention, as they are another important source of cigarettes, particularly in western Canada. A number of features may make gas stations particularly appealing as a source of cigarettes. For example, gas stations may afford greater privacy for the retailer or underage purchaser, as there are few other customers around.

There are some limitations to the degree to which the YSS is a good vehicle to study purchase behaviour, and some modifications would enhance future monitoring. For example, underage smokers may use multiple sources for cigarettes and may have a variable rate of success when trying to purchase. The YSS was able to ask only a few questions about attempts to buy cigarettes, which may not capture this complexity. As well, people were asked if they had ever been asked their age when trying to buy cigarettes, which makes it somewhat difficult to determine the frequency of being turned away at any age. Regardless, it is clear that there is no guarantee a young smoker will be asked to show proof of legal age when buying cigarettes or be turned away. Even among 10- to 12-year-olds, 18% had gone to a store to buy cigarettes, and, of these, only 42% said they had ever been asked their age.

The findings of the YSS also show that young people commonly buy cigarettes in large quantities, with half of 10- to 14-year-olds and 70% of 15- to 19-year-olds buying packages of 25. The YSS does not provide information to explain why packages of 20 cigarettes (as opposed to packages of 25) were so much more popular in Newfoundland and British Columbia than in other provinces or why fewer smokers in Ontario buy single cigarettes. These issues deserve further study.

The YSS provides new information about the purchase of single cigarettes. Being able to buy small quantities of cigarettes is believed to encourage smoking among young and novice smokers, as price and other barriers are removed. However, the majority of those who occasionally buy single cigarettes usually buy them from another person. Therefore, the behaviour being captured may simply be sharing cigarettes – dividing up the package away from the retail store or paying back a friend for a few cigarettes. It is important to distinguish between retail and other sources of cigarettes sold outside of packages if one is interested in tracking policies on retail practices such as separating cigarettes from packages.

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Table 8-9
Brand Usually Smoked, by Sex and Age, Current and Beginning Smokers, Canada, 1994

			Brand Usually Smoked (%)				
	Pop. Est. ('000)	Do You Usually Smoke the Same Brand? (% yes)	No Usual Brand	Brand C	Brand H	Brand I	All Other Brands
Total, 10-19	**886**	**80**	**20**	**28**	**11**	**35**	**6**
10-14	310	81	20	28	13	30	9
15-19	576	80	20	28	10	37	5
10-12	95	81	20*	27	12*	27	14*
13-14	215	81	19	29	14	32	7*
15-17	304	78	22	29	10*	35	4*
18-19	271	81	19	27	9*	40	6*
Males, 10-19	**427**	**79**	**21**	**29**	**13**	**32**	**6***
10-14	145	82	18	27	17	27	11*
15-19	282	78	22	29	10*	34	4*
10-12	51	82	15*	27*	15*	28*	16*
13-14	94	81	20*	28	18*	27*	8*
15-17	136	78	22*	35	11*	29	#
18-19	146	77	23	24	10*	39	#
Females, 10-19	**459**	**81**	**19**	**28**	**9**	**38**	**6***
10-14	165	80	21	29	10*	33	7*
15-19	294	82	19	27	9*	40	5*
10-12	44	75	26*	28*	#	25*	#
13-14	121	81	19	29	10*	36	5*
15-17	169	78	22	25	9*	40	#
18-19	125	86	14*	30	9*	40	#

* Moderate sampling variability; interpret with caution

\# Data suppressed due to high sampling variability

Table 8-10
Brand Usually Smoked, by Province and Age, Current and Beginning Smokers, Canada, 1994

	Pop. Est. ('000)	Do You Usually Smoke the Same Brand? (% yes)	Brand Usually Smoked (%)				
			No Usual Brand	Brand C	Brand H	Brand I	All Other Brands
Canada, 10-19	**886**	**80**	**20**	**28**	**11**	**35**	**6**
10-14	310	81	20	28	13	30	9
15-19	576	80	20	28	10	37	5*
Newfoundland, 10-19	**25**	**83**	**17**	**38**	**6***	**28**	**11**
10-14	8	79	22	35	#	29	#
15-19	17	85	15*	40	#	27	12*
Prince Edward Island, 10-19	**5**	**79**	**21**	**65**	**#**	**#**	**#**
10-14	2	78	#	65	#	#	#
15-19	3	79	#	65	#	#	#
Nova Scotia, 10-19	**10**	**78**	**20**	**49**	**9***	**18**	**#**
10-14	28	80	23*	48	#	16*	#
15-19	19	82	19*	49	10*	18*	#
New Brunswick, 10-19	**25**	**81**	**19**	**42**	**11**	**21**	**7***
10-14	8	80	20*	33*	#	26*	#
15-19	17	82	18	46	11*	19	#
Quebec, 10-19	**264**	**79**	**22**	**21**	**24**	**27**	**7***
10-14	106	85	15*	24	29	24	8*
15-19	158	74	26	19	20	28	6*
Ontario, 10-19	**281**	**84**	**17***	**31**	**#**	**48**	**#**
10-14	86	79	#	29*	#	43	#
15-19	195	86	14*	31	#	50	#
Manitoba, 10-19	**39**	**81**	**20**	**30**	**#**	**41**	**#**
10-14	12	79	21*	30*	#	38	#
15-19	28	81	19*	30	#	42	#
Saskatchewan, 10-19	**33**	**74**	**26**	**29**	**#**	**30**	**11***
10-14	13	71	30	24	#	28	#
15-19	20	76	24	31	#	31	#
Alberta, 10-19	**85**	**77**	**23**	**31**	**8***	**30**	**7***
10-14	31	79	22*	30	#	28	#
15-19	54	76	24	32	#	31	#
British Columbia, 10-19	**102**	**78**	**22**	**23**	**10***	**34**	**12***
10-14	36	81	19*	30	#	26*	18*
15-19	66	76	24	19*	11*	38	#

* Moderate sampling variability; interpret with caution

\# Data suppressed due to high sampling variability

Table 8-11
Ability to Match Anonymous Cigarette Package Designs with Brand Names, by Sex and Age, Age 10-14, Canada, 1994

	Pop. Est. ('000)	Number of Correct Matches Between Picture of Cigarette Package Without Brand Name and Cigarette Brand Name (%)				
		0	1	2	3	4+
Total, 10-14	**1,949**	**5**	**25**	**19**	**16**	**34**
10-12	1,166	7	34	22	15	22
13-14	783	3*	14	16	17	50
Males, 10-14	**997**	**6**	**24**	**18**	**15**	**37**
10-12	596	7*	32	21	15	26
13-14	401	3*	14	15	16	52
Females, 10-14	**953**	**5***	**26**	**21**	**17**	**31**
10-12	571	7*	36	24	16	18
13-14	382	#	15	17	19	47

* Moderate sampling variability; interpret with caution

\# Data suppressed due to high sampling variability

Table 8-12
Recall of Advertisements for Tobacco Corporation-sponsored Events and Place Ads Were Seen, by Sex and Age, Canada, 1994

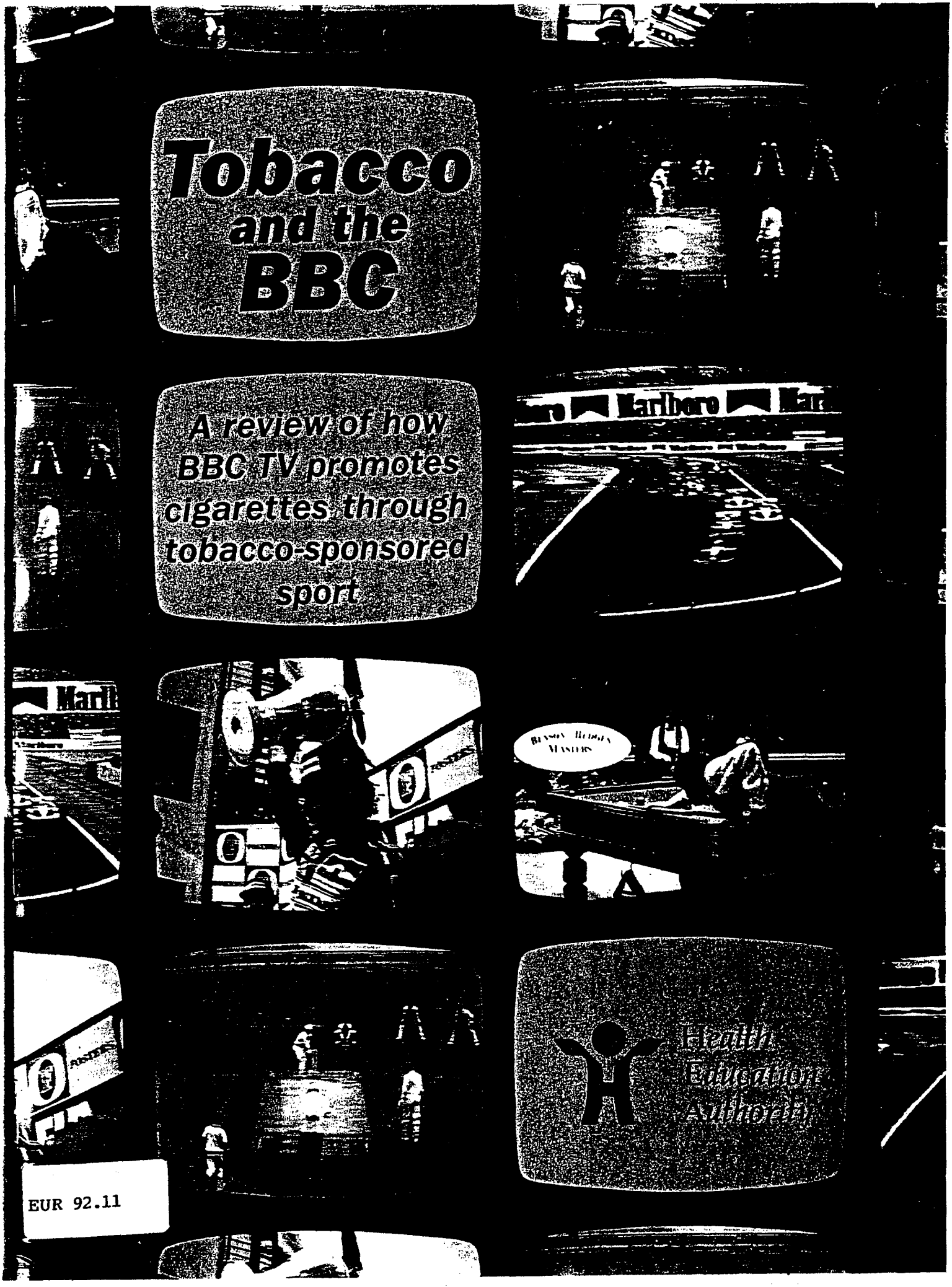
		Seen Ads for a Sponsored Event (%)			Seen Sponsorship Advertising by Location (% yes)				
	Pop. Est. ('000)	Yes	Don't Know	Pop. Est. ('000)	Billboards	Store Signs/ Displays	Buses/ Bus Shelters	Magazines/ Newspaper	Television
Total, 10-19	**3,881**	**50**	**10**	**1,870**	**48**	**27**	**25**	**44**	**63**
10-14	1,949	49	14	898	56	45	41	53	63
15-19	1,932	51	5	972	40	11	11	36	63
10-12	1,166	43	15	466	50	43	40	48	61
13-14	783	58	13	432	63	47	42	58	66
15-17	1,149	48	5	537	37	9	11	36	65
18-19	783	56	5	435	44	12	12	35	59
Males, 10-19	**1,986**	**57**	**8**	**1,096**	**49**	**28**	**25**	**44**	**64**
10-14	997	55	12	517	58	48	42	53	63
15-19	989	60	4	579	40	11	11	36	65
10-12	596	49	13	268	54	46	42	47	59
13-14	401	64	10	249	63	50	41	58	67
15-17	589	56	4*	322	36	11*	9*	35	70
18-19	400	65	4*	257	45	11*	12*	37	59
Females, 10-19	**1,896**	**43**	**11**	**774**	**47**	**26**	**26**	**44**	**61**
10-14	953	43	17	381	53	41	39	53	64
15-19	943	43	6	393	40	11	12	35	59
10-12	571	38	17	198	45	39	37	49	64
13-14	382	51	17	183	62	43	43	57	64
15-17	560	40	5*	215	38	8*	13*	37	59
18-19	383	47	6*	178	43	14*	12*	33	59

* Moderate sampling variability; interpret with caution

Table 8-13
Recall of Advertised Events Sponsored by Tobacco Corporations, by Type of Event, Sex, and Age, Canada, 1994

	Seen an Ad for a Tobacco Corporation-sponsored Event (%)			Among Those Who Have Seen an Ad for a Tobacco Corporation-sponsored Event ...		
	Pop. Est. ('000)	Yes	No	Pop. Est. ('000)	Recall One or More Correct Matches Between a Sponsored Sporting Event and Tobacco Company Sponsor (%)	Recall One or More Correct Matches Between a Sponsored Music or Cultural Event and Tobacco Company Sponsor (%)
Total, 10-19	**3,881**	**40**	**61**	**1,533**	**63**	**14**
10-14	1,949	24	76	472	60	11
15-19	1,932	55	45	1,061	64	16
10-12	1,166	19	81	222	55	8*
13-14	783	32	68	250	65	14
15-17	1,149	53	47	604	60	15
18-19	783	58	42	458	68	17
Males, 10-19	**1,986**	**49**	**51**	**977**	**68**	**12**
10-14	997	32	68	323	64	9
15-19	989	66	34	654	69	13
10-12	596	26	74	155	58	6*
13-14	401	42	58	167	69	13
15-17	589	62	38	368	66	11
18-19	400	72	28	287	74	15
Females, 10-19	**1,896**	**29**	**71**	**556**	**54**	**19**
10-14	953	16	84	149	52	14*
15-19	943	43	57	407	54	21
10-12	571	12	88	66	46	12*
13-14	382	22	78	83	56	16*
15-17	560	42	58	236	52	20
18-19	383	45	55	171	58	22

* Moderate sampling variability; interpret with caution


Tobacco
and the
BBC
A review of how BBC TV promotes cigarettes through tobacco-sponsored sport
Marlboro
Health Education Authority

EUR 92.11

Tobacco and the BBC

A review of how BBC TV promotes cigarettes through tobacco-sponsored sport



Health Education Authority

This report was written by Adhealth Limited.

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Foreword

In 1965 the British Government imposed a ban on tobacco advertising on television. Since then, however, the BBC has continued to provide free airtime to the tobacco industry. This new report indicates that the BBC is broadcasting tobacco images through sport at unprecedented levels.

In 1991 the tobacco-sponsored sport shown on BBC TV appears to have reached a new record level of exposure of tobacco company and brand images; in one event, for example, these images were on screen for up to 25 minutes per hour of the broadcast programme and others came close to that record level. Such images associate tobacco with success and glamour in sport and exceed the total advertising time allowed each hour on commercial television in Britain.

Tobacco-sponsored sport is controlled by a voluntary agreement between the Secretary of State for Education and Science and the tobacco industry. The present report is the eighth in a series which highlights what we believe are serious breaches and defects in the controls on tobacco-sponsored sport on BBC TV. Since February 1987 commercial television has not broadcast tobacco-sponsored sport.

The monitoring of tobacco-sponsored sport on BBC TV undertaken for this report in 1991 found that the impact of tobacco names, logos and colour codes has never been greater. In many programmes, the colours and styles of the studio graphics resembled those of the cigarette brands of the sponsors. Furthermore, the BBC did not ensure that legible health warnings were broadcast as required in other forms of tobacco promotion.

Tobacco-sponsored sport on television is seen by a large number of children. For example, in 1991 over four million 7–15 year olds watched the Embassy World Snooker Championship. This undermines efforts to educate children about the dangers of smoking.

In publishing this report the HEA urges the BBC Board of Governors and the Advisory Council to halt this means of promoting tobacco products which cause over 111,000 people in the UK to die each year before their time.

Donald Maitland

Sir Donald Maitland, Chairman HEA

BBC TV policy statement

'Our policy [is] to relieve the anxiety, felt both outside and within the BBC, that our airtime is being used to sell cigarettes.'
Bill Cotton, Managing Director, BBC TV, September 1988.

Tobacco industry statement

'We're not in the sports business. We use sports as an avenue for advertising our products.'
W Robertson, spokesman for RJ Reynolds in the USA, manufacturers of Camel cigarettes, a principal sponsor of Grand Prix racing cars, September 1989.

Introduction

Health complaints rebuffed

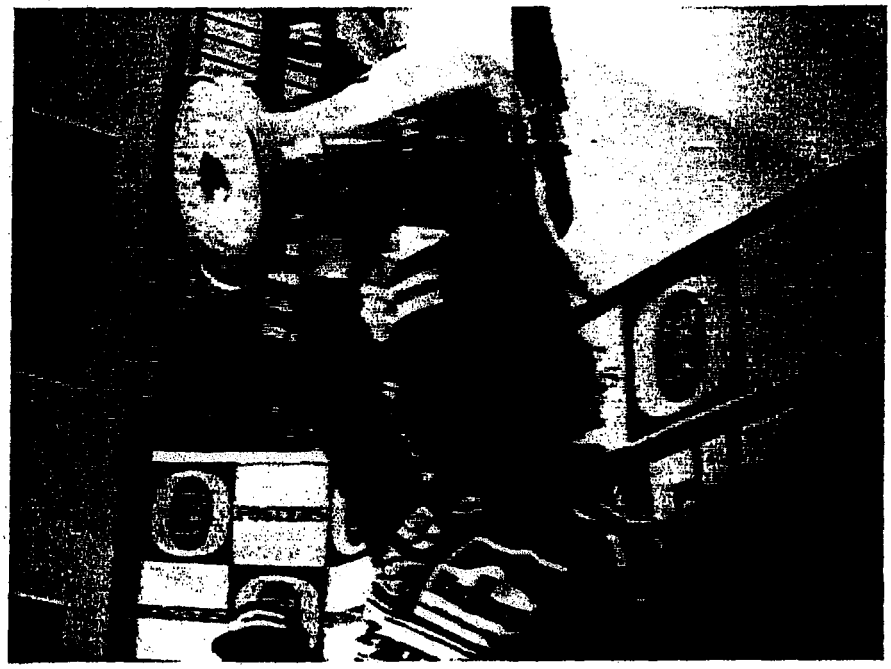
Between 1985 and 1990 the Health Education Authority commissioned some seven reports on breaches and defects in the controls on tobacco-sponsored sport in this country. There is little evidence that these have had any effect at all. Independent TV in Britain refuses to take tobacco-sponsored sports programmes, but the BBC continues to broadcast such programmes, lasting in total hundreds of hours a year. Complaints from within the BBC, from the medical royal colleges, from health education bodies and from the general public have failed to curb this apparent abuse of the Government's intention in 1965 to halt the use of TV to advertise tobacco.

Britain is now falling behind other countries in the world which refuse to allow TV to be exploited by those wishing to promote the sale of a product which this year will probably be responsible for one million premature deaths in Europe and nearly three million worldwide.

BBC TV enhances tobacco promotion

Tobacco advertisements in Britain are forbidden to associate tobacco with glamour, with sport and with success in business. Tobacco-sponsored sport presents all these images. The BBC seems to help in every part of the process. In many programmes there is a remarkable similarity between the colours and style of the studio graphics and those of the sponsors' cigarette brands. Is this merely coincidence? The publicity clips that the BBC provides add to the force of the tobacco promotion. These images of tobacco are enhanced by the glamour of BBC sport's presentation. The images are repeated in the news bulletins and sports quiz programmes that give further coverage well known to be attractive to children throughout Britain.

1. A champion with Marlboro colours, chevron symbol and name badge shown on BBC TV coverage of the 1991 Silverstone British Grand Prix but using archive footage from a previous Grand Prix.



Up to 50 thirty-second tobacco ads per hour on BBC TV

This new report shows that tobacco-sponsored sports events shown on BBC TV are now showing tobacco company or brand images for up to 25 minutes of every hour of transmission. That may be said to be equivalent to the BBC broadcasting up to 50 thirty-second tobacco adverts per hour. The commercial value to the tobacco trade of such contracts is obvious. To buy such airtime at commercial rates would cost the tobacco trade at least £1.5 million an hour of broadcast time. The total declared investment in tobacco-sponsored sport each year is about £5 million which buys the tobacco trade over 300 hours a year, much of it at prime time with audiences of many millions of adults and children.

Health hazard with no legible health warnings

Tobacco smoking causes lung cancer, heart disease, chronic obstructive lung disease and risks to unborn babies. Tobacco kills non-smokers as well. Yet during the tobacco-sponsored sports events the BBC does not ensure that legible health warnings are broadcast as required in other forms of tobacco promotion.



2. The Marlboro name, colours and chevron symbol unmistakable on the billboard: the health warning is illegible. BBC TV coverage of British Grand Prix 1991.

BBC TV and the tobacco trade

This report gives further evidence that may prompt the BBC to review its policy on tobacco-sponsored sport. The report calls on the Board of Governors and the Advisory Council to give priority to the best interests of the children of this country, many of whom still believe that the BBC carries tobacco advertising.

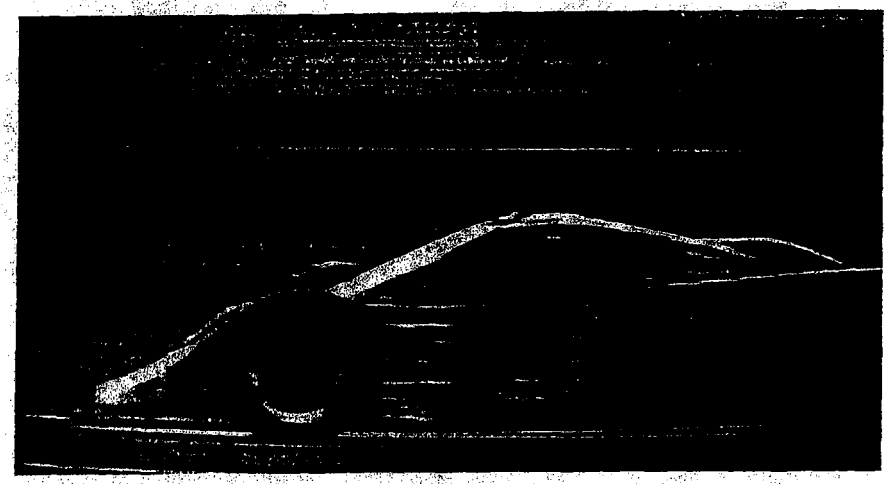
Undermining health education

The continued promotion of tobacco on the BBC channels tends to undermine the work of the Health Education Authority and the schools and health services in Britain in educating young people about tobacco, and helping smokers to quit. In the face of this, it is difficult to know how the Health Education Authority can compete.

More tobacco images on the box

The Government's current efforts to curb tobacco promotion have failed since the levels of penetration of tobacco images in tobacco-sponsored sport are reaching unprecedented levels with so many events beyond the terms of the agreements themselves, such as motor sport from abroad. The acid test is

what appears on the screens in millions of homes. Even though there is a committee for monitoring this agreement, there is a vast amount of tobacco-sponsored sport on TV.



3. BBC TV motor sport from Le Mans 1991. The tobacco colours and the brand name are linked to the glamour of a top motor car company.

Freedom from tobacco promotion

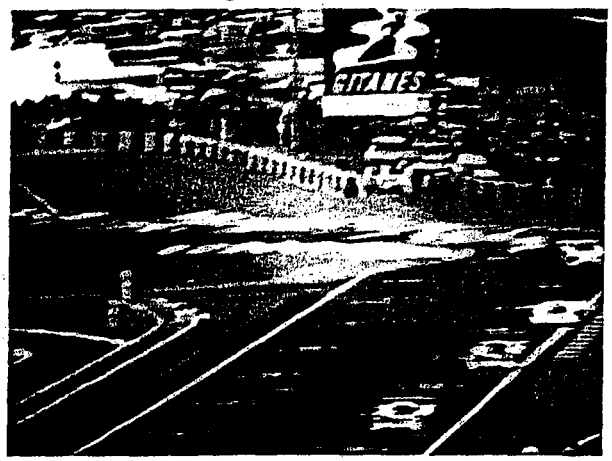
Over ten years ago the World Health Organization called for a complete end to tobacco advertising and promotion. The evidence in this report shows how absurd it is to try to defend anything less.

It is hoped that this report will help the BBC Board of Governors and its Advisory Council to review its current policy to broadcast tobacco-sponsored sports events whether taking place in this country or abroad. The key question is, in the interests of children, what should the BBC put first – health or tobacco? In the circumstances, should not concern for health persuade the BBC to take its cameras away from those events where so much tobacco promotion is involved?

Seven previous reports

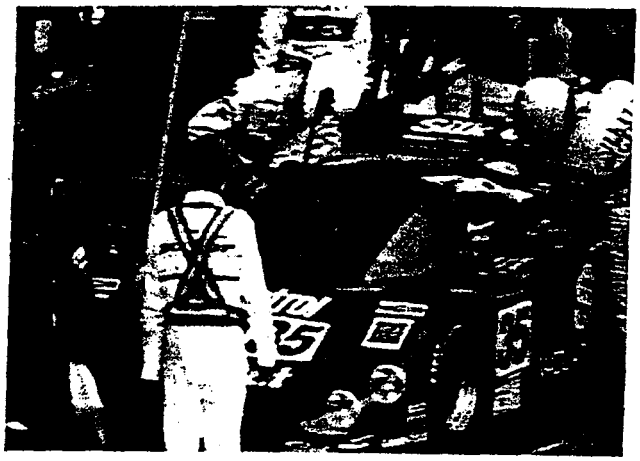
There have been seven previous reports presented by the Health Education Authority (HEA) and its predecessor, the Health Education Council (HEC). These set out the chief ways in which tobacco-sponsored sport on BBC TV

4. BBC TV coverage from Le Mans 1991.



5. Tobacco promotion is a dying feature of the French circuit. New legislation will put a brake on these advertisements shown by BBC TV from Le Mans 1991.





6. Le Mans 1991 – pit stops give long uninterrupted brand advertising that the voluntary agreement should exclude.



7. BBC TV showed pictures like this for 25 minutes per hour in the 1991 French Grand Prix.

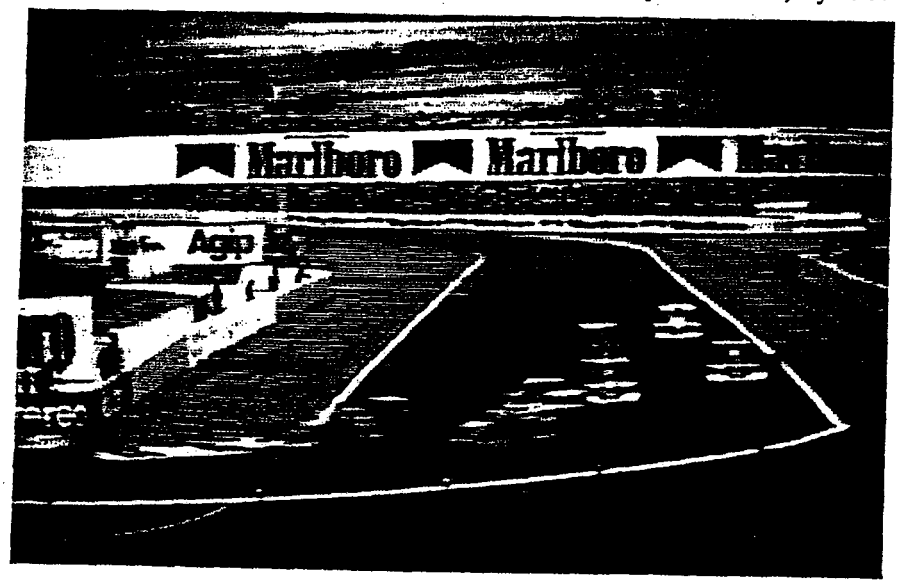
gave evidence of breaches and defects in the then voluntary agreements between the Government and the tobacco trade in this country.

These reports were:

- *Codebusters*, October 1985
- *The Tennis Racket*, December 1985
- *Codebusting by Tobacco Companies: A Case Against the Existing Voluntary Agreement*, March 1986
- *Cigarette Advertising on BBC TV*, April 1986
- *Monitoring Tobacco-sponsored Snooker on BBC TV*, September 1986
- *The Name of the Game – Selling Cigarettes on BBC TV*, August 1987
- *Beating the Ban: Tobacco Advertisements on BBC TV – A Threat to Our Children's Future Health*, November 1990

More exposure of tobacco images in BBC programmes despite the agreements

The reports showed how the tobacco trade continued to evade the spirit, and often the letter, of the agreements. They measured the extent of the exposure of the tobacco images on the TV screen and showed the increasing trends. In 1985, for example, in the first snooker competition monitored, the tobacco name boards appeared on the screen on average 140 seconds per hour. In 1986 that figure had increased to 383 seconds per hour. In July 1986



8. The French Grand Prix 1991 – BBC TV shows the modern 'cowboys' riding out of the tobacco-sponsored 'hill country'.

tobacco-sponsored cricket exposed viewers to 439 seconds per hour of tobacco name boards on the screen. In August of that year horse jumping provided 482 seconds per hour. In May 1987 the Rugby League cup final at Wembley provided 484 seconds per hour of tobacco name boards, together with an under-11 team playing in front of them in the pre-match entertainment.

While exposure of name boards in snooker has declined since 1986, motor sport has exceeded all previous levels of tobacco promotion. In 1988 in the British Grand Prix circuit boards logos on cars and participants' clothing captured 533 seconds per hour on camera. In 1991 at the equivalent British-based event the figure was again over 500 seconds per hour.

The defect in the agreement which allows foreign-based events to escape the British controls provided even greater exposure of tobacco images. In the Spanish Grand Prix in 1989 the tobacco images were screened for 1344 seconds per hour. In the Mexican Grand Prix in 1991 they appeared for 1300 seconds per hour. In the French Grand Prix in 1991 the tobacco images and names appeared for 1515 seconds per hour.

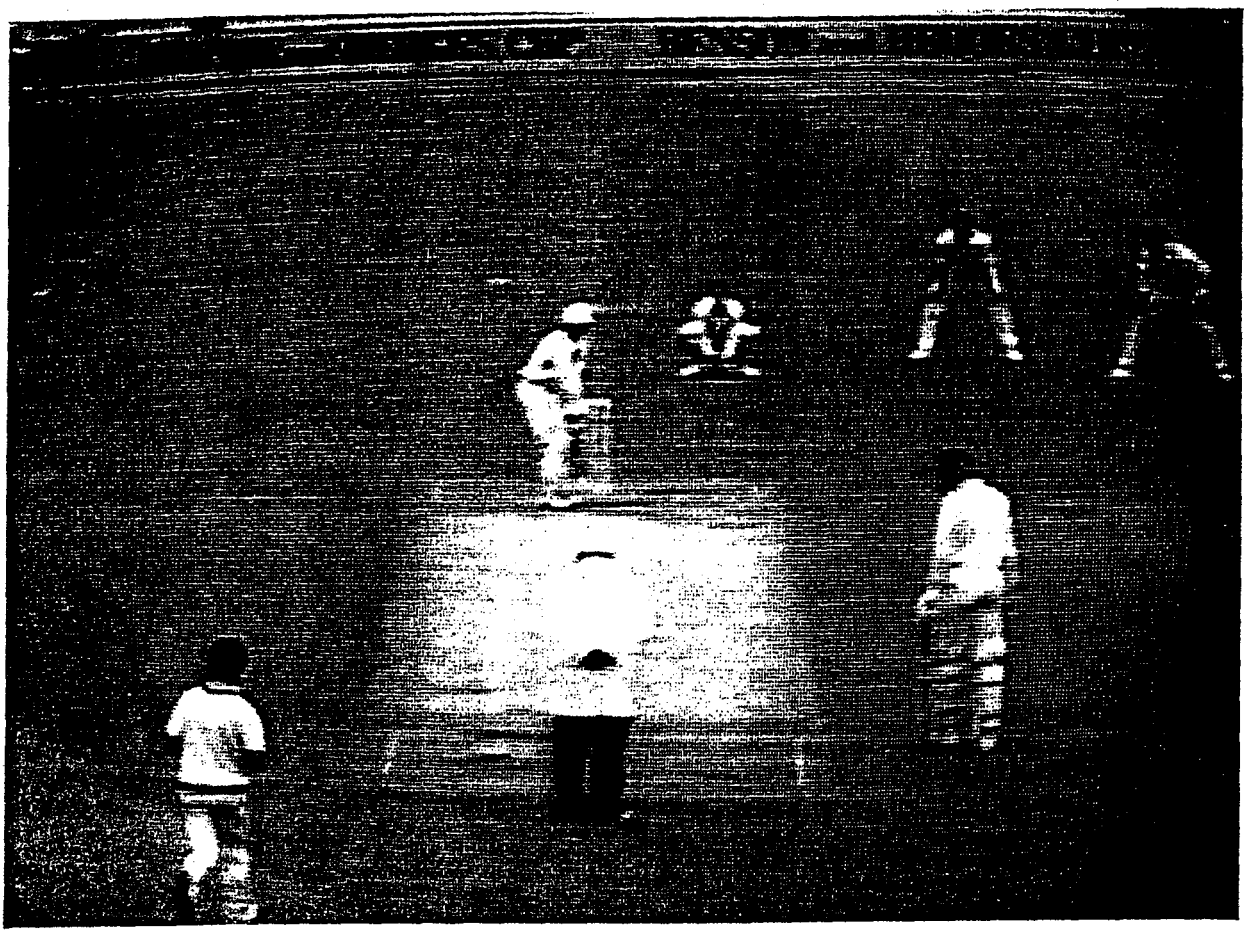
The forbidden images

Direct tobacco advertisements are banned on British TV. But tobacco-sponsored sport allows extensive opportunities for equivalent images to appear on TV – images that the tobacco companies would like to put into advertisements if they could. In snooker where one sees concentration and stress during the play and the relaxation that follows, the tobacco name boards appear with the tobacco brand colours for the same amount of time it would take to show between 2 and 13 thirty-second advertisements per hour.

In cricket, viewers are exposed to tobacco name boards for the same amount of time it would take to show 15 or 16 thirty-second advertisements per hour, interspersed with scenes of sporting success in this popular summer game played in elegant surroundings. In bowls the tobacco sponsors' name boards are exposed for the same amount of time it would take to show 2 thirty-second advertisements per hour in restful indoor settings showing top sportsmen in international competition.



9. Snooker 1991. The sponsor's name board dominates the most prized shots – the red-black combination. The health warning is illegible.



10. Cricket 1991. The two tobacco name boards are placed in just the position which guarantees maximum exposure behind the batsman. The two health warnings are illegible on screen.

But it is motor racing that offers sponsors the biggest prize. Here the drivers speed their cars amid tobacco images that hit the screen for the same amount of time it would take to show over 50 thirty-second advertisements per hour.

Voluntary agreements let in overwhelming tobacco promotion

The voluntary agreements were meant to control the exposure of these images but they have manifestly failed. In motor sport, most of which is shown by the BBC from abroad, the viewers are bombarded with up to 25 minutes of tobacco names and images for every hour of the time the sport is transmitted.

In 1990 the Health Education Authority complained to the Monitoring Committee about the problems that tobacco-sponsored sport presents for health education in this country. The Monitoring Committee convened a special meeting to consider the representations of the HEA but did not invite the HEA to present its complaints directly. In its letter of reply the Monitoring Committee rejected virtually all the HEA's complaints. The answers are not published in detail in the 1991 annual report of the Committee, but are shown here. (See Appendix 1.)

How the tobacco sponsors get their message across

In tobacco-sponsored sport the tobacco images appear on the BBC TV screen in the following ways:

- by placing tobacco company and tobacco brand name boards in positions which are picked up by TV cameras as part of the background to key aspects of sporting activity;
- by putting tobacco brand names, logos and colours on the participants in the sports;
- by visual and verbal references to the sponsors in the commentaries and in studio titles provided for the events;
- by echoing the colours of the company or the brand in other features of the sport, eg flags, umbrellas, refreshments;
- by participants smoking in front of the camera, especially the sponsor's brand;
- by use of tobacco-sponsored sports film coverage in news, sports publicity and sports quiz programmes on TV.

11. The Marlboro chevron and distinctive tobacco brand colours on the side of the racing car, Silverstone 1991.





12. BBC TV shows the Marlboro chevron symbol and brand colours on a leading driver, Silverstone 1991.



13. A pit stop with mechanics wearing Marlboro colours and the chevron symbol, British Grand Prix 1991.

Table 1 Tobacco-sponsored motor racing on BBC TV 1988–1991

Event	*Tobacco sponsors*	*Exposure of circuit ad. boards secs/hr*	*Exposure of logos on cars, clothing, etc secs/hr*	*Total exposure secs/hr*	*30-second tobacco advert equivalents*		
					Circuit boards	*Logos*	*Total*
1988 British Grand Prix	Marlboro	290	243	533	10	8	18
1989 Spanish Grand Prix	Marlboro Camel Gitanes	167	1177	1344	6	39	45
1991 Mexico Grand Prix	Marlboro Camel	458	842	1300	15	28	43
1991 Le Mans	Gitanes Silk Cut	70	148	218	2	5	7
1991 Canadian Grand Prix	Camel Marlboro	0	692	692	0	23	23
1991 French Grand Prix	Marlboro Camel Gitanes	1045	470	1515	35	16	51
1991 British GP (Practice)	Camel Marlboro	37	486	523	1	16	17
1991 British Grand Prix	Camel Marlboro	48	450	498	2	15	17
1991 British Formula 3	Camel Marlboro	496*	99	595	17	3	20

* Including exposure of name boards during expert interviews, which accounted for 270secs/hr exposure and 17 TSAES (thirty-second advert equivalents); excluding these, the circuit board exposures were 58secs/hr and 2 TSAES.

To the sponsor these opportunities provide advertising value. The voluntary agreements have attempted to curb the use of many of these mechanisms but have evidently failed. The extent of the failure is shown in Tables 1–3 which summarise the penetration of many of these images on BBC TV screens since monitoring began in 1985.

Table 2 Tobacco-sponsored snooker on BBC TV 1985–1991

Date	*Sponsor/ Company*	*Exposure of tobacco name boards secs/hr*	*Advertising value[1] – 30-second tobacco advert equivalents per hour*
1985[2]	Rothmans	140	5
1986[2]	Benson & Hedges	383	13
1986[2]	Embassy	82	3
1986[2]	Rothmans	81	3
1987[2]	Benson & Hedges	109	4
1987[2]	Embassy	56	2
1988[3]	Embassy	76	3
1989[3]	Embassy	176	6
1991	Benson & Hedges	48	2

1. Name penetration in equivalent number of 30-second adverts (TSAES) just showing the tobacco name boards.
2. See Roberts, JL (1987) *The Name of the Game – Selling Cigarettes on BBC TV,* North Western Regional Health Authority for the Health Education Authority, p. 15.
3. See Roberts, JL (1990) *Beating the Ban: Tobacco Advertisements on BBC TV – A Threat to Our Children's Future Health,* Health Education Authority, Table 1.

Table 3 Other sports sponsored by tobacco companies

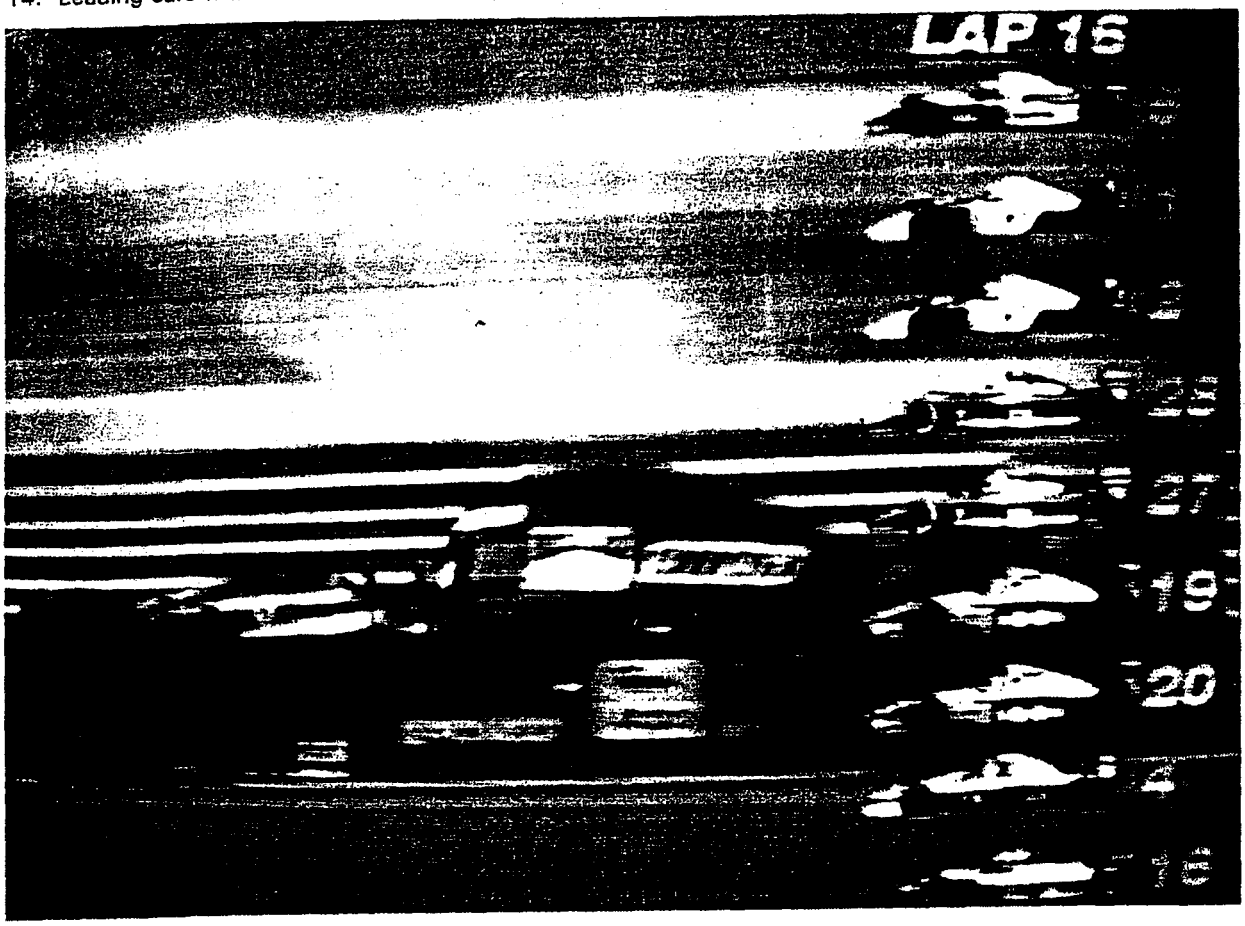
Event	*Tobacco sponsors*	*Exposure of tobacco name boards secs/hr*	*Advertising value – TSAES secs/hr*
CRICKET			
1986	Benson & Hedges	439	15
1987	Benson & Hedges Australia	481	16
1991	Benson & Hedges	188	6
TENNIS			
1986	Benson & Hedges	93	3
BOWLS			
1987	Embassy	58	2
1989	Embassy	186	6
RUGBY			
1987	Silk Cut	484	16

These figures reveal that in British and foreign-based Grand Prix Formula One motor sport, the tobacco images exceed eight minutes per hour of screen time. This is more than the total advertising time per hour allowed on commercial TV in Britain.

In snooker the penetration of tobacco images has declined to about one minute per hour but still includes smoking in front of the camera, and the arenas continue to echo the main colours used by the sponsors for promoting their brands. Neutral or contrasting colours have not been used since their first appearance in October 1986 when the then managing director of BBC TV, Bill Cotton, attempted to take a stand against the use of BBC airtime to sell cigarettes.

Cricket on BBC TV allows the tobacco name boards to be placed together behind the batsmen on the boundary of the playing field; these are picked up by cameras on average about three minutes every hour of broadcasting.

14. Leading cars with tobacco colours and symbols, BBC TV British motor sport 1991.



Solutions to the problem of tobacco image penetration on BBC TV

There are two basic solutions to the problem that tobacco-sponsored sport presents to health education in this country. One is for the practice to be banned. This is the preferred solution. The second is for the BBC or the Government to insist that the tobacco images do not penetrate on to the screen. In the section that follows the key points of complaint made in the past are examined and specific solutions offered which could be implemented by the BBC or incorporated in future arrangements for the televising of these events.

The position of tobacco company boards

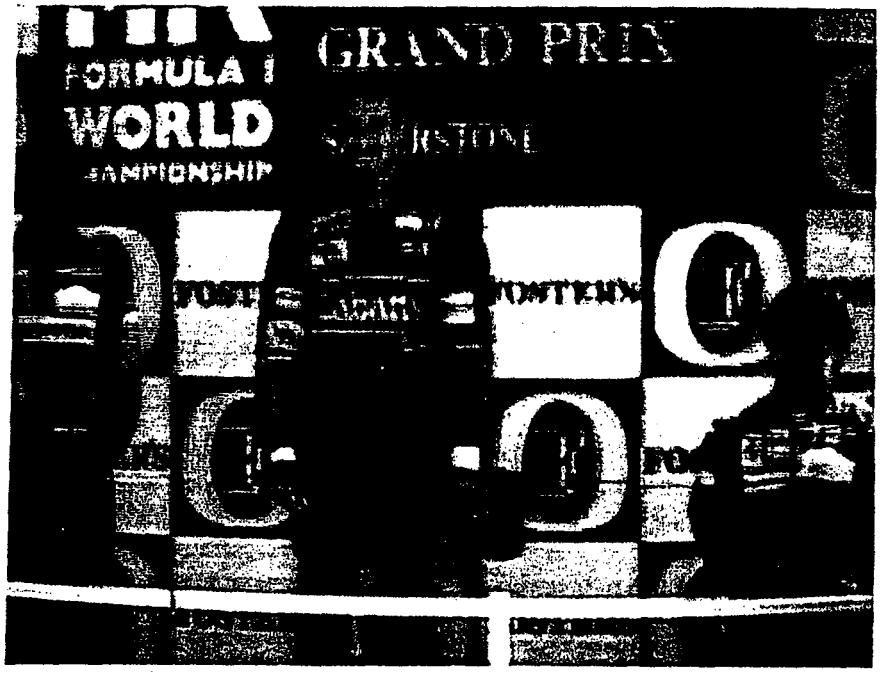
In 1985 a complaint was made in the report, 'The Tennis Racket', that the name Benson & Hedges appeared on the umpire's chair, contrary to the requirements of the agreement, in the Masters' tournament at Wembley, sponsored by Gallahers. Gallahers replied that the umpire was not actively involved in the game of tennis and so he and his chair were excluded from that part of the then agreement relating to the forbidden display of 'brand names or symbols on officials and their equipment'.

> 'The display of house or brand names or symbols on participants and officials, their vehicles, equipment and/or animals likely to come within the scope of the television cameras, is not permitted during the course of a televised activity in the UK.' (Paragraph G13, 1987 agreement).

The HEC replied that when Ilie Nastase and John McEnroe are playing it is difficult to argue that a tennis umpire is not actively involved in the match.



15. Nigel Mansel carries the Camel symbol, Silverstone British Grand Prix 1991.



16. BBC TV shows the Silverstone British Grand Prix 1991, the winner with the Camel symbol; the runners up with Marlboro brand symbols and colours.

In 1990 in 'Beating the Ban' a complaint was made that the tobacco name boards were placed behind set playing positions in bowls and in snooker, contrary to the provisions of paragraph F12(a) p11 of the 1987 agreement. The Monitoring Committee dismissed both claims despite the submission of direct evidence. It claimed, for example, that there is no set playing position in bowls or in snooker. Such a view seems designed to protect the positioning of the tobacco name boards in the places where, against the letter and the spirit of the agreement, they are not to be placed; namely, they

> 'should not be located within camera sightlines for long uninterrupted periods. For example, they should not be placed on or at scoreboards, set playing positions, rest areas etc. that are likely to come within the scope of the television cameras.' (Paragraph 12a, 1987 agreement)

The key point here is that the intention of the agreement seems to be clearly to minimise the exposure of the name boards. The effect of the TV coverage seems to achieve just the opposite. The interpretation of the Monitoring Committee of this provision seems to fly in the face of both the letter and the spirit of the agreement.

The BBC's continuous battles with sponsors

This cannot be an easy matter for the BBC to handle at the events themselves, where the TV camera positions may have already been determined by the event organisers under the influence of the sponsors. It is no wonder that, in her letter of 3 December 1985, the Secretary to the BBC, Patricia Hodgson, referred to 'the continuous battle with the sponsors of events to ensure that... incidental coverage of the names of the sponsors is kept to a minimum'.

The question is, what is a minimum? The current range of exposure of tobacco names and images in tobacco-sponsored sport in Britain is from one minute per hour to eight minutes or more. All these events are covered by the agreements. In events beyond these controls the penetration of tobacco names and logos is up to 25 minutes per hour.

Cover up the tobacco boards or withdraw the cameras

But there are simple solutions. In setting up the cameras the BBC should insist that the boards are not within the sightlines of the cameras and, if they are, the boards should be covered up. If there is further difficulty with the sponsors amounting to 'a continuous battle', the BBC should refuse to televise the event.

Place the name boards out of sight of the cameras; edit out any exposure of the boards

In the case of snooker the tobacco name boards can be placed at the back of the audience, where they can be appreciated by the live audience but are not shown on TV. In indoor tennis and bowls a similar rule could apply. In outside events where the boards may come in range of the cameras they should be covered, or the event should be so edited that such camera shots are not broadcast.

Mask out symbols on participants and their equipment

A similar arrangement should apply to tobacco company and brand logos on cars, participants, umbrellas, water jugs, pit stop interiors, etc. The symbols of tobacco should be masked and the colours prohibited or painted out.

Disqualify competitors

Failing this, where the rules are not complied with, the competitors should be disqualified.

Fines for exposure of tobacco names and images

Independent monitoring should be undertaken routinely to measure the exposure of tobacco company and brand name and images in tobacco-sponsored sport. Fees paid by the BBC to the organisers should be adjusted accordingly or fines imposed. The cost of these would no doubt be passed on as a bill to the sponsor. In this way the sponsor would pay for any exposure of the boards.

17. BBC TV British Grand Prix 1991 interview with former champion driver. Note the one Marlboro signboard which was exposed in this interview for a total of 4 minutes 30 seconds. There is no legible health warning on the signboard.



'The Companies should print a health warning... on static promotional signs (ie signs likely to come within the scope of television coverage) at sponsored sporting acvities.'
(Extract from paragraph C3, 1987 agreement.)

The rates could be equated to commercial advertising rates and the revenue from them dedicated to health education programmes. This would at least ensure some equality in the exposure of children to illicit tobacco advertising.

If the current rates of exposure of tobacco images in tobacco-sponsored sport on BBC TV remained, the revenue from fines would be considerable. It would amount to about £60,000 for every hour of broadcast snooker rising to £510,000 for every hour of British motor sport.

A similar rule could be applied to foreign-based motor sports if the organisers wished the BBC to give continued coverage. But in this case the fines could be up to £1.5 million per hour at current levels of tobacco image penetration.

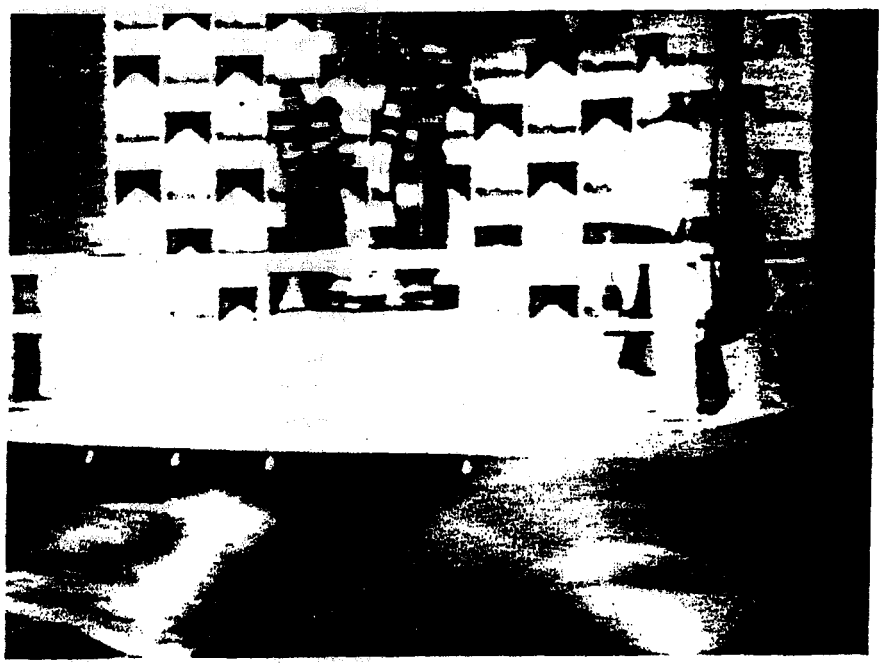
The net effect could be to give health education in Britain a boost of some £60 million per year or more. This might be considered reasonable compensation for the damage caused currently by the BBC TV coverage.

Introduce legible health warnings on BBC TV

In all the monitoring since 1985 seldom have the health warnings shown on the tobacco sponsors' boards been visible on screen. The tobacco industry claims that the boards conform with the requirements of the agreement. If this is so, the letter of the agreement fails to meet its spirit. The health warnings should be legible, otherwise there is no point in having them there. Without visible or audible health warnings the BBC itself is assisting in the promotion of a lethal product. In the light of this, and for as long as tobacco-sponsored sport is broadcast by the BBC, the BBC should consider broadcasting visually and verbally one of the current health warnings approved for all tobacco advertising by the Government. These are set out in Appendix 2, page 22.

18. BBC TV coverage of the French Grand Prix 1991.





19. The Mexican Grand Prix 1991. The Marlboro red chevron is the background to success.

The warnings should be given airtime equal to the exposure of the tobacco names and logos in the programmes, or the BBC should broadcast a health education insert to ensure proper balance in its messages. This rule should be followed by the BBC to alleviate any anxiety that the BBC is supporting the sponsor's products without thought for the risks to health.

Agenda for action by the BBC

The BBC should recognise the conflicting interests of sports coverage and health education, and consider drawing up an agenda for remedial action to give due emphasis to health in its production standards.

Complaints have been made previously about the spill-over effect of tobacco-sponsored sport into BBC publications and publicity, including news coverage. Assurances are needed that the BBC and its publications exclude images which associate tobacco with glamour, sport, social and business success, etc. These publications should use as a guideline the British code for tobacco advertising.

Title cards, presenters and commentators should not use the tobacco company or brand names in announcing programmes, even where the tobacco companies have succeeded in incorporating these names in their own, or the organiser's, publicity for the events. For example, the match should be referred to by the BBC as the Rugby League cup final and not the sponsor's name cup final. Tobacco is not a product or service like others. It kills one in four of those who use it in the way specified by its manufacturers.

The end result in implementing such new health standards for BBC programmes may be that tobacco sponsors withdraw their sponsorship. That is a matter for them. Tobacco sponsorship constitutes less than 5 per

cent of all sponsored professional sport in Britain. The leading sports organisers have expressed confidence that they could attract alternative sponsors, in which case the BBC would be relieved of a great and growing anxiety that it is part of a conspiracy to promote tobacco to young people and to non-smokers in Britain, who constitute the majority of the public.



20. Canadian Grand Prix 1991. Despite the new legislation and vigorous campaign against tobacco advertising, the cigarette brand name and colours get massive exposure on the leading cars.

Conclusions and recommendations

Penetration of tobacco names, logos and colour codes has never been greater in tobacco-sponsored sport on BBC TV. This was established in 1991 in the monitoring undertaken for this report. Commercial TV channels refuse to broadcast such programmes. There has been anxiety for many years, both within the BBC and beyond, that the BBC is allowing its airtime to be used for promoting tobacco. The evidence from this report only reinforces that belief.

The controls agreed between the Government and the tobacco trade in Britain are manifestly failing to curb the penetration of tobacco promotion in these programmes, so much so that, in the programmes subject to control, the tobacco images appear on the screen for up to eight minutes per hour of transmission. In the events transmitted from abroad, and therefore outside the scope of the present limited agreements for control, the tobacco images are on the screen for up to 25 minutes per hour. This is not merely a matter for the Government but for the BBC Governors and its Advisory Council.

The BBC has in the past complained of a continuous battle with the sponsors to ensure that the agreements between the Government and the tobacco trade, and its own guidelines for producers, are adhered to. This has been to no avail. The facts speak clearly enough in this report. Where certain steps have been taken to reduce the effective level of tobacco promotion, the sponsors have devised means of ensuring these restrictions are overcome in some new way. The tobacco images in snooker have been reduced, but they have steadily climbed to totally unacceptable levels in motor sport.

Enough is enough

Tobacco smoking by young children is not declining as might be hoped in response to increasing expenditure on health education. The future health of millions of children in this country is at risk. Tobacco-sponsored sports events on BBC TV are undermining the work of the Health Education Authority, and the BBC itself, in trying to prepare young people to evaluate the risks that smoking presents to them. When tobacco-sponsored sport says in the most seductive way that smoking is a route to success, glamour and the most attractive values of life, how can health education compete?

The time has come for a radical review of the current arrangements. It is not for the BBC to determine which sponsors are acceptable to sports promoters; but the BBC can exercise its own discretion on which events it is prepared to cover and what arrangements it will accept for the transmission of programmes in public broadcasting airtime which attract millions of young viewers.

Immediate action required

This report calls for a ban on tobacco-sponsored sport. Failing that, the following action should be taken immediately:

1 **Systematic monitoring** There should be systematic monitoring and analysis of the penetration of tobacco images in all BBC TV transmissions of tobacco-sponsored sport, publicity, news, quizzes and other coverage of events, to check the nature and extent of the continuing problem. The data should be matched with audience data so that assessments can be made of the overall exposure of children and other non-smokers and ex-smokers to

tobacco promotion through BBC programmes and publications. The BBC governors and the Advisory Council should expect BBC officers to explain why these BBC programmes are carrying so much tobacco promotion and what steps are being taken to curb the dangers to young people.

2 **No tobacco name boards** Tobacco name boards at tobacco-sponsored events should be out of view of the cameras, or covered up so that they are not broadcast by the BBC.

3 **No tobacco colours or logos** Tobacco company or brand colours or logos should be masked out where they have been placed on participants or their equipment; they should not appear on BBC TV screens.

4 **Disqualification rules** Where such logos, colours or other tobacco promotion symbols are not masked out, the participants involved should be disqualified, or the BBC should withdraw their cameras from the events.

5 **Broadcast health warnings** The BBC should ensure that health warnings are broadcast visually and verbally whenever tobacco-sponsored sports are broadcast, whether in the sports programmes themselves or in other coverage of the events by the BBC.

6 **No BBC TV tobacco promotion** The BBC should not broadcast tobacco company or brand names, logos or colours in title cards, commentaries or in any of its publications such as *Radio Times* and sports-related publications.

7 **Fines for breaches** Where tobacco company or brand names or logos or colours do appear as part of the tobacco-sponsored sports programmes or related coverage in news and quiz programmes, etc, charges or fines should be made by the BBC against the sports promoters, calculated at the current commercial rates for TV advertising on commercial channels and in proportion to the actual penetration of the promotional images in those broadcasts or publications. The yield from these charges or fines should be put into a fund for health education.

Towards freedom for children from tobacco promotion

The European Community is considering legislation which would effectively stop tobacco advertising and the appearance of tobacco promotion in tobacco-sponsored sport.

In the absence of such legislation, it is evident that the present agreement between the Government and the British tobacco trade presents a serious threat to health education, and one which shows signs of growing rather than diminishing.

This report is written as an appeal to the BBC to take a stand with those concerned with the future health of millions of British children. The report calls for an end to the exploitation of BBC airtime by the tobacco industry whose principal aim is to continue to promote its products. This is not a trivial issue: tobacco will probably kill one million people in Europe this year including over 111,000 in Britain.

The task of health educators is made all the more difficult when tobacco is associated with the successful and glamorous sports shown on BBC TV. The pro-tobacco images the BBC shows could be seen to conflict with the health education messages on tobacco in its schools and other programmes, good as these can be.

BBC for health or tobacco?

The majority of British people have chosen health and they do not smoke. Parents in this country would like their children to be free from tobacco. Does the BBC believe that it is acting responsibly in presenting programmes which for nearly half their time on screen display tobacco as a glamorous and attractive product?

Appendix 1

Beating the Ban – the response of the Committee for Monitoring Agreements on Tobacco Advertising & Sponsorship.

Committee for Monitoring Agreements on Tobacco Advertising & Sponsorship

6th Floor, Clements House, Gresham Street, London EC2V 7DN

Telephone 01–606 5127

Chairman: Sir Peter Lazarus KCB
Joint Secretaries: Miss K. Wright
Mrs. P. Elcome

Your Reference
Our Reference

Date:
11th January 1991

Sir Donald Maitland GCMG OBE
Chairman
Health Education Authority
Hamilton House
Mabledon Place
London WC1H 9TX

Dear Donald,

Further to my letter of 6 November, my Committee has now had a chance to consider your Authority's report 'Beating the Ban'. This letter sets out our views which were reached at a special meeting held on 6 December, devoted exclusively to a consideration of the report. At that meeting we had an opportunity to study video excerpts from BBC TV coverage of sponsored sporting events as well as written responses by the Industry to the allegations made in the report. I can assure you that those allegations were given full and careful consideration.

For the purposes of the Committee's consideration of the report we identified twelve specific complaints about individual events, and these are listed on the attached sheet [see page 21]. For each specific complaint we have identified the paragraph references in the report. I shall set out the Committee's conclusions in respect of each below. In doing so I am aware, and this was also the Committee's view, that quite a few of the complaints in the report are really aimed at what your Authority views as shortcomings in the agreement. Under our terms of reference, the Committee is concerned with the implementation of the terms of the Voluntary Agreements and reports on how they have been observed. It is not part of our function to consider how the Agreements might be amended though I have made some recommendations in my personal forewords to our Annual Reports. As the Agreement on Sports Sponsorship was negotiated between the Industry and the relevant Secretary of State (now the Secretary of State for Education and Science), you might do best to pursue these matters directly with them.

Item 1

In considering this item, the Committee was able to study a video of BBC TV coverage of a sponsored bowls event. In relation to the TV coverage, the Committee is of the view that there is no 'set playing position' in bowls as the player has a large degree of freedom as to his choice of playing position. In relation to the souvenir programme, there is no requirement to carry health warnings as the Sports Sponsorship Agreement does not cover such programmes.

Item 2

As with bowls, there is no 'set playing position' in snooker; there is, however, a 'master shot' used in television coverage, at the start of play, from which the promotion material cannot be seen. The black ball may be played from any position, so the Committee concluded that no breach had occurred as far as the point made in paragraph 8 of your Authority's report is concerned. The points made in paragraphs 21 and 23 of the report seem to be criticisms of the agreement.

Item 3

As I have said above, the Committee is of the view that there is no set playing position in snooker but members were also conscious of the fact that the programme director is in each case responsible for choosing the camera angles and shots. In addition, we recognise that there is considerable difficulty in interpreting the word 'located' in paragraph F12a of the Code of Practice which forms Appendix 1 to the Agreement.

Item 4

The event referred to in which 'Marlboro house or brand red Chevron symbols were shown on cars and auxiliary personnel' took place in 1988. Philip Morris, the manufacturer of Marlboro, is not directly represented in the UK. The marketing of Marlboro was taken over by Rothmans UK in 1989, and the Committee is awaiting a reply from the European Headquarters of Philip Morris regarding this matter, as it occurred during 1988. I personally am giving up the post of Chairman, but the Committee will arrange for a further letter to come to you as soon as they have considered the Industry response. [At the time of publication of this report no further correspondence had been received.]

Item 5

The Committee took the view that as the set colours are beige and red, and the overwhelmingly predominant pack colour is gold, no breach had occurred.

Item 6

The matter raised in the report has been considered by my Committee before and it found that no breach had occurred. The initial choice of colour for the set of blue was later changed to pink in order to avoid any possible association with any other Embassy brand.

Item 7

The event referred to occurred prior to the 1987 Sports Sponsorship Agreement.

Items 8–10

The Committee felt that these items also related to alleged weaknesses in the Agreement. As you will be aware, sponsorship at the Spanish Grand Prix is outside the scope of the Voluntary Agreement which only relates to the UK.

Item 11

This matter is not covered by the Agreement but Imperial Tobacco Limited assured the Committee that it asks the organisers of events to request that players should not smoke during events. Unfortunately, not all players comply.

Item 12

My Committee concluded that there was no evidence in this case that the brand name had been visible for a 'prolonged uninterrupted period'. However, the Industry told the Committee that if it detected inadvertent breaches due to the director's choice of camera shots it would always raise the matter with the BBC.

After carefully considering all the points you have raised the Committee concluded that in eleven of the twelve items there had been no breach of the current Voluntary Agreement on the Sponsorship of Sport, and in one instance the Committee has been unable to make a decision as it is still awaiting details from the company concerned. I would like to emphasize the seriousness with which my Committee has addressed your Authority's report. As a measure of the importance we attach to this matter I am copying this letter to the Secretary of State for Health, the Secretary of State for Education and Science, the Chairman of the Tobacco Advisory Council, the Chairman of the Imported Tobacco Products Advisory Council and the Director General of the British Broadcasting Association.

Yours ever

PETER LAZARUS

List of items referred to, with corresponding paragraphs in *Beating the Ban*

1. Embassy World Bowls, 1989 – paragraph 8, 30
2. Embassy Snooker, April 1988 – paragraph 8, 21, 23
3. Embassy Snooker, April 1989 – paragraph 8, 22, 23
4. Marlboro Motor Racing Grand Prix, 1988 – paragraph 10, 32; figures 3, 4
5. Benson & Hedges Snooker, 1987 – paragraph 12
6. Embassy Snooker, April 1987 – paragraph 12
7. Benson & Hedges Snooker, 1986 – paragraph 15
8. Marlboro, Spanish Grand Prix, October 1989 – paragraph 27
9. Camel, Spanish Grand Prix, October 1989 – paragraph 27
10. Gitanes, Spanish Grand Prix, October 1989 – paragraph 27
11. World Snooker Player Smoking – paragraph 28, 33
12. Embassy Bowls 1987 – paragraph 15

Appendix 2

Current Government health warnings approved for all tobacco advertising

1. Smoking causes cancer.
2. Smoking causes heart disease.
3. Smoking causes fatal diseases.
4. Smoking kills.
5. Smoking when pregnant harms your baby.
6. Protect children: don't make them breathe your smoke.

Tobacco and the BBC

A review of how BBC TV promotes cigarettes through tobacco-sponsored sport

In 1965 the British Government imposed a ban on tobacco advertising on television.

In February 1987 commercial television ceased broadcasting tobacco-sponsored sport.

In 1991 the tobacco-sponsored sport shown on BBC TV appears to have reached a new record level of exposure of tobacco company and brand images.

Televised coverage of tobacco-sponsored sport is controlled by a voluntary agreement between the Government and the tobacco industry. This report is the eighth in a series to highlight defects and apparent breaches in that agreement on BBC TV. The examples are many:

- **placing tobacco company and tobacco brand name boards in positions which are picked up by TV cameras;**
- **putting tobacco brand names, logos and colours on sports' participants;**
- **visual and verbal references to the tobacco sponsors in commentaries and titles provided for the event;**
- **echoing the colours of the company or brand in other features of the sport – flags, umbrellas, refreshments;**
- **participants smoking on camera;**
- **use of tobacco-sponsored sports film coverage in news, sports publicity and sports quiz programmes on TV; and**
- **illegible health warnings.**

Many children believe that the BBC carries tobacco advertising. Health education is made more difficult when tobacco is associated with the successful and glamorous sports shown on BBC TV. This report is an appeal to the BBC to end the exploitation of their airtime by the tobacco industry, whose principal aim is to continue to promote its products.

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Some Effects of Tobacco Sponsorship Advertisements on Young Males

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Regulation of tobacco promotions has generated considerable controversy and, in New Zealand, has led to legislation banning sponsorship by tobacco companies. However, the reported findings of research into the effects of tobacco promotions on young people have proved contradictory and have not provided sufficiently unambiguous evidence to justify replacement of self-regulatory codes by legislation. This study examined the effects of a tobacco sponsorship advertisement on young males and found that a single exposure to the advertisement reinforced existing behaviour among smokers, created more favourable attitudes to smoking among non-smokers, increased non-smokers' brand awareness and influenced their brand preference. Though these findings do not constitute a case for abandoning self-regulation of advertising, they do suggest that corporate promotions can act as product promotions, thus circumventing the voluntary codes designed to regulate them.

INTRODUCTION

Increasing public concern over advertising to young people has focused attention on the vexed issue of tobacco promotions. While many countries (for example, Australia and the United Kingdom) control the promotion of tobacco products through self-regulatory codes formulated by the advertising industry, some interest groups have claimed that these fail to restrict sufficiently the form and purpose of tobacco promotions.

Among other things, self-regulatory codes specify the size and content of advertisements, the media in which they may be placed, the audience at whom they may be directed, and the type of demand they may attempt to affect. However, although these provisions have curtailed tobacco manufacturers' advertising activities by disallowing product promotions, they have not prevented the advertising of corporate sponsorships by tobacco companies through electronic media.

While the codes prohibit advertising of tobacco products, some tobacco manufacturers have circumvented this restriction by donating substantial sums to sporting councils on the proviso that high profile events are named after the

sponsor, and are well publicized in electronic media. This enables the manufacturers to promote their products indirectly through sponsorship advertising, and, although conforming to the letter of the codes, exploits an ambiguity which contravenes their spirit.

These sponsorships typically involve national sporting teams which are held in high esteem by young people. Thus public health groups argue that tobacco sponsorship advertisements flout the intent of voluntary codes by targeting under-18-year-olds, making smoking look glamorous, and associating it with personalities or heroes of the young. In New Zealand, claims such as this provided the impetus for legislation (the Smoke Free Environments Act 1990) which further restricts the promotions that tobacco manufacturers may undertake, and effectively bans them from engaging in sponsorship activities.

However, the progress of this legislation was marked by controversy. Its opponents argued that free speech and hitherto sacrosanct commercial rights were being eroded, and, surprisingly, supporters of the Act had little local empirical evidence to lend credence to their claims that corporate sponsorship advertisements had circumvented the self-regulatory code.

Before other countries decide to adopt New Zealand's stance, it seems prudent to re-assess the effects that sponsorship advertisements have on young people. This paper reports pilot-scale research designed to investigate the effects that advertisements promoting sports sponsorship by a tobacco manufacturer had on young males.

REVIEW OF PAST RESEARCH

Past studies have taken two general approaches when investigating the relationship between cigarette advertising and tobacco consumption. While some have attempted to describe the relationship econometrically, others have taken a more cognitive approach and have assessed the changes in recall, attitude and behaviour that could be attributed to tobacco promotions.

Several econometric studies have attempted to identify the effect that advertising has on demand for products that are subject to self-regulated advertising codes. However, while Duffy's work (1989 and 1990) investigating the effect of advertising on the growth in consumption of various alcoholic beverages found only very minor relationships (at most, 0.2 per cent of the average annual growth in beer and wine consumption could be attributed to advertising), current thinking regarding the effect of advertising on cigarette consumption is more ambiguous.

Efforts to define this relationship econometrically have tended to prove either inconclusive or contradictory (see Hamilton, 1972; Clarke, 1976; Johnston, 1980; Johnson, 1985; Abernethy and Teel, 1986; Waterson, 1990). Thus while Johnson (1985) writes:

> No statistically significant evidence could be found which suggests that either total advertising has a positive effect on total cigarette demand or that the

> electronic media ban on cigarette advertising had a negative effect on the demand function for cigarettes.
>
> (p. 15)

Foote (1981), a former chairperson of McCann Erickson Inc, states:

> I am always amused by the suggestion that advertising, a function that has been shown to increase consumption of virtually every other product, somehow miraculously fails to work for tobacco products.
>
> (p. 1668)

Even very recent work, while verifying the existence of a relationship, is unable to define it precisely. Wilcox (1991) concludes:

> What is clear from this analysis is that, for certain brands, advertising exhibits an important relationship with consumption — how important is difficult, if not impossible, to determine.
>
> (p. 66)

Foote (1981) and Ledwith (1984) proposed that studies failed to establish this relationship because tobacco manufacturers use sales promotions techniques and sponsorships to augment the limited advertising that they may conduct. Advertising, as only one component of the promotion mix, cannot therefore be held accountable for all the sales variations that occur. Smith (1990) suggested that this body of research neither proved nor disproved the effect of advertising on consumption, but instead showed that econometric analysis was incapable of ascertaining whether such a relationship existed.

Researchers taking a more cognitive approach have not sought to assess changes in total consumption or demand, but have attempted to link attitudinal and behavioural changes to tobacco promotions, and have used their findings to draw conclusions about the likely effect of these promotions.

Foote (1981) argues that, even if cigarette advertisements do not directly increase consumption, they enhance the general acceptability of smoking and create a positive social environment for it. Other studies have explored more specific attitudes to these promotions, and whether approval of them could be related to smoking behaviour. Fisher and Magnus (1981), Alexander *et al.* (1983) and Chapman and Fitzgerald (1985) found that children who held favourable attitudes to tobacco advertising had a higher risk of becoming or remaining smokers than those who disapproved of these promotions. This led Alexander *et al.* to conclude that 'legislation banning the advertising of cigarettes is required to counter the predisposing and reinforcing effects of this advertising on children' (1983, p. 65).

Other research has explored the relationship between young people's advertisement recall and their brand preferences. Both Ledwith (1984) and Charlton (1986) found that adolescents had a high recall of advertisements ostensibly directed only at adults, and concluded that tobacco advertisements attract and influence young people. Chapman and Fitzgerald (1982) go further and suggest that these advertisements act as 'a cue to smoking behaviour, whether this be already established or something that could develop in the future' (p. 493).

Fisher and Magnus (1981) investigated children's attitudes to cigarette companies' sponsorships and found that, although children were sceptical about the motivation for such sponsorship, the brands they selected as the ones they liked the most were those with the highest sponsorship and advertising profiles. Aitken *et al.* (1985a and b) also found that promotions which associated cigarette brand names and logos with non-tobacco products or events, a phenomenon they termed 'brand-stretching', had a strong impact on children. Indeed, Ledwith (1984) suggested that sponsorship might actually act as advertising in a different guise:

> The increase in awareness of the sponsored brands suggests that even fairly brief exposure to tobacco-sponsored sports on TV, if linked to well-publicised images, may produce a considerable increase in levels of brand awareness and association with the sport.
>
> (p. 88)

However, despite the apparent consensus that cigarette advertising and sponsorship activities affect young people's attitudes and may influence their behaviour, dissenting views have also received comprehensive attention. Smith (1990) described an international study of children that found little connection between the level of control on advertising and the numbers of regular smokers or their brand awareness. Furthermore, he identified methodological problems associated with many of the studies discussed earlier which, he claimed, undermine the validity of their findings.

Poiesz (1990) examined stages of smoking and the effect advertising could have on these. Although he identified four factors (affective changes based on information; association; consumer inference; and reminders to purchase or consume) affecting decisions to commence, continue or cease smoking, he argued that advertising is unlikely to affect non-smokers. Focusing specifically on advertising's influence on smoking initiation amongst adolescents, van Raaij (1990) found that advertising did not have a direct effect on smoking initiation. While conceding that advertising may influence adolescents' attitudes to smoking, he concluded that this effect would be minimal compared to family and peer influences.

Clearly, the research so far conducted does not provide evidence that is sufficiently specific or unambiguous about the effects of advertisements promoting manufacturers' sponsorships that feature in electronic media. The research reported here was designed to redress this deficiency. In order to test whether corporate sponsorship advertisements acted in the same or in a similar way to product advertisements and circumvented self-regulatory codes, we selected the three variables that had received most attention in research to date—attitudes, awareness and preference—and formulated the following objectives:

1. To assess whether young males' attitudes to smoking had changed after viewing an advertisement promoting a cigarette sponsorship.
2. To measure differences in unprompted cigarette brand recall.
3. To investigate whether viewing the advertisement had any effect on respondents' cigarette brand preferences.

METHOD

Sample

The sample for this study consisted of ten classes of pupils. Two classes at each level were selected at random from a local boys' secondary school. As the sponsorship advertisement featured the New Zealand cricket team and was targeted specifically at men, only young males were included in the sample. This resulted in a total sample of 203 pupils, which was split into a test and control group at each level; Table 1 shows the age distribution of each group.

Table 1 *Pupils' age distribution*

Age range	Test group (n = 105)	Control group (n = 98)
	%	%
13 and under	13.3	17.3
14–15	43.0	46.9
16–17	36.1	32.6
18 and over	7.6	3.1

Procedure

All the pupils had previously participated in a general health study, and were told that the survey was part of this programme. At the beginning of each class they were introduced to the interviewer and told they would be shown a 15-minute video entitled 'What to do while waiting for the ambulance', about which they would be questioned. Half the pupils (the test group) saw an advertisement, embedded with five others in the video, promoting the 1990 Rothman's Cricket Series. The remaining pupils (the control group) viewed an advertisement featuring a beer company's sponsorship of New Zealand's rugby team, the All Blacks. After viewing the video, pupils answered questions about its content and about their sporting and leisure activities, as well as questions required for the research project. Students had an answer booklet which contained appropriate boxes or lines for their responses, but all the questions were written on overhead transparencies, thus preventing pupils from anticipating what they were going to be asked, and any bias that this may have introduced.

Responses from the two groups were analysed independently and, within each group, responses from smokers and non-smokers were also calculated. Because the number of confessed smokers was very small, and because the most logical test of the advertisement's influence was to examine non-smokers, our analysis and tables concentrate on comparing the non-smokers' responses.

In order to eliminate some of the other factors that could have contributed to these results, pupils' television viewing habits and ages were examined to determine whether either had a significant relationship with any of the variables under investigation. There was no consistent relationship between pupils' ages and their susceptibility to the advertisement, although medium and heavy television viewers were more likely to select a strongly promoted cigarette brand.

RESULTS

Attitudes

After answering a series of questions relating to the video content, pupils used a five-point scale to indicate their level of agreement with a series of attitude statements. These investigated the pupils' perceptions of cigarette smoking and beer drinking and were interspersed with a series of statements covering topical issues such as corporal punishment and fitness. Comparing the differences between the various groups' responses enabled an assessment as to whether recent viewing of a tobacco sponsorship advertisement had affected the pupils' attitudes to smoking. Table 2 shows the mean scores for smokers and non-smokers, according to the test groups to which they belonged.

Table 2 *Attitudes to smoking*

	Smokers[1]		Non-smokers[1]	
	Ad (n = 13)	No Ad (n = 9)	Ad (n = 92)	No Ad (n = 89)
Men who don't smoke are weak	2.15	2.11	1.24[2]	1.19[4]
Smoking is a disgusting habit	2.77	3.56	3.96[2]	4.18
Smoking doesn't harm people if they play sport	2.92	2.33	1.61[2]	1.36[3,4]

1. The table reports mean scores for each attitude statement; a score of less than 3 indicates that viewers generally disagreed with the statement; a score of more than 3 indicates that they generally agreed. The closer to 1 or 5, the stronger the level of disagreement or agreement.
2. Difference between smokers and non-smokers exposed to the stimulus advertisement significant at $p < .05$.
3. Difference between non-smokers significant at $p < .10$.
4. Difference between smokers and non-smokers not exposed to the stimulus advertisement significant at $p < .10$.

Examining the non-smokers' responses to the first two attitude statements revealed that, although neither of the differences between the test and control groups was significant at commonly cited levels, the differences noted were in the expected direction. That is, pupils who had just viewed the sponsorship advertisement had more favourable overall attitudes to smoking than those who saw an alternative advertisement. However, the third statement is linked specifically to the advertisement content, and shows a significant difference between those non-smokers who viewed the stimulus and those who did not. Non-smoking pupils who saw the sponsorship advertisement had a significantly higher level of agreement ($p < .10$) with the proposition that 'smoking doesn't harm people if they play sport' than did non-smokers not exposed to the advertisement.

The number of confessed smokers was extremely low; thus their responses to the attitude statements did not vary significantly, although all the differences noted were in the expected direction. Within the test group, smokers' and non-smokers' responses differed significantly for each statement; these differences were greater in every case than those noted in the control group.

Awareness

Following the attitude statements, pupils listed all the cigarette brands that they could recall, thus providing a measure of their unprompted brand awareness. Table 3 contains the mean results for this section.

Table 3 *Awareness of Rothmans and mean number of brands recalled*

Cigarette Brand	Smokers		Non-smokers		Significance[1]
	Ad (n = 13)	No Ad (n = 9)	Ad (n = 92)	No Ad (n = 89)	
	%	%	%	%	
Pall Mall	100	100	86	72	.03
Rothmans	77	78	83	66	.01
Benson & Hedges	69	56	75	57	.01
Winfield	77	100	74	71	.76
Peter Jackson	69	56	43	33	.16
Camel	62	56	34	19	.04
Marlboro	54	22	29	17	.07
Dunhill	62	12	23	12	.09
Pacific	62	35	15	11	.56
Mean number of brands recalled	6.3	5.2	4.6[2]	3.7[2]	

1. Figures in this column show the level of significance of the differences in brand awareness for the test and control groups of non-smokers.
2. Difference between test and control groups significant at $p < .05$.

Overall, the mean number of brands recalled by non-smokers exposed to the cigarette sponsorship advertisement (4.63) was significantly higher ($p < .05$) than that recalled by non-smokers in the control group (3.73). Smokers exposed to the advertisement also recalled more brands on average than those not shown the stimulus, although the cell sizes involved in this analysis preclude firm conclusions. Non-smokers exposed to the cigarette sponsorship advertisement showed a higher awareness of all the cigarette brands recalled than non-smokers who did not see the advertisement. This difference in awareness was significant at the 95 per cent level for four of the nine brands listed, including Rothmans, and at the 90 per cent level for another two brands.

Preference

Following the awareness measurement, all pupils were shown a slide featuring nine popular cigarette brands, and were asked to identify the brand they would select if they had won a prize of a carton of cigarettes. This measure enabled investigation of two issues: first, whether smokers' brand preferences had been affected by exposure to the sponsorship advertisement, as would happen if the

tobacco companies' claims were correct; second, whether non-smokers exposed to the advertisement had different brand preference patterns to the control group.

Seventy per cent of smokers in the test group chose as their prize the brand they had identified as their favourite. No member of this group 'converted' to Rothmans, although one respondent who claimed Rothmans was his favourite brand defected to another brand. Similar results were obtained from the control group, where 75 per cent remained loyal to their favourite brand. Among non-smokers exposed to the stimulus advertisement, Rothmans rose in popularity when compared to its awareness ratings (see Table 4). However, non-smokers in the control group gave identical awareness and preference ratings to Rothmans.

Table 4 *Non-smokers' awareness and preference ratings*

Rank order of brands	Shown Ad (n = 92)		Not Shown Ad (n = 89)	
	Awareness	Preference	Awareness	Preference
1	Pall Mall	Rothmans	Pall Mall	B&H
2	Rothmans	Camel	Winfield	Winfield
3	B&H	Winfield	Rothmans	Rothmans
4	Winfield	B&H	B&H	Peter Jackson
5	Peter Jackson	Pall Mall	Peter Jackson	Camel
6	Camel	Marlboro	Camel	Pall Mall
7	Marlboro	Peter Jackson	Marlboro	Dunhill
8	Dunhill	Dunhill	Dunhill	Marlboro
9	Pacific	Pacific	Pacific	—[1]

1. *Pacific not chosen at all.*

Other brands' preference ratings also deviated from their awareness ratings, though only Pall Mall had considerably lower preference than awareness ratings. Although a well-established name with high top-of-mind awareness, Pall Mall does not undertake sponsorship promotions, and so may not project the images that appeal to young males, a possible reason for its lower preference scores. Apart from Camel, the most preferred brands among both non-smoking groups were those which undertake highly publicized sports sponsorship. These results thus suggest that the sports sponsorship undertaken by tobacco companies does more than merely enhance their corporate profile.

DISCUSSION

While non-smokers' general attitudes to smoking were not significantly affected by exposure to the sponsorship advertisement, at least one of their specific beliefs about the health hazards that smoking poses did change. The fact that non-smokers exposed to the stimulus advertisement gave significantly higher scores to the statement related specifically to sports sponsorship suggests that these promotions do affect young people's understanding and knowledge of the effects of

smoking. These findings corroborate Foote's (1981) work and lend some support to claims that favourable attitudes may predispose young people to commence smoking (see Fisher and Magnus, 1981; Alexander *et al.*, 1983; Chapman and Fitzgerald, 1985). Although we did not investigate whether having more favourable beliefs about the potential effects of smoking would actually cause young people to commence smoking, it seems reasonable to assume that it could make them less resistant to peer group or family pressures, factors which both Poiesz (1990) and von Raaij (1990) indicated were important in smoking initiation.

As expected, smokers had more favourable attitudes to smoking. Viewing the sponsorship advertisement appeared to reinforce these attitudes, and resulted in more favourable attitudes for the test group, although the cell sizes were too small to allow statistical comparisons. Thus, while pupils' actual behaviour appeared to be a stronger determinant of their general attitudes to smoking than exposure to the sponsorship advertisement, viewing the advertisement accentuated the differences attributable to their behaviour alone, and may, as Fisher and Magnus (1981); Alexander *et al.* (1983) and Chapman and Fitzgerald (1985) argue, provide further justification for continuing to smoke.

The awareness results support Ledwith (1984) and Charlton (1986) and suggest that sponsorship advertisements serve less to increase smokers' awareness of alternative brands than to increase non-smokers' brand awareness. Opponents of restrictions on tobacco promotions argue strongly that these promotions aim to switch brand preferences, and that they are not targeted at young people. However, the findings reported here question both claims and show not only that young people could recall several cigarette brand names, but also that exposure to a tobacco sponsorship advertisement had a greater effect on non-smokers than smokers. Similarly, the fact that non-smokers exposed to the advertisement recalled a greater number of brands than their control group counterparts, indicates that these advertisements do not simply increase awareness of the brand concerned, but heighten awareness of the product category as a whole. Although this was only a pilot scale study, these findings run counter to Poiesz's (1990) and van Raaij's (1990) conclusions.

Interestingly, non-smokers showed no significant differences in recall for three brands. Further investigation revealed that all three brands were heavily involved in highly publicized sponsorships occurring at or around the time the survey was conducted. This adds further support to Ledwith (1984), Chapman and Fitzgerald (1985) and Chapman (1986), who argued that well-targeted sponsorships of sporting events increase awareness in a group often cited as being immune to, or capable of blocking out, the effects of these promotions.

Examining the preference results shows that smokers' current behaviour proved a stronger predictor of their brand preference than did exposure to a sponsorship advertisement. This finding runs counter to tobacco industry claims, although cumulative exposure to the advertisement may have produced a different result. Although non-smokers did not have an initial preferred brand, the fact that their preference ranking for Rothmans was higher than the group's awareness rating for this brand suggests that these advertisements affect non-smokers' preferences, and thus act in a similar way to product promotions.

CONCLUSIONS

Although exposure to this sponsorship advertisement did not significantly enhance young males' general attitudes to smoking, it appeared to reinforce the attitudes of those among them who smoked. These types of advertisement may therefore provide young male smokers with some justification for continuing to smoke. However, when the attitude statement was linked specifically to the advertisement content, those pupils who viewed the promotion demonstrated significantly more favourable attitudes than those who did not view it. This is a disturbing finding, as medical research provides no grounds for believing that participation in sporting activities either reduces or eliminates the harmful effects of smoking. It is clear that these non-smokers were not immune to the claims or suggestions made in this sponsorship advertisement, nor did they block out the promotion, as has been suggested by opponents of promotion restrictions. The healthy connotations suggested by these types of advertisement appear to have contributed to the formation of erroneous beliefs about the possible consequences of smoking in at least some of the young males interviewed.

The significantly higher number of brands recalled by non-smokers exposed to the sponsorship advertisement suggests that such advertisements actually heighten awareness of the overall product category, rather than of individual brands, thus further questioning claims that these promotions serve only to affect the brand performance of those who smoke. Indeed, our findings suggest that smokers' brand preferences remain very consistent, while non-smokers' preferences show more evidence of being affected by tobacco sponsorships in general.

While these results arose from an experimental setting, and so did not replicate real viewing behaviour, the differences noted were based on only one exposure to the sponsorship advertisement. There seems no reason to believe that repeated exposure under normal viewing conditions would not support and reinforce these findings. Although we cannot conclude from this study that exposure to tobacco sponsorship advertisements will initiate smoking among young males, it is clear that the cognitive stages assumed to lead to such behaviour are being affected in a positive way, and that the people most affected by this advertising are those that the tobacco industry claims not to target.

Our study suggests that advertising of sponsorships reinforces existing behaviours, and has the potential to increase the rate at which young males smoke by negating the ill-effects associated with smoking. We also conclude that these promotions do affect those under the age of 18 by creating associations with events, teams or personalities with whom they identify. Although these findings do not, in themselves, constitute a case for legislation, as opposed to voluntary self-regulation, they suggest that corporate promotions can and do act as product promotions, thus circumventing the voluntary codes designed to regulate them.

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IEG's Complete Guide to Sponsorship



From the publisher of *IEG Sponsorship Report*™

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Everything you need to know about sports, arts, event, entertainment and cause marketing



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entertainment and cause marketing

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What is

Spon·sor·ship \spon´sŏr·ship\
n. a cash and/or in-kind fee paid to a property (typically in sports, arts, entertainment or causes) in return for access to the exploitable commercial potential associated with that property.

sponsorship

Although the recipient of sponsorship may be nonprofit, sponsorship should not be confused with philanthropy. Philanthropy is support of a cause without any commercial incentive. Sponsorship is undertaken for the purpose of achieving commercial objectives.

And, although a sponsored property may include media extensions such as a TV broadcast, sponsorship is not advertising. Advertising is the direct promotion of a company through space or air time bought for that specific purpose. Advertising is a quantitative medium, sold and evaluated in terms of cost per thousand.

Sponsorship on the other hand is a qualitative medium; it promotes a company in association with the sponsee.

Some of the benefits sponsorship typically offers that advertising does not are access to a live audience, on-site sampling and opportunities for client entertainment.

And, companies can tie sponsorship directly into product usage or sales so they can quantify not only how many people were reached, but how many were motivated to buy.

Sponsorship spending – the big picture

When we conceived of IEG in 1980, few people were familiar with sponsorship. Sports marketing was viewed as an ad buy on *Monday Night Football,* while most companies' support of art and causes was purely philanthropic. Network TV was omnipotent and American consumers were treated as a single mass audience reachable with a 30-second spot during prime time.

While a handful of companies were using event marketing at that time – primarily tobacco and liquor companies that could not advertise on TV – no publications were tracking sponsorship, no schools were teaching it and no market research was measuring it.

But with skyrocketing ad rates, emerging delivery systems such as cable TV, ever-growing "minority" markets and a hunch that advertising was not the way to reach TV-weaned Baby Boomers, the growth of alternative media seemed inevitable.

IEG believed that sponsorship would become the fourth arm of marketing – alongside advertising, sales promotion and public relations – and defined its scope to include sports, arts, festivals, causes, entertainment and attractions.

By 1988, sponsorship did indeed come of age, becoming the fastest-growing form of media in North America. Originally tapped by companies for free visibility and client entertainment, sponsorship was now being used as a platform for fulfilling the needs of consumers and the trade, and, in turn, building sales.

By 1994, more than 4,500 North American companies spent more than $4.2 billion on sponsorship. Worldwide spending approached $10 billion. Those numbers are fees paid for sponsorship rights. They do not include additional expenditures for advertising, promotion and client entertainment, nor do they include philanthropic contributions.

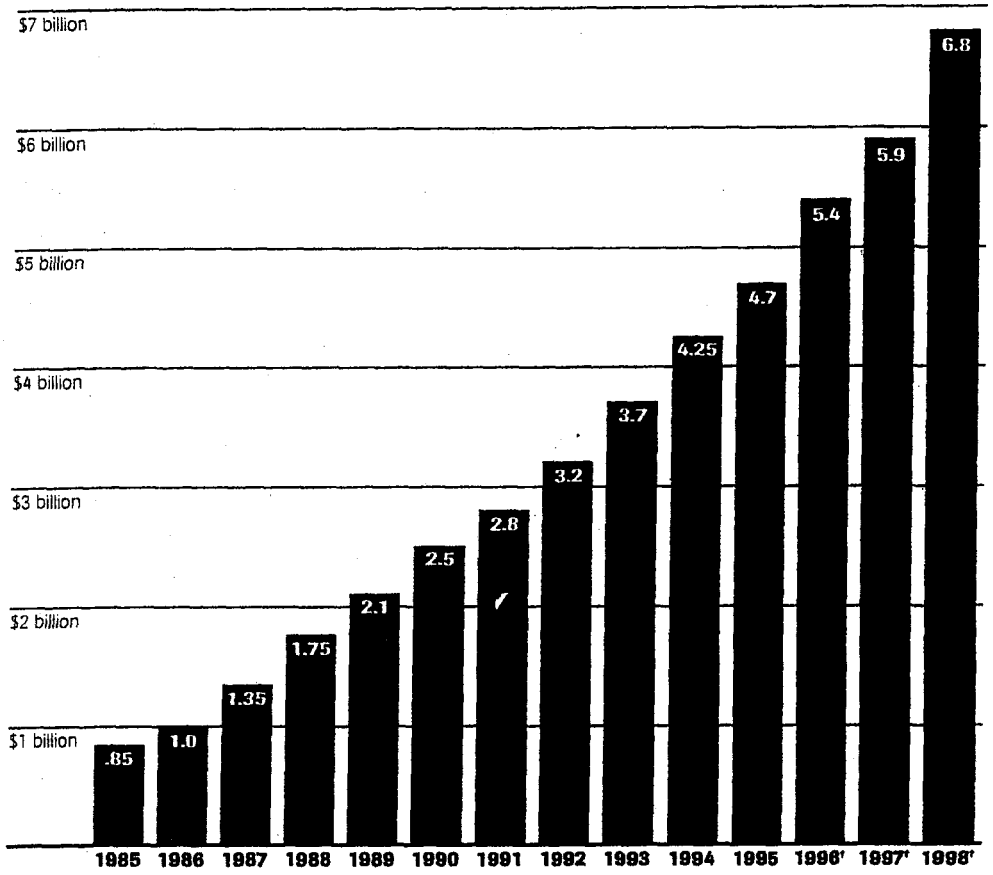
Today, the types of sponsored properties include everything from the Olympic Games to tractor pulls, symphony orchestras to theme parks. While each type offers discrete benefits, all properties have benefited from the marketer's need to move from passive communication to participatory and interactive media such as sponsorship, where consumers can experience what a company stands for and establish a dialogue.

As we approach the millennium, there are no signs that sponsorship's growth will diminish. The scope of deals will continue to broaden and promotional executions will extend their sweep.

Even with such growth, one aspect of the medium remains constant: Sponsorship is still the only marketing platform available that is mutually beneficial to the business community and to the local and global communities of its consumers.

Chart A **Sponsorship spending in North America***

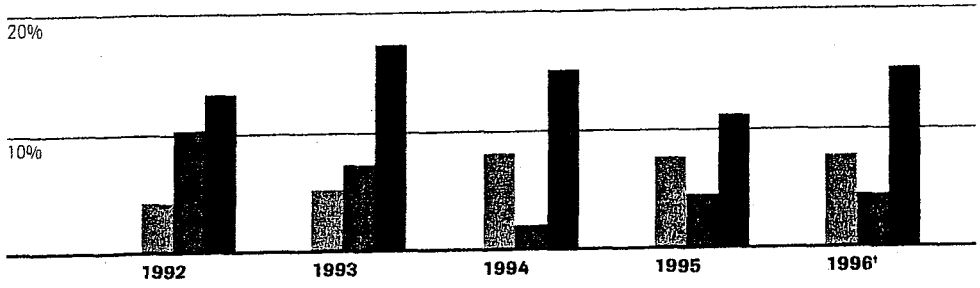
Whether it is a frequently purchased consumer item, such as beer, a big-ticket, smaller-volume item, such as cars, or a product marketed to a niche audience, such as office copiers, sponsorship is being used by product and service marketers of all types and sizes.



* Source: *IEG Sponsorship Report*
† Projected

Chart B **Sponsorship growth compared to advertising and promotion***

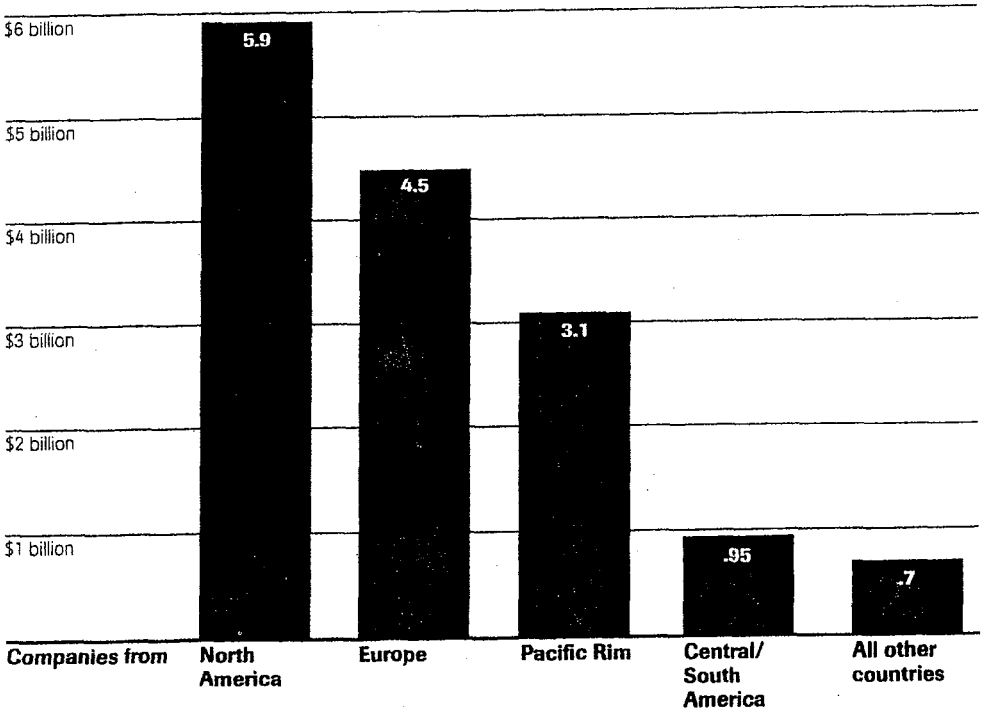
Sponsorship has been the fastest-growing form of marketing for the past decade, outpacing the growth of measured media and sales promotion each year. But even the biggest users of sponsorship rarely spend more than eight percent of their total marketing budget on sponsorship.



* Source: *IEG Sponsorship Report*
† Projected

Chart C **1997 projected sponsorship spending worldwide***

From cricket in the U.K. to men's field hockey in India to Aboriginal theater in Australia, sponsorships in all countries have grown as a result of marketers' need to tether their products and services to something meaningful.



* Source: *IEG Sponsorship Report*

...although a sponsored property may include media extensions such as a TV broadcast, sponsorship is not advertising.

Why sponsorship is the fastest-growing marketing medium

Changes in the economy, demographic shifts and the fragmentation of media have all contributed to sponsorship's growth. Some of the largest factors behind sponsorship's rise are:

Decreasing efficiency of measured media

Costs for traditional advertising continue to increase, while ratings and readership decline. On top of that is an even more basic problem: consumers are not paying attention to ads. The situation is particularly acute in television. When a commercial comes on, viewers flip to another station. When viewing a program recorded on a VCR, ads fall victim to the fast-forward button, or are edited out entirely.

The bad news for measured media only promises to get worse, as the digital future puts more power into consumers' hands.

Sponsorship, on the other hand, provides opportunities for embedded advertising, a fail-safe delivery system where messages are incorporated right into the action.

Changing social priorities

As issues such as poverty, the environment and AIDS loom larger, there is a growing realization that the needs of society and the interests of business overlap. Buyers are demanding to know where a company stands before they purchase its products. Making the world a more livable place is a prerequisite to achieving consumer affinity.

Sponsorship, which allies companies with community responsibility and improved quality of life, is precisely the kind of statement consumers will respond to. When a company sponsors, it is providing something for its customers – not making some media conglomerate richer, but saving a high school sports program or underwriting a symphony performance.

Shifting personal values

Conspicuous consumption has been replaced by cashing out. Shopping for shopping's sake has become déclassé. Tapping into today's consumers' elusive will to spend requires turning the buying experience into something larger than just acquisition.

Sponsorship provides companies this opportunity. It says to the potential customer: "Buy this product not to indulge yourself, but to help make the world a better place."

Increasing need for two-way communication

In response to the fragmentation of the mass market and mass media, companies are looking for alternative methods to communicate sales messages. The idea is to find delivery systems that allow companies to deepen their relationship with customers.

Sponsorship, which is the most direct channel of communication, is tailor-made for this environment. It reaches people in an environment that matches their lifestyle rather than intrudes upon it. It is not a passive monologue that interrupts a TV show, or comes as a piece of mail that needs to be dealt with. Sponsorship speaks *to* the public, not *at* them, creating opportunities for two-way dialogue.

High consumer acceptance

While traditional media is less effective than ever, much of the new media alienates consumers. For example, 75 percent of Americans view phone solicitation as an invasion of privacy, while 81 percent find ads in stores to be distasteful, according to a *Brandweek* study. In addition, 69 percent of consumers who buy or rent movies on video are annoyed by advertising before the film, according to a Gallup survey conducted for *Advertising Age*.

On the other hand, public response to sponsorship has been overwhelmingly positive. Sponsorship is viewed favorably because it is seen as a form of advertising that gives something back, that benefits someone else in addition to the marketer. It implies a degree of altruism absent from more commercial types of marketing.

For example, eight out of ten respondents to a survey conducted in Britain said sponsorship makes "a positive contribution to society."

The following is a sampling of recent market research regarding sponsorship's acceptance and ability to influence what and where people buy.

Cause marketing. A full 78 percent of adults said they would be more likely to buy a product if it is associated with a cause, according to the Cone/Roper Benchmark Survey on Cause-Related Marketing. Sixty-six percent said they would be likely to switch brands, while 62 percent said they would likely switch retailers to support a product that associated with a cause they cared about. Cause marketing had the strongest impact on people who Roper classifies as "Influentials." This group – about 20 million strong – are opinion makers, most have attended college and earn $30,000-plus annually. By a two-to-one margin (41 percent to 20 percent), Influentials are more likely to have made a cause marketing purchase than consumers at large.

Festival sponsorship. Eighty-five percent of attendees surveyed at the city of Chicago's Gospel Festival could name one or more of the event's sponsors, according to a survey conducted by research firm McKeon & Assoc. of Joliet, Ill. When surveyed one month later, 70 percent could still recall a sponsor. Eighty-two percent attested they would be more likely to purchase a product made by a company that sponsored Gospel Fest. The figures held across all age and earning categories, with sponsor loyalty actually increasing with income level.

Arts sponsorship. British Petroleum found a positive relationship between arts sponsorship and a company's image and reputation. BP also examined public reaction to the BP logo built into the set of a performing arts event. Eighty-one percent of respondents thought the logo was noticeable. Of those, 88 percent said it was very acceptable or quite acceptable. Only two percent thought it was quite unacceptable; no one found it very unacceptable.

Sports marketing. Fifty percent of consumers surveyed in four countries said they would be more likely to buy a product with the World Cup logo than a similar product without the logo, according to Lucerne, Switzerland-based SRI.

John Hancock's survey

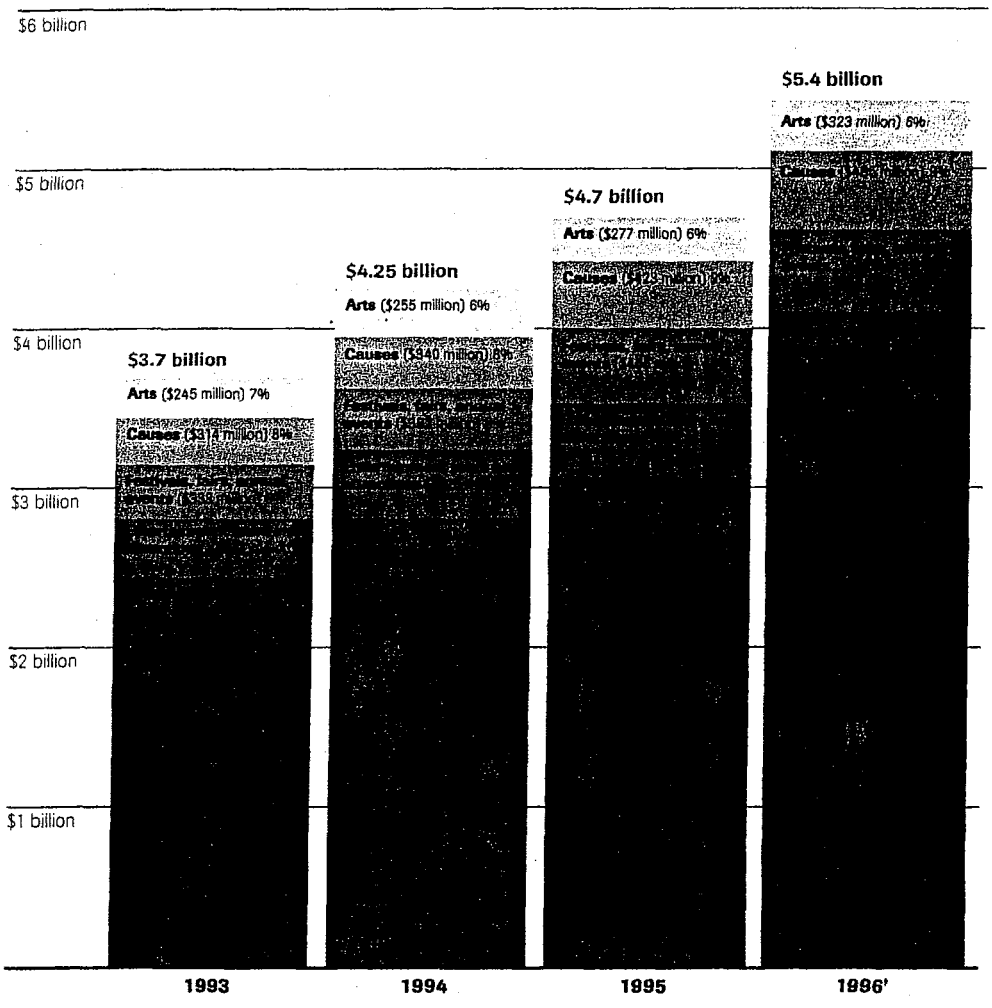
Prior to buying an Olympic sponsorship, John Hancock Financial Services commissioned a nationwide survey of its target market – 25-to-64-year-old financial decision-makers in households with annual incomes of at least $30,000. Findings include:

- About one-third (34 percent) said that their perception of a company "changes" depending on the type of event the company is sponsoring. Sixty-four percent of the respondents said sponsorship of a local event would make them think more favorably of a company. The number dropped to 42 percent for a company sponsoring a national event.
- Respondents with household incomes of $50,000-plus were equally willing to think more favorably of a company that sponsored local events as respondents making $30,000-to-$49,990 (64 percent each).
- Income had an impact on favorability ratings toward companies sponsoring national events: Only 35 percent of the respondents from $50,000-plus households gave national sponsors a more favorable rating versus 45 percent from the $30,000-to-$49,990 households.
- Whether sponsoring a local or national property, a company's ability to influence purchase is greater with men than women, and respondents earning $30,000-to-$49,990 than those earning $50,000-plus.
- Changing the name of an event to the sponsor's name was deemed "very appropriate" by only 13 percent of respondents. High visibility at the event via signage and product sampling was considered "very appropriate" by 30 percent.

What companies sponsor

In its earliest days, sponsorship was almost exclusively the domain of sports properties. In 1984, 90 percent of all sponsorship dollars went to sports. While sports continues to command the lion's share, the demand of corporations for a new and better way of communicating with their key audiences has benefitted every type of sponsorship.

Chart D **North American sponsorship spending by type of property***



* Source: *IEG Sponsorship Report*
† Projected

Why companies sponsor

Companies do not use sponsorship to replace advertising, public relations or sales promotion campaigns. The benefits sponsorship offers are quite different and the medium works best as part of an integrated marketing communications effort that includes the use of all marketing methods.

The following are the most common reasons companies use sponsorship.

Heighten visibility

The wide exposure events enjoy in both electronic and print media provides sponsors with vast publicity opportunities. For many companies, the cost of purchasing the TV and print exposure their sponsorships garner would be unaffordable.

For example, for the cost of a 30-second spot on the Super Bowl telecast, a company can sponsor a team on the NASCAR Winston Cup circuit, which delivers more than 30 hours of TV coverage.

Shape consumer attitudes

Brands with huge ad budgets and high unaided recall do not need sponsorship to generate visibility. Instead, they often sponsor for the lifestyle association the sponsored property represents.

They are looking to the event to have a rub-off effect on their image and ultimately their sales.

"Coca-Cola is the world's most recognizable trademark," said the director of sports marketing, Coca-Cola USA. "However, if you did a survey on the streets of Chicago and asked people what was more important to them, Coca-Cola or the Chicago Bulls, nine out of 10 would probably say the Bulls. We accept that and try to borrow that equity by becoming their sponsor."

Miller Lite's sponsorship of pro beach volleyball is another example of an image-driven tie. By becoming synonymous with beach volleyball, the brand is identified with a lifestyle emulated by its young adult target market. "Consumer attitudes are the hardest thing to change," said a Miller marketing executive. "And the more our brand is part of events that are part of a consumer's lifestyle, the more we can affect his or her attitude toward the product."

Communicate commitment to a particular lifestyle

The era of the mass audience is gone. Instead, companies are narrowcasting, tailoring specific messages to small, targeted segments. Sponsorship is an effective vehicle for this type of individualized communication. Opportunities are divisible by age, income, geography and gender. They segment markets along geographic, ethnic, psychographic and demographic lines.

Sponsorship allows companies to hone in on a niche market without any waste.

The era of the mass audience is gone. Sponsorship allows companies to hone in on a niche audience without any waste.

Business-to-business marketing: incenting the trade

Competition for shelf space is one of the biggest issues facing companies today and many are using sponsorship to win the battle. For example, many of the companies sponsoring stock car racing do so to offer retailers perks such as driver appearances at stores and event tickets in exchange for incremental case orders and in-store product displays.

Sponsorship of all types can be used to incent wholesalers, retailers, dealers and other intermediaries in the distribution channel.

Differentiate product from competitors

This objective is what is driving much of the sponsorship by service industries like banking, insurance and telecommunications.

Sponsorship provides companies a competitive selling advantage because it offers opportunities for category exclusivity and can be used as a platform for creating currency with customers. Sponsors take the rights associated with their properties and make them work for the customer to help achieve their needs and objectives, for example, a discount on tickets or a pit pass to a NASCAR race. It is a value-added promotion that the competition can not duplicate.

Entertain clients

Many companies sponsor for hospitality opportunities. For example, golf tournament sponsors offer their key clients pro-am spots, giving sponsors the opportunity to spend a few hours with important customers and solidify business relationships.

Events make great settings for this informal networking. They are unique and desirable, two things that are absolutely necessary to entice a business contact to join you during non-business hours.

Merchandising opportunities

As consumer buying decisions are increasingly being made in-store (80 percent of all product choices are now made at the retail level), marketers need to have relevant promotions for consumers at the point of purchase. A sports or entertainment tie can bring excitement, color and uniqueness to a p-o-p display and can be merchandised weeks or months in advance. The opportunity to have items available as giveaways or for sale is valuable because this type of merchandise is immensely popular with consumers and can be used to provide a key point of difference when offered in conjunction with an in-store promotion.

Showcase product attributes

Sponsorship allows companies to call attention to product benefits. For example, tire manufacturers sponsor auto racing to demonstrate their product in action.

Combat larger ad budgets of competitors

The cost-effectiveness of sponsorship relative to traditional media advertising allows smaller companies to compete with the giants of their industry. Mercury Communications could not match rival British Telecom's mighty media budget and used sponsorship of the U.K.'s Prince's Trust charity and a Royal Academy of Arts exhibit to build awareness, increase sales and strip market share from its only competitor. Mercury tied its phone cards to both sponsorships. The company donated a portion of each Mercury Prince's Trust affinity card sale to the charity; it also commissioned artists to design Pop Art cards that coincided with the Royal Academy exhibit.

Prior to the sponsorship programs, survey respondents had overwhelmingly chosen coins as their preferred payment method at public phones; 17 percent chose BT cards, while 9 percent opted for Mercurycards. Afterwards, 67 percent chose phone cards, with Mercury thrashing BT, 55 percent to 12 percent.

Moreover, given the choice between the standard Mercurycard and the Trust affinity card, survey respondents picked the affinity card, 38 percent to 17 percent.

Another example is Coors Brewing Co. For years, Coors, which has never had an ad budget as large as its competitors Anheuser-Busch and Miller, has used sponsorship to level the playing field. While it cannot afford to buy as many TV ads as A-B and Miller, it becomes one among equals when its race car lines up against those of the other two.

Drive sales

Purchases, not perceptions, pay the bills and companies increasingly use sponsorship as a hook to drive sales. For example, Visa conducts a national usage/fund-raising effort around its sponsorship of the Olympic Games and the U.S. Olympic Team. Visa promotes its association by offering to make a donation to the team each time consumers charge a purchase to their Visa card.

During a recent Summer Olympics, Visa's sales volume rose 17 percent – well over the company's projected 11-percent increase.

Visa does not increase its marketing spend during Olympic years; rather it gains extra mileage from those dollars. That kind of cost efficiency is critical in today's budget-trimming corporate climate.

Local sponsorships also can drive sales. For example, the Olive Garden Italian Restaurant chain used sponsorship of the Florida Marlins to attract consumers to its outlets. Its regional office developed a neighborhood baseball clinic in conjunction with the team sponsorship and saw guest counts increase by five percent to nine percent in participating areas during the promotion. Similarly, Southwest Airlines Co. used its sponsorship of the State Fair of Texas to increase ticket sales. More than 15,000 passengers took advantage of Southwest's offer of free admission to the fair with a ticket receipt.

Achievement of multiple objectives

Sponsorship offers the possibility of achieving several goals at once; most companies expect the medium to deliver a combination of the above benefits.

For example, Jack In The Box's Seattle region had five objectives for its sponsorship of Western Washington's Puyallup Fair:

1) generating awareness and trial of new products

2) reinforcing its position as a fast-food chain where consumers can try new items

3) building sales through aggressive couponing

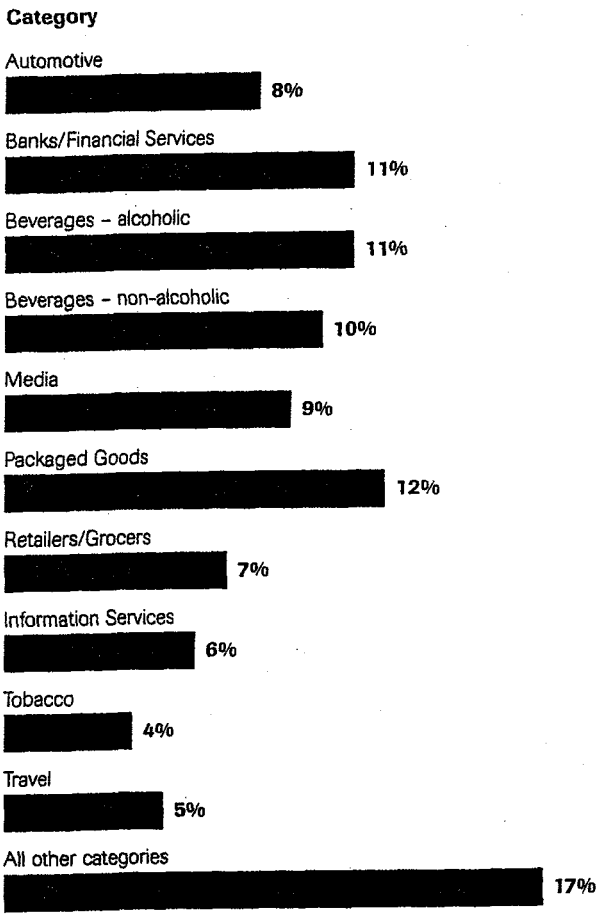
4) providing employees an opportunity to learn local marketing techniques via event participation

5) expanding the chain's awareness with radio broadcast support

Who sponsors

While sponsorship was originally the domain of beer and tobacco companies, today the biggest users include packaged goods, retail and financial services.

Chart E **Most active business categories in sponsorship***



* Source: *IEG Sponsorship Report*

How companies decide what to sponsor

The following are typical sponsorship criteria. Sponsors should use them as a guide to designing their own matrix for sponsorship selection – adding, deleting and refining points to dovetail with your specific objectives. Properties should use them to understand what potential sponsors generally will be seeking.

Image compatibility

- Does the property offer the imagery we are trying to establish?
- Is it a lifestyle with which we want to be associated?
- Is the property bigger than any sponsor or will it be possible to impose our brand's personality on the sponsorship?
- Are the cosponsors companies with which we want to be associated?

Audience composition

- Who is the property's core audience and what are the group's buying habits?
- Does the audience feel a strong sense of ownership/identification with the property or is it a more casual relationship?
- What is the extended reach of the property? On-site spectators? TV viewers? Year-round members?
- What geographic market(s) does it impact?

Ability to incent retailers

- Can we offer retailers a tie-in that builds store traffic?
- Can we create multiple promotions around the sponsorship so that each competing retailer in a market can have a distinct program?

Ability to leverage

- Is there an opportunity for multi-brand involvement?
- Can we conduct cross-promotions with cosponsors?
- Can we integrate the sponsorship into our existing promotional campaigns?
- Can we use "star performers" in our ad campaigns or promotions?
- Does the opportunity occur during a time we would like extra visibility?
- What is the property's promotional time frame...Is it relevant year-round, each season or just once?
- Are there opportunities for product sampling and display?

Media

- Is the property appealing – in a positive way – to the media?
- Can it draw broadcast and print coverage?
- Can we get our presence recognized?
- Can the property attract a network or cable TV broadcast?
- Will our signage show up on the TV broadcast?

Exclusivity

- Are the areas of category exclusivity offered broad enough?
- Can we take a position with all properties within the entire sector, thereby locking out our competition, or will the expense or existing deals prohibit this?
- Is the property already saturated with sponsors?
- Is it already identified with another company in our field?
- What are the opportunities for ambush? For example, will we be the category exclusive advertiser on the TV broadcast?

Product showcase

- Can our product be worn/used while participants compete/perform?
- Is our product key to the successful staging of the event?
- Does the property lend credibility to our product with hard-core fans, insiders and the media?

Ability to impact consumer sales

- Can we design promotions around our activity that directly involve product purchase?
- Does the hospitality component have strong appeal to our key clients?
- Can the sponsorship gain additional distribution outlets for our products?
- What is the value of on-site sales rights?
- Does the sponsorship give our marketing pitch a relevant point of difference?

Efficiency

- Does the property deliver a wider audience than we need? Are we paying for more than we need, such as elaborate VIP hospitality?
- What is the relationship between the cost of sponsorship and the value received?
- How does the sponsorship's cost compare with that of similar properties?
- Could we achieve the same results more cost-effectively through other media?
- Do we have the budget to promote our involvement properly?

Measurability

- Does the property lend itself to measurement?
- Does it conduct regular surveys or tracking studies on which we could piggyback?

Continuity/ability to extend

- Does the sponsorship have the potential to be long term?
- Is it something we can build on?
- Can we roll it out to other markets?
- Does the property contain spinoff opportunities?

Ease of administration

- Are we buying into a logistical nightmare?
- Can organizers deliver what they promise?
- Do we have the staff to properly administer the sponsorship?
- Do we have the support/approval of internal management?
- Is the promoter responsive to sponsor needs?
- Does the promoter have a credible track record?
- Will the promoter work with us to capitalize on the sponsorship, e.g., by initiating cross-promotions?

Typical sponsorship rights and benefits

Rights vary with scope of property and level of sponsorship purchased. Typical rights and benefits granted by a property to a sponsor are:

Official sponsor designation

Category exclusivity

Right to use marks and logo in advertising and promotions

ID in property's media buy

ID in promotional and collateral materials

Complimentary ad in program book

On-site product sampling

Exhibit/display space

On-site product sales (when applicable)

VIP invitations

Ticket allocation

Discount on additional tickets

On-site signage

Access to mailing list

Discount on merchandise

Title to proprietary event within larger event

Public-address announcements

Right of first refusal to purchase ad time on event telecast (when applicable)

Renewal option

Opportunity to survey audience

Pricing: determining what a sponsorship is worth

When a company buys a sponsorship, it is primarily buying access to intangibles, such as an association with a property and the right to promote that association.

Sponsorship assets with the highest potential value are qualitative rather than quantitative, rendering a single, standard measure of value – such as cost-per-thousand – inapplicable.

According to IEG's annual survey of properties, the sum of all the tangible benefits contained in a sponsorship package – i.e., tickets, program ads, etc. – is almost always worth less than the fee paid. And, the more prestigious the property, the greater the difference between the value of the tangibles and the sponsorship fee.

The Olympics are a good example. The Olympic sponsorship package does not include signage, commercials, athlete appearances, etc. Olympic sponsors are paying for the prestige of the association, the rights to use the Olympic name and five-ring symbol and the right to associate their product with Olympic attributes.

Variables which impact price include:

Tangible

- *Value of on-site sampling or sales rights*
- Property's media buy with sponsor ID
- Face value of tickets
- Booth/display space
- Value of program book ads
- *Guaranteed non-measured media with sponsor ID, e.g., banners, video monitors,* ticket backs, schedules, announcements, etc.
- Value of mailing list

Intangible

- Prestige of sponsored property
- Recognizability of property marks and logos
- Level of audience interest/loyalty

Reach/impact

- Scope of property: global, multiple countries, national, regional, major market or small market
- Cost to sponsor other properties in the same market(s)
- Cost to buy measured media in property's market(s)
- Cost to sponsor comparable properties in other markets

Price adjusters

- Desirability of property to sponsor category
- Impact of sponsor on cosponsor sales
- Degree of sponsor clutter
- Susceptibility of property to ambush
- Networking opportunities with cosponsors
- Size of sponsor's promotional commitment

Leveraging sponsorship

A company will only realize the full value of the sponsored property when it is used as a central platform around which consumer, trade, employee and media activities are built. Thus, knowing how to leverage sponsorship is as much in the interest of sponsees as sponsors.

The illustrations below show how to develop promotional programs around sports, arts, cause and festival ties to crack new accounts, drive incremental displays and trigger buying decisions.

Consumer sales overlays

The most common method of using sponsorship to drive sales is offering consumers a ticket discount to the sponsored property with proof of purchase.

Variations include offering to make a donation to a cause, such as Visa U.S.A. Inc.'s contribution to the U.S. Ski Team each time consumers used the card to purchase lift tickets, and running a sweepstakes, such as N.V. Philips's awarding of a night with Dire Straits around the company's tour sponsorship. To drive dealer traffic, registration forms were only available at electronics stores carrying Philips.

Added-value offers

Sponsors also can design sales-driven programs that offer consumers added value. Around its sponsorship of the San Francisco Giants, Safeway Inc. offered $6 ticket vouchers to Monday night home games. The vouchers also included a coupon for a free hot dog and soft drink during the game. Safeway promoted the offer and the team in its weekly newspaper inserts. The chain also created the Safeway/Oakland A's Kids Club, where for $7 children under age 15 received an A's pennant, membership card, team photo, button and two game tickets.

Service companies also can leverage sponsorship to create value-added consumer promotions. For instance, American Express TRS Co. runs an ongoing offer that gives Gold Card members first crack at the best seats in the house for popular plays and performances.

Self liquidators

Around its sponsorship of the U.S. Olympic Team, Texaco Inc. sold a specially-priced Olympic highlights video profiling athletes who "demonstrated the strength to endure and the energy to go further." The offer, good with a fill-up of any grade of System^3 gasoline, also encouraged repeat business: Consumers could redeem a coupon included in the video package for a free two-liter bottle of Coca-Cola Classic or Diet Coke on their next visit to a Texaco station.

Sponsor Eastman Kodak Co. also ran a merchandise offer during the Games. It sold commemorative Olympic watches – promoted as a $30 value – for only $3.50 with proofs-of-purchase from selected products. The company advertised the offer along with a coupon for its film.

Trade extensions

Around its World Cup sponsorship, MasterCard Int'l created a series of commemorative medallions that were marketed exclusively by its member banks; consumers could purchase the medallions only with a MasterCard. The banks could customize the medallions and shared in the revenue.

Nestlé USA, Inc's use of its sponsorship of a team on NASCAR's Busch Grand National Series presents another example of leveraging to influence the sales chain. Seven of the independent dairies that distribute the company's ice cream bars were in race markets. Nestlé used race benefits as a promotional incentive for the dairies, which parlayed tickets and merchandise into more freezer space and end-aisle displays. The sponsorship also opened doors with racetrack concessionaires.

Retailer incentives

To increase presence in-store, sponsors can create an offer as basic as allocating tickets and backstage passes based on merchandising performance. But, as competition between sponsors for retailer participation has grown more intense, offers have become more elaborate.

For example, a sponsor can sign over benefits to a local retail chain in exchange for incremental product displays or case orders. Sara Lee Corp.'s L'eggs, sponsor of a recent Ice Capades tour, gave Hook's drug stores presenting status of the Ice Capades stop in Indianapolis.

Similarly, Colgate-Palmolive Co. used its sponsorship of the Starlight Foundation to offer a local hook designed to boost retailer participation. Colgate donated 125 of the charity's "wishes" at $1,000 apiece on behalf of local retailers who supported the promotion in-store. Colgate also featured retailer ID on the front and back of its 90 Starlight Express Trolleys – self-contained entertainment centers for children's hospitals.

A custom element is critical to retailer participation. For example, around its Disney sponsorship, Eastman Kodak Co. offers a booklet containing $400 in Disney-related discounts and premiums in exchange for two film proofs-of-purchase. Kodak backs the offer with p-o-s materials, radio advertising and a national FSI. Retailers can enhance the Kodak package with their own sweepstakes or contests, such as tying a "buy two tickets and get one free" offer to twin-packs of film or video cassettes.

Cross-promotions with cosponsors

Cosponsors are potential partners for each other. Networking within this group can be highly profitable. For example, a candy maker that was a primary sponsor of a yacht racing team liquidated its entire fee with a product sale to one of the team's smaller cosponsors, an oil company. The confectioner transferred a portion of its sponsor benefits package to the oil company to clinch the sale of its candy as a giveaway with a tank of gas.

Similarly, when United Airlines and Hilton Hotels Corp. cosponsored the U.S. Olympic Team, the sponsorship was used as a hook in offering extra Hilton benefits to the airline's Mileage Plus frequent flyers who stayed at one of the chain's hotels.

Working with a cosponsor can vastly extend the reach of a company's promotions without increasing cost. Additional savings can accrue from such practices as sharing photography and entertainment expenses. Properties can facilitate cross-promotions by holding meetings so sponsors can discuss ways to conduct mutually beneficial joint promotions.

Media tie-ins

Media partners help extend sponsor visibility in many ways. For example, the Pinkerton Tobacco Co.'s Red Man Golden Blend Country Concert Series showcased up-and-coming bands. In each market the tour visited, Red Man teamed with the leading country radio station to design custom promotions for the station's listeners. These promotions included free tickets, merchandise and ticket discount coupons. The company further leveraged its sponsorship by trading tickets and event merchandise for on-air mentions.

Multidimensional programs

Sponsorship-themed promotions are most successful when they are layered to simultaneously induce consumers to buy while adding to the number of outlets offering the product.

For example, when Corona beer sponsored the Triple Crown of Surfing, it built in promotions for consumers, on-premise clients and off-premise retailers. Consumer promotions included a self-liquidating videotape offer with event highlights and a sweepstakes that sent winners to the Triple Crown in Hawaii. The brand used p-o-s materials at retailers and offered on-premise accounts surfing-themed promotions and merchandise such as Hawaiian tank tops and baseball caps.

Working with a cosponsor can vastly extend the reach of a company's promotions without increasing cost.

Chiquita Brands Int'l, Inc.'s World Cup soccer sponsorship also included multidimensional offers. The consumer-oriented centerpiece was Chiquita Clinics, a nationwide series of youth skills competitions free to youngsters with proof-of-purchase. Besides creating consumer impact, the series helped forge in-store merchandising partnerships with key local accounts. This was achieved by the clinics' ability to increase store traffic -- registration forms were available from p-o-s displays in supermarket produce sections -- and by including the retailers in community-service themed promotions.

Additional elements of Chiquita Soccer included Team Value Chiquita, a grassroots soccer equipment savings program available to all youth teams. Rounding it out were Chiquita's sponsorship of individual pro teams, which provided opportunities for visibility and client entertainment.

La Victoria Foods, Inc.'s salsa exploited its primary sponsorship of an NHRA team on multiple levels. In race markets, the brand promoted event ticket discounts with product purchase. Stores could obtain ID on the La Victoria car in exchange for product display. La Victoria induced store traffic through radio ads promoting the $5 ticket-discount coupons available with purchase. To trace bounceback, the company distributed recipe books with coded coupons.

Around its sponsorship of a NASCAR Winston Cup team, Kraft General Foods, Inc. offered race tickets and a selection of race items to retailers who agreed to buy a specified case load. Stores that agreed to a substantially larger-than-normal order and additional shelf space and end-aisle displays could have a race-car simulator appear at their site. To help the store move the product, KGF required consumers to show proof-of-purchase to ride the simulator. Placing the simulator in a store's parking lot gave the promotion an edge over other proof-of-purchase schemes: a customer without the required sales slip could simply drop inside to obtain one.

Chart F **Exploitation menu**

The value of any sponsorship is derived when the sponsored property is used as a central platform around which to direct other marketing activities.

Objective	Sponsor offer(s)	Implementation vehicle(s)
Retailer incentives	Traffic-builders: store appearance by team, showcar, rock star, etc.; exclusive off-site outlet for tickets, merchandise or registration forms	Based on merchandising performance and incremental case orders
		National ad slicks with room for tag with local store ID
	Assigned benefits: ID on sponsor's car in local market, donation to cause in retailer's name	Display contests, dealer loaders, point-of-purchase materials
	Entertainment: VIP tickets, premiums	Retailer sells participation in store promos around property at a profit
	Sales rights: retailer "buys" relevant categories for resale to manufacturers	
Consumer sales	Free or discounted event tickets or special on-site privileges, e.g., pit-pass with proof-of-purchase	In-store displays and media buy within 200-mile radius of event
		FSIs, product wrappers, shelf talkers, etc.
	Donation to cause with purchase	Media buys, direct mail sweepstakes or contest
	Merchandise and premium offer with purchase, e.g., collector cans, pins, trading cards	Statement stuffers
	Special privileges for members; e.g. tickets to "sold-out" events	
Client entertainment	Pro-Am spots, opening night invitations, event travel or training camp visits; clinic with pros	Invitations to hospitality tents, suites, etc.; player visits with customers; backstage tours
Trade extensions/ Sales force motivators	Local overlays, e.g., event/game/cause sponsorships; affinity-card offers; commemorative merchandise; on-site product sales	Co-op with bottlers, distributors, brokers, member banks, etc.; check presentation made by trade rep
	Use of property's membership list to create database of targets or for traffic-building direct mail offer	Salespeople accumulate points on number of units sold
		Special offers, e.g., family days, discount on tickets and merchandise
	Entertainment opportunities as entree to new accounts	
Borrowed imagery	Exclusivity in product category	Official status on packaging and in media buy
	Special awards, proprietary programs	PR, advertising and marketing support
Media leverage	Sponsor benefits traded for media commitment	Used to advertise property or resold to cash sponsors
	Ad time/space buy extended with event-related promotions, merchandise, etc.	Live remotes, pre-event giveaways, etc., negotiated with media promotions director
Cross-promotions	Cosponsors provide product for giveaways, etc., in exchange for inclusion in surrounding promotions	Exposure in cosponsors' distribution outlets, e.g., auto dealerships, gas stations
Trial	On-site sales, sampling and/or exhibit for product display or to showcase product in action	On-site distribution of bounce-back coupons or trial-sized samples with next-purchase coupons; use of sponsor product while competing or performing

Measuring sponsorship results

Sponsorship can be measured. There are three broad schools of evaluation:

- *measuring awareness levels achieved or attitudes changed*
- *quantifying sponsorship in terms of sales results*
- *comparing the value of sponsorship-generated media coverage to the cost of equivalent advertising space or time*

The first two forms of measurement require:

- A pre-sponsorship benchmark. Only an initial measurement can establish a point of comparison
- Maintaining consistent levels of advertising and other forms of marketing during the sponsorship. If several promotional variables are introduced at once, it is impossible to isolate the effect of each one
- Measuring one objective at a time. Though companies sponsor for multiple reasons, the sponsor must decide which objective is most important and measure that one

Measuring awareness/attitude changes

Britain's Cornhill Insurance's primary objective for its cricket sponsorship was raising name awareness. Studies commissioned prior to its ties pegged unprompted awareness at two percent. Surveys were conducted quarterly during the two-year sponsorship period. Awareness levels had risen to 16 percent at the end of the 24 months. Cornhill did not increase or change any other advertising or promotion components during that time, so the 14-percent net increase could be attributed to the sponsorship. The surveys also measured prompted name awareness; unprompted and prompted awareness of Cornhill as a sports sponsor; and attitudes toward sponsorship.

Lloyds Bank undertook extensive post-project research for its sponsorship of the Lloyds Bank Theatre Challenge. The financial institution evaluated Challenge participant responses against a 10,000-person control group. The two groups differed 30 percent in how they rated Lloyds as a place to bank, as well as their perceptions of the bank as an up-to-date organization, its accessibility and friendliness.

Sponsors need to address three areas when measuring awareness and attitude:

- Prior to launching the tie, they need to determine awareness levels, attitudes and image perceptions among their target and set goals they expect the sponsorship to achieve
- During the sponsorship, companies should ask themselves, "Are we on the right path? Are there any strong positive or negative indicators to adjust or change?"
- Following the sponsorship, they should ask, "Did we meet our goals?"

Measuring sales

To justify expenditures to shareholders and employees, sponsors must show that sponsorship makes an impact on the bottom line. They must show that associating with an NBA team or a state fair positions their products or services so that consumers want to buy them, while concurrently influencing the key elements in the sales chain so that there is a readily available outlet from which to buy.

Sales objectives that can be tracked include a sponsorship's ability to:

- increase sales of a product or a service to consumers
- drive sales to business customers
- increase distribution outlets
- generate more product display at point of sale
- produce targeted new leads
- improve efficiencies of FSIs and other promotions
- lock-in heavy users
- boost retail traffic

Methods of tracking sales gains include:

- comparing sales for the two-to-three-month period surrounding the sponsorship to the same period in prior years
- measuring sales in the immediate event area against national sales
- tying sales directly to the sponsored event, e.g., ticket discount with proof of purchase, then tracking redemptions
- tracking number of outlets carrying product
- measuring customer brand preference
- tracking number of retailers/dealers participating in program
- gauging incremental sales to retailers by measuring additional case orders, display penetration, shipments, features and price reduction

Philip Morris sponsored a U.K. darts competition to increase distribution of its Marlboro brand in bars. P-M used the number of outlets who for the first time stocked the brand as a measure of the program's success. Marlboro did not increase promotion during the sponsorship period, so the resulting gain was attributed to sponsorship.

VF Corp.'s Wrangler jeans measures the net-profit contribution for each of its sponsorship programs. Prior to sponsoring, Wrangler conducts on-site interviews at an event to determine the number of attendees who have purchased the jeans during the last six months. The brand again conducts the survey after the first year of sponsorship. The rate of Wrangler purchases between the pre- and post-sponsorship studies reflects incremental sales generated.

Wrangler then multiplies its $3-per-pair profit margin by the number of incremental sales. This provides an accurate estimate of the sponsorship's profit contribution. Wrangler then subtracts the cost of the sponsorship to determine the program's net profit contribution.

Measuring media coverage

This approach calls for placing a dollar value on publicity. First, document the number of seconds of TV and radio coverage, as well as column inches in print. Then determine the cost to purchase a like amount of advertising. In assigning values, some sponsors use the rate card, while others use qualitative objectives. For example, Cartier values mention in *Town & Country* higher than *People*.

Lloyds Bank, in association with market researcher Audits of Great Britain, devised a qualitative rating system for each piece of coverage received by its Theatre Challenge. Of 216 articles, 96 percent credited Lloyds as sponsor. Each clipping received a grade: two points if Lloyds appeared in the headline, or if the story included a positive comment about the bank's sponsorship; and one point for a name mention in the text or a photograph. The coverage then was evaluated against the relevant publication's rate card. Results showed Lloyds achieved coverage equivalent in value to 75 percent of the cost to buy the space.

Other performance indicators

Depending on a sponsor's objectives, several other measures can be used to evaluate sponsorship.

Interest levels/participation

Gillette, which sponsored the $10,000 Right Guard Halfway Challenge award during televised auto races, measured participation in its promotion. Entrants, who either mailed in entry forms or registered through a 900 number, vied for a chance to be phoned at the race's halfway point and asked who was leading. The contest was promoted prior to races through radio and TV ads. During the second half of the race, the winner of the award was announced on TV.

Gillette received more than one million phone calls during the season. The names and numbers collected from the calls were turned into a direct mail list, which was later used to send coupons for Gillette products.

Number of product-related actions taken

Bailey's Original Irish Cream was able to determine that 50,000 people sampled the drink during its SummerStage sponsorship in New York City's Central Park. Other actions may be measured after the sponsorship, i.e., calls to 800 information numbers, etc.

Key clients attending

A project's success in appealing to a company's target audience also is evident in the number of guests accepting invitations and personally attending the event.

New contacts/mailing list generated

A car dealer who sponsors an annual concert hosts a party before the concert and a buffet afterwards, to which it invites 30 guests. Over the three years the dealer has sponsored, five guests have bought cars. On a broader scale, the dealer collects names of concert attendees and follows up with phone calls asking whether they enjoyed themselves and then discusses cars.

Measurement case studies

Business-to-business marketer/arts

Who: Digital Equipment Corp., U.K.

What: Partners in Dance, an umbrella program for sponsorship of Sadler's Wells Theatre, Britain's major dance showcase, and seven dance companies ranging from traditional ballet to contemporary

Objectives: Reach the 8,000 corporate customers who make purchasing decisions for major users of information technology; position Digital as an innovative, reputable and exciting company

Measured: Number of invitees who personally attended event; business written as a result of the contact

Results:

- After reaching 5,000 of its target audience, Digital commissioned a poll that found the company's favorable perception rating had increased 20 percentage points. Competitors' ratings had either dipped or stayed the same during the same period. Digital's ratings even outpaced one competitor that spent £3 million — several times the cost of Digital's sponsorship — on advertising during the previous year
- Further research showed that the only segment of Digital's target not being reached was the very top - CEO's and directors of the largest British companies. The program was amended to include private dance events for these key businesspeople. Digital spent an amount equal to its sponsorship fee on silk ties, gold jewelry and champagne glasses with the Partners in Dance logo, which were given to guests to extend the life of the sponsorship
- Within the first year, Digital's arts sponsorship more than paid for itself in new business

Packaged good/taste festival

Who: Warner-Lambert Co.'s Listerine

What: $20,000 cosponsor of Taste of Chicago, an annual free food and music festival attracting three million people

Objectives: Boost shelf space, retailer co-op advertising and consumer sales; increase standing in minority markets

Promotion: Bring proof of purchase to festival and receive 50-cent food ticket; retail and on-site sweepstakes with urban-contemporary and Spanish-language radio station partners; on-site sampling and couponing

Measured: Display activity; number of retailers promoting the offer in their own advertising; and shipments during the festival promotion

Results:

- Gave away more than 10,000 food tickets to Taste attendees redeeming Listerine wrapper
- Displays in Chicago were 112 percent higher than rest of U.S.
- Trade participation in Listerine's co-op advertising was the highest ever
- Local shipments of the traditionally sluggish 48-ounce size during peak month of promotion increased 238 percent over the previous year; shipments for the quarter jumped 193 percent. Those figures contrasted with a national nine-percent decline for the month and a two-percent increase for the quarter
- Market share remained one point higher in the months following the sponsorship than it had been previously
- Listerine placed fifth among Taste's 37 sponsors in attendees' unaided recall, outperforming larger sponsors that had paid nearly five times more for their sponsorships

Beverage/auto racing

Who: Kraft General Foods, Inc.'s Country Time drink mix

What: NASCAR Winston Cup stock-car racing team

Objectives: Boost in-store merchandising; regional and national consumer sales

Promotions: Ride in show-car simulator with proof of purchase; limited-edition Collector's Can featured through in-store contests and ads in trade and race publications

Measured: Trade gains, product sales

Results:

- Traveling simulator generated more than 40 incremental case displays at each retail stop
- Collector's Can on-pack program featuring six limited-edition lithographs of NASCAR drivers produced a 13-percent increase in national lemonade sales, with sales jumping as high as 66 percent in Southeastern markets

Packaged good/ethnic music

Who: Keebler Co.'s crackers and cookies

What: Keebler Music Series, 156 Hispanic music events in Southern California

Objectives: Involve major supermarket chain; leverage displays; drive consumer sales

Promotion: Attendees receive $5 off the $15 admission price with a recent Lucky Stores' supermarket receipt and a proof-of-purchase from Keebler products; on-site signage, sampling, couponing and sales of Keebler licensed merchandise

Measured: Number of proof-of-purchases collected

Results: One in five attendees turned in a proof-of-purchase for ticket discount

Restaurant chain/cause

Who: Jack In The Box, Seattle ADI group

What: Save the Earth Foundation, funder of environmental research at the University of Washington

Objectives: Increase coupon redemption; increase sales; raise visibility of chain's environmental commitment

Promotion: Donate $1 and receive coupon book offering $10 in Jack In The Box savings

Measured: Redemption of coded coupons

Results:
- 35,000 coupon books sold
- 26 percent coupon redemption rate vs. expected three-percent rate
- More than $300,000 in corresponding sales

Financial services/global sports event

Who: Visa Int'l

What: The Olympic Programme (TOP)

Objectives: Gain consumer preference and stimulate card usage

Promotion: From May through September, Visa promoted its association with National Olympic Teams by promising to make a donation to a Team each time the card was used or traveler's checks purchased; member banks allowed to issue special Olympic cards and tag national TV advertising

Measured: Attitudes and usage

Results:
- Doubled consumer preference rate of its card over its chief rival from 15 points three months before the Olympics to about 30 points during the Games. Rate remained larger than 15 one month after the event
- Sales volume increased 17 percent (Prior to sponsoring, no advertising or promotion had ever achieved more than a 3-percent increase for Visa)

Working with sponsorship agencies

Sponsorship, the fastest growing form of marketing, is unregulated in the U.S. No guidelines for agency standards and practices exist; those involved in the industry have had to establish their own business principles. As a result, practices vary considerably from one agency to another.

Few corporations have the depth of specialization in house that sponsorship requires, so agencies are often brought in to provide crucial guidance.

Agencies may act as advisers to sponsors, steering them through the myriad of options and providing the supplemental professional staff required to manage an event involvement.

Agencies may also act as advisers to sponsees, packaging a property to make it more relevant to the needs of potential sponsors, and as brokers, shopping it around to corporate buyers.

Although in most cases sponsorship has been governed by the highest professional standards to the mutual benefit of sponsors and sponsees, the lack of codified practices and variance in procedures is often confusing to even the savviest of sponsorship veterans.

Concerns also emerge when an agency has a multiplicity of commercial interests. For example, when the agency promoting or marketing an event also represents the talent that appear in that event, consults to the companies that sponsor the event, owns the TV rights, and controls merchandise and signage sales.

The role of sponsorship agencies

Sponsorship agencies provide services to sponsors and sponsees on the development of a program, negotiation of terms and management of the sponsorship, either on an ongoing or project basis. These services run the gamut from media and promotional services to hospitality and evaluation.

Sponsors and sponsorship agencies

In general, sponsors are not willing to pay for strategic counsel in the area of event marketing. Instead, they expect agencies to present ideas and advice for free, making their money if a sale is transacted.

This has meant that the majority of sports, arts, event and cause marketing agencies represent properties. Showing sponsor clients how to use these properties to increase sales, visibility and retail presence is a necessary part of the agency's sales process.

This is not an ideal situation for either party: rather than receiving impartial advice, sponsors rely on agencies with a vested interest in certain events, while agencies often provide thousands of dollars worth of education, expertise and ideas to sponsors without compensation.

This has resulted in sponsorship agencies offering a growing number of specific services that sponsors *are* willing to pay for. These include:

- Event creation
- Contract negotiation
- Servicing and implementing the sponsorship
- Monitoring the delivery of rights
- Creation of marketing, sales promotion and PR campaigns around the sponsorship
- Evaluation

Properties and sponsorship agencies

The services most often provided to property clients by agencies are:

- Establish audience demographics and purchasing habits
- Determine what rights property owns
- Develop a commercial strategy, including best way to package and market those rights
- Design sales materials
- Prepare a profile of companies most likely to sponsor the property
- Engage commercial partners to make the sponsorship work
- Structure TV and media deals
- Approach and negotiate terms with sponsors, TV and others
- Implement merchandising program
- Create and administer hospitality program
- Protect and enhance rights ownership
- Implement signage
- Service sponsors
- Conduct follow-up research and evaluation

How sponsorship agencies bill for their services

Agency remuneration takes three forms:

Project fee or retainer. A project fee is a fixed fee for undertaking a project; a retainer consists of regular payments over time for services

Expenses. Reimbursement of out-of-pocket costs incurred in performance of services

Commission. A percentage of income generated

Agencies working for sponsors are usually compensated through the first two forms. Since sponsors most frequently hire agencies to manage and implement their event tie-ins once the property is selected, there may also be an operational budget. This would cover the costs of servicing the sponsorship, including such items as signage, legal fees, sampling, hospitality, etc.

Under no circumstances, should an agency receiving a fee from a sponsor also accept a commission from a property.

When an agency is hired by the rights holder to perform a sales role, compensation may be strictly a fee or retainer, plus expenses; a commission; or a combination of all three.

Commission rates vary between 10 percent and 40 percent of income secured. The percentage will depend on several factors including:

- Competition between agencies to represent the project
- Difficulty in securing funds
- Sums being sought
- Length of engagement of agency
- A combination of the above elements

In general, the longer the period of engagement of the agency, the lower the commission rate is likely to be. The larger the sum sought in relation to the perceived value of the property, the higher the risk, and thus the higher the rate.

Commission rates also may vary depending on the type of deal signed. For example, the rate for signing new sponsors might be 25 percent while the rate for renewing current sponsors might be 12 percent.

Extremely prestigious properties might be able to command a minimum guarantee. This may affect commission arrangements since the agency could effectively "buy out" the right to receive all income for the period of the contract.

Straight commission arrangements shift the commercial risk of raising income to the agency and protect the cash flow of the rights holder, since payment need not be made until income is received. This shifting of the commercial risk to the consultant is reflected in the higher cost of commission-based arrangements when contrasted with project fee arrangements.

Bottom line, commission deals often cost more in the long run if the project is successful, but remove the risk of the event having to pay if the consultant fails to sell any sponsorship.

Tips for successfully working with a sponsorship agency

Provide clear job assignment upfront

It should include:

- Detailed objectives
- Desired outcome
- Budget (If you cannot give specifics, provide reasonable idea of the size of the project)
- Time frame for start and completion

Define Roles

- Before hiring agency, discuss the assignment with your other agencies and staff to minimize any internal problems brought on by new consultant's arrival
- Determine who will be managing the assignment at your end, i.e., individual, committee, etc.

Interview agencies

Be sure to determine:

- What, if any, responsibility the agency will take for achieving promised results
- Reporting procedures. How often will agency report to you and in what format (verbally, in writing)
- How, if at all, agency plans to monitor and evaluate results
- Terms and fees
  - *daily rate (for principals vs. less experienced staff)*
  - *hourly rate*
  - *expenses*
- Find out who will be assigned to your account. Is it the senior people who are pitching you or will it end up being their newest staff members?
- Check references

Negotiate contract

Points to address:

- Confidentiality
- Billing arrangements including expenses that you will cover (if any)
- Time frames, either for getting assignment done or length of time the agent is authorized to act on your behalf
- Length of compensation, e.g., will commission be paid for as long as sponsor renews even if agency is no longer involved?
- Ownership of materials
- Commissions on in-kind commitments
- Exclusivity: will other agencies be allowed to market the property as well?
- Conflicts of interest: does agency work with any competitors of sponsor?

Special considerations for properties

- When an agency contacts you on behalf of a potential sponsor, establish that agency remuneration is the responsibility of the sponsor. Ask the agency to explain its client's background and objectives. This allows you to assemble the most thorough and customized sponsorship package for their client. If an agency is not willing to spend 10 minutes on your needs, chances are it will not represent your sponsorship program properly
- If you are already set up with an in-house sales staff but are presented with a strong prospect by an agency that doesn't represent the sponsor, consider granting the agency the exclusive right to approach a company or a category of companies for a limited time – perhaps four to six months – leaving you with enough time to sell sponsorship on your own if they don't produce a sponsor
- If you hire an agency but also plan to sell sponsorship in-house, make sure you have prior approval on specific categories and companies to approach. This prevents two different people from approaching the same company and avoids approaching a company that may have already turned down sponsorship of your property

Before hiring

- Look at sales materials the agency has prepared for existing clients
- Ask how much sponsorship revenue the agency produced for other properties. Confirm with reference checks
- Determine if final sponsorship contract negotiations will be handled directly by you or your staff, or the agency representative

Why sponsorships fail

Up until the late 1980s, the CEO Syndrome – when a company sponsors yacht racing because a top executive likes yachting – was the primary cause of ineffective sponsorships.

While sponsorship decision-making is still not totally immune to this kind of subjectivity, growing accountability to stockholders and stakeholders has resulted in a more professional approach to sponsorship.

Today, far more complex reasons are usually behind sponsorship programs that run amok. The most common ones are detailed below:

Greenwashing. Don't sponsor green unless you are green. Sponsorships are coming under increasing scrutiny and those perceived as PR ploys will backfire. Whether it is an environmental tie or a tie to sports, unless a sponsor is genuinely seen to be enabling a recipient organization, the strength of feeling that is engendered can very easily turn against the company, as it will be seen merely as exploiting a situation.

Signing the check and dropping the ball. Sponsorship is rarely an efficient buy for companies expecting the pay-off to come through on-site visibility; on a cost-per-thousand basis, the return is not there. Sponsorships must be commercialized weeks or months in advance and leveraged with an audience far broader than at the venue. Sponsors should budget anywhere from 10 cents to 10 dollars for every dollar spent on rights fees, depending on the type of property being sponsored. For example, if the title sponsor of a college bowl game wants its name kept in the title on the TV broadcast, it must buy about 25 percent of the ad time. This is on top of the fee paid to be the event's title sponsor. On the other hand, a sponsor of a race car team gets ID in front of the audiences at every event in which the team competes, even if they are not an event sponsor, as well as on TV, even if they don't buy any ad time.

Due diligence overlooked. Knowing what you are not getting is often as important as knowing what you are getting. For example, does the sanctioning body you are about to sign with control marketing rights to the events it sanctions? How about the athletes that compete in them? Does league sponsorship include marketing rights to teams? Who controls advertising on broadcasts? Does official water status cover both sparkling and flat waters? What are the legalities and liabilities associated with the property?

Property hopping. One-year commitments are generally of dubious benefit. Creating a link between a sponsor and a property is rarely accomplished overnight. Also, the learning curve in sponsorship is longer than other media, and sponsors usually do not know how to fully maximize an involvement with a particular property in the first year.

Sponsorship, unlike traditional media, will not reach consumers unless the field gets behind it and sells it to the trade.

Too many little sponsorships. It is generally much more effective to build equity by concentrating sponsorship funds than by spreading them around. This can take the form of multiple lower- and middle-level packages within a single property type or buying top-level packages at one or two properties.

Insufficient staffing. Even turnkey packages require additional staff time for everything from hosting clients on site to approving artwork with sponsor ID.

Competition for trade participation by cosponsors. When companies whose products are sold through the same distribution channel sponsor the same property, impact is often diluted. Sponsors find themselves competing with each other for retail participation and undermining the value of each other's offers in the consumer's mind. Both sponsors and properties need to consider not only exclusivity within a product category but also the number of cosponsors with the same sales outlets.

Failure to sell internally. Sponsorship, unlike traditional media, will not reach consumers unless the field gets behind it and sells it to the trade, who then must promote it. A program will not work unless the concept is sold throughout the system and meets the needs of all the various constituencies.

Overlooking the fans. Sponsorship will not work if it is imposed on an audience. Sponsors and properties must help audiences look beyond the obvious trappings of sponsorship, such as perimeter signage, to the value-added benefits sponsors are bringing. It must be communicated to fans and audiences that, as a result of the sponsorship, they are getting events that would not otherwise visit their market, more affordable ticket prices, enhanced programming or some other tangible benefit. To make an impact, it is key that the sponsor is seen as bringing something to the event. The activity must be perceived as being *provided* by the brand rather than simply *sponsored* by it.

Comparing sponsorship to advertising

What sponsorship accomplishes better than advertising

The benefits sponsorship provides are quite different from those offered by advertising. For example, specific product messages, such as "one-third the calories," must be communicated through controllable advertising.

What sponsorship generally accomplishes better than advertising is establishing qualitative attributes, such as shaping consumers' image of a brand, increasing favorability ratings and generating awareness.

This was documented by a major tire marketer in India, which conducted a four-year study on how sponsorship compares to advertising. During the study, the company quit all advertising and used sponsorship exclusively. During the four years, its two competitors used product advertising and hardly any sponsorship.

In three of the four areas measured – corporate image, propensity to purchase and brand awareness – the company using sponsorship fared better.

The fourth area – communicating specific product attributes, such as long-lasting tires – required traditional advertising.

Attributes where sponsorship's efficiency over advertising has been demonstrated include its ability to build:

Credibility. Sponsors typically receive official product designation and rights to use the sponsee's marks and logo on packaging, etc. Because the official sponsor credential is so strongly linked to the brand's positioning, the message works in the consumer's mind as "the sponsor's sports beverage enhances performance and is the brand to drink." Sponsorship generates credibility for the sponsor's brand over the brands of its competitors, which appear not to have been sanctioned or approved.

Imagery. By stating that it is an official sponsor, the sponsoring brand can be linked immediately to a known set of image qualities, e.g., public-service oriented (sponsor of a local parks program); environmentally responsible (World Wildlife Fund); world-class performance (Olympic Games); artistic excellence (Chicago Symphony Orchestra); durability (New York City Marathon); category dominance (National Football League); etc. The company's advertising does not have to work as hard to create image qualities for the brand and the consumer is more likely to be receptive to the transference of qualities than to their creation in advertising.

Prestige. Only a handful of companies can afford to advertise on the most prestigious media broadcasts. But with sponsorship, even a mega-event like the Super Bowl is affordable to smaller and local brands. That's because companies with smaller budgets can sponsor subordinate events within a major one. Small-budget sponsors can also sponsor a lesser-known event and work with the producer to make it a major one.

Internal morale. Unlike an ad buy, employees can be directly involved with a company's sponsorships, e.g., acting as volunteers at the event or receiving special benefits such as ticket discounts.

Sales rights. Sponsorship, unlike measured media, also provides opportunities for liquidating a fee via sales rights. For example, Philips provides lighting for a number of stadiums. When any of the stadium operators needs a TV camera, security system, phone handset or coffee maker, the appropriate Philips division has first crack at providing it. Another liquidating opportunity is on-site sales rights for categories like film, soft drinks and hot dogs.

Live audience. *Unlike advertising, sponsorship provides a live audience with built-in opportunities for:*

- On-site sales and sampling
- Surveying
- Customer feedback
- Interaction with sales force
- Product testing

Why it's easier to stay with advertising

Despite its many advantages over measured media, the process of buying, managing and measuring sponsorship is far more time-consuming, complex and risky. Among the efficiencies that advertising offers that sponsorship does not are:

Standardization. With advertising media, what's delivered is consistent, e.g., all broadcast media deliver time; all print outlets offer space. Sponsorship benefits, on the other hand, vary radically from one property to another. With sponsorship, two properties in identical markets might deliver the exact same audience and numbers, yet offer entirely different benefits, e.g., pro-am spots vs. title of a stage, making it virtually impossible to compare like and like.

Evaluation. Flawed as it is, cost-per-thousand is a universally accepted measure providing advertisers built-in evaluations of their media buys. Measuring sponsorship's impact takes a dedicated effort and entails an additional cost.

Turnkey. Ad buys do not require an additional spend for effectiveness. The opposite is true of sponsorship, where companies looking for a pay-off solely through their visibility during the event usually will be disappointed.

Make-goods. With advertising, if ratings or circulation are lower than projected, additional time or space can be provided by the media as compensation. With sponsorship, where the seller often controls just one property and has no access to a year-round inventory, this is rarely the case.

IEG sponsorship glossary

Ambush marketing: A promotional strategy whereby a non-sponsor attempts to capitalize on the popularity/prestige of a property by giving the false impression that it is a sponsor. Often employed by the competitors of a property's official sponsors.

Arts marketing: Promotional strategy linking a company to the visual or performing arts (sponsorship of a symphony concert series, museum exhibit, etc.). *See: Sponsorship.*

Business-to-business sponsorship: Programs intended to influence corporate purchase/awareness, as opposed to individual consumers.

Category exclusivity: The right of a sponsor to be the only company within its product or service category associated with the sponsored property.

Cause marketing: Promotional strategy that links a company's sales campaign directly to a nonprofit organization. Generally includes an offer by the sponsor to make a donation to the cause with purchase of its product or service. Unlike philanthropy, money spent on cause marketing is a business expense, not a donation, and is expected to show a return on investment. *See: Sponsorship.*

Cosponsors: Sponsors of the same property.

Cross-promotions: A joint marketing effort conducted by two or more cosponsors using the sponsored property as the central theme.

Event marketing: Promotional strategy linking a company to an event (sponsorship of a sports competition, festival, etc.). Often used as a synonym for "sponsorship." The latter term is preferable however, because not all sponsorships involve an event, per se. *See: Sponsorship.*

Hospitality: Hosting key customers, clients, government officials, employees and other VIPs at an event. Usually involves tickets, parking, dining and other amenities, often in a specially designated area, and may include pro-am spots, backstage tours, etc. *Synonym:* Client Entertainment.

In-focus coverage: Amount of time sponsor identification is visible to TV viewing audience during event broadcast.

In-kind sponsorship: Payment (full or partial) of sponsorship fee in goods or services rather than cash.

Licensing: Right to use a property's logos and terminology on products for retail sale. *Note: While a sponsor will typically receive the right to include a property's marks on its packaging and advertising, sponsors are not automatically licensees.*

Media equivalencies: Measuring the exposure value of a sponsorship by totalling the coverage it generated and calculating what it would have cost to buy a like amount of ad time or space in those outlets based on media rate cards.

Media sponsor: TV and radio stations, print media and outdoor advertising companies that provide either cash, or more frequently advertising time or space, to a property in exchange for official designation.

Municipal marketing: Promotional strategy linking a company to community services and activities (sponsorship of parks and recreation programs, libraries, etc.).

Option to renew: Contractual right to renew a sponsorship on specified terms.
See: Right of First Refusal.

Philanthropy: Support for a nonprofit property where no commercial advantage is expected. *Synonym:* Patronage.

Perimeter advertising: Stationary advertising around the perimeter of an arena or event site, often reserved for sponsors.

Premiums: Souvenir merchandise, produced to promote a sponsor's involvement with a property (customized with the names/logos of the sponsor and the property).

Presenting sponsor: The sponsor that has its name presented just below that of the sponsored property, i.e., "The Kroger Senior Classic presented by Fifth Third Bank," or "The Music of Andrew Lloyd Weber presented by MCI."

Primary sponsor: The sponsor paying the largest fee and receiving most prominent identification. (Would be title sponsor if sponsored property sold title.)

Property: A unique, commercially exploitable entity (typically in sports, arts, events, entertainment or causes). *Synonyms:* Sponsee, Rights Holder, Seller.

Right of first refusal: Contractual right granting a sponsor the right to match any offer the property receives during a specific period of time.

Signage: Banners, billboards, electronic messages, decals, etc., displayed on-site and containing Sponsor ID.

Sole sponsor: A company that has paid to be the only sponsor of a property.

Sponsor: An entity that pays a property for the right to promote itself and its products or services in association with the property.

Sponsor ID: Visual and audio recognitions of sponsor, e.g., sponsor name/logo on participant clothing, equipment, etc.; in property's publications and advertising; public-address and on-air broadcast mentions.

Sponsee: A property available for sponsorship.

Sponsorship: The relationship between a sponsor and a property, in which the sponsor pays a cash or in-kind fee in return for access to the exploitable commercial potential associated with the property.

Sponsorship agency: A firm which specializes in advising on, managing, brokering or organizing sponsored properties. The agency may be employed by either the sponsor or property

Sponsorship fee: Payment made by a sponsor to a property.

Sports marketing: Promotional strategy linking a company to sports (sponsorship of competitions, teams, leagues, etc.). *See: Sponsorship.*

Supplier: Official provider of goods or services in exchange for designated recognition. This level is below official sponsor, and the benefits provided are limited accordingly.

Title sponsor: The sponsor that has its name incorporated into the name of the sponsored property, e.g., the Mobil Cotton Bowl Classic.

Venue marketing: Promotional strategy linking a sponsor to a physical site (sponsorship of stadiums, arenas, auditoriums, amphitheaters, racetracks, fairgrounds, etc.).

The sponsorship source

Whether you are a sponsor, a property seeking sponsorship or an agency providing event marketing services, IEG can improve your bottom line.

We are the only company that tracks and analyzes sponsorship of sports, arts, music, causes and events. Since 1980, we've furthered the professional practice of sponsorship by providing comprehensive, quality information to the industry.

IEG is the source for event marketing publications, sponsorship intelligence and consulting services available nowhere else. These include:

- **IEG Sponsorship Report,** the international biweekly newsletter on sponsorship.
- **IEG Sponsorship Sourcebook,** the definitive guide to who's who and who does what in sponsorship, be they sponsors, properties, agencies or suppliers.
- **IEG Legal Guide to Sponsorship,** the 500-page reference book that identifies the rights of sponsors and sponsees and how to protect them.
- **IEG Consulting,** which provides strategic planning, evaluation and research services to properties and sponsors seeking to improve their sponsorship sales or implementation efforts.
- **IEG Sponsordex,** the names, addresses, phone and fax numbers of decision-makers at the country's 1,800 most active sponsors, available on disk or rotary card file.
- **IEG Intelligence Reports,** in-depth examinations of sponsorship activity in a given sector, e.g., auto racing, golf, causes, venues, available on disk or bound report.
- **IEG Event Marketing Conference,** the annual three-day conference for 1,000-plus industry leaders.
- **IEG Event Marketing Conference Audio Cassettes,** recordings of select presentations from industry leaders – the equivalent of a university-level course on sponsorship.
- **IEG Sponsorship Workshop Series,** regional one-day seminars on the selling of sponsorship and custom presentations tailored to individual groups.
- **IEG Mailing Lists,** up-to-date, targeted lists for each major sector of the industry: sponsors, properties, agencies and suppliers and services.

IEG product order form

Product	Price	Postage Canada & Mexico/ Other countries
IEG Sponsorship Report	$390	$20/$75
Nonprofit rate	*$320**	*$20/$75*
IEG Sponsorship Sourcebook	$199	$15/$55
IEG Sponsorship Report subscriber rate	*$149*	*$15/$55*
IEG Legal Guide to Sponsorship	$89	$10/$35
IEG Sponsorship Report subscriber rate	*$79*	*$10/$35*
IEG Sponsordex	$985	$20/$80
IEG Sponsorship Report subscriber rate	*$885*	*$20/$80*

*Prices quoted payable in U.S. dollars. *A copy of your 501(C) 3 form is required for this rate*

Send me the following:

- ☐ IEG Sponsorship Report
- ☐ IEG Sponsorship Sourcebook
- ☐ IEG Legal Guide to Sponsorship
- ☐ IEG Sponsordex

Contact me with more information about the following:

- ☐ IEG Sponsorship Report
- ☐ IEG Sponsorship Sourcebook
- ☐ IEG Legal Guide to Sponsorship
- ☐ IEG Consulting
- ☐ IEG Sponsordex/IEG Sponsordisk
- ☐ IEG Intelligence Reports
- ☐ IEG Event Marketing Conference
- ☐ IEG Event Marketing Conference Audio Cassettes
- ☐ IEG Sponsorship Workshop Series
- ☐ IEG Mailing Lists
- ☐ Advertising Opportunities
- ☐ Listing in the IEG Sponsorship Sourcebook

Name, Title

Company

Address, Suite (UPS will not deliver to a P.O. Box)

City, State, Zip

Area code + Telephone number

Fax

☐ Enclosed is my check payable to IEG, Inc.

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☐ Charge the following ☐ Amex ☐ MC ☐ Visa

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Expiration date

Print name exactly as it appears on card

Signature

Date

For immediate service on credit card orders, call 312/944-1727 or fax your completed order form to 312/789-6488.

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http://www.sponsorship.com



A copy of this document, which comprises listing particulars relating to Imperial Tobacco Group PLC prepared in accordance with the listing rules made under section 142 of the Financial Services Act 1986, has been delivered to the Registrar of Companies in England and Wales for registration in accordance with section 149 of that Act.

This document has been prepared in connection with the Demerger of Imperial Tobacco Group PLC from Hanson PLC and, unless the context otherwise requires, assumes that the Demerger has become effective.

Application has been made to the London Stock Exchange for the Imperial ordinary shares to be admitted to the Official List. Subject to the passing of the relevant resolution to be proposed at the Extraordinary General Meeting of Hanson PLC on 25 September 1996, it is expected that listing will become effective and that dealings in Imperial ordinary shares will commence on 1 October 1996.

The Directors of Imperial Tobacco Group PLC, whose names appear in this document, accept responsibility for the information contained in this document. To the best of the knowledge and belief of the Directors (who have taken all reasonable care to ensure that such is the case), the information contained in this document is in accordance with the facts and does not omit anything likely to affect the import of such information.

This document does not constitute an offer or invitation for any person to subscribe for or purchase any securities in Imperial Tobacco Group PLC.

IMPERIAL TOBACCO GROUP PLC

Incorporated and registered in England and Wales under the Companies Acts 1985 and 1989
Registered No. 3236483

INTRODUCTION
TO THE
OFFICIAL LIST

SPONSORED BY SCHRODERS

Schroders is acting exclusively for Imperial Tobacco Group PLC in relation to the Demerger and the Introduction and is not advising any other person or treating any other person as its customer in relation to the Demerger or the Introduction. Schroders will not be responsible to anyone other than Imperial Tobacco Group PLC for providing protections afforded to its customers or for advice on the Demerger or the Introduction. Schroders is regulated by The Securities and Futures Authority Limited.

SHARE CAPITAL UPON ADMISSION

Authorised			Expected minimum issued and fully paid or credited as fully paid	
Number	Amount	in ordinary shares of 10p each	Number	Amount
1,000,000,000	£100,000,000		520,756,751	£52,075,675

The ordinary shares will rank in full for all dividends and other distributions declared, made or paid after the date on which the ordinary shares are admitted to the Official List. Details of the expected minimum and the expected maximum numbers of ordinary shares in issue following the Demerger are set out in paragraph 2 of Part 5 of this document.

INDEBTEDNESS

At the close of business on 26 July 1996, the Group had outstanding unsecured amounts due to the Hanson Group (excluding the Group) of £1,799 million. Save as aforesaid and apart from any intra-group indebtedness, at the close of business on 26 July 1996, the Group had no other borrowings or indebtedness in the nature of borrowing, including bank overdrafts and liabilities under acceptances (other than normal trade bills), or acceptance credits, hire purchase commitments, finance lease obligations, mortgages, charges, guarantees or other material contingent liabilities.

At the close of business on 26 July 1996, the Group had bank and cash balances of £68 million and amounts due from the Hanson Group (excluding the Group) of £2,265 million.

On the Demerger Date, it is anticipated that there will be no outstanding indebtedness (other than normal third party trading debts) between the Hanson Group (excluding the Group) and the Group, and that the Group will have drawn down approximately £1,125 million under its new principal banking facilities. Details of the Demerger arrangements are set out in Part 2 of this document.

The rationalisation of cigar manufacturing since 1990 has involved the closure of two factories and the opening of a new purpose-built facility in Bristol, employing state of the art cigar production technology, and the establishment of a raw materials processing co-operation venture in the Dominican Republic. The use of less labour intensive manufacturing processes, the application of advanced production techniques and improved productivity have allowed the number of cigar employees to be reduced from around 1,000 before the rationalisation to around 200 today.

The Group's Dublin plant, which supplies the market in the Republic of Ireland, has achieved significant productivity improvements between 1991 and 1995 as a result of restructuring and investment in upgrading its production equipment.

Distribution, sales and marketing

The Group's UK sales and distribution organisation employs around 930 people with responsibility for the warehousing, distribution and sale of cigarettes and other tobacco products once they have left the factories. It is currently organised into three geographic regions (Northern, Central and Southern), each of which is further divided into two sales areas for the sale and distribution of Imperial Tobacco's products to the wholesale, cash and carry and retail trade. In 1995, Imperial Tobacco achieved major operational benefits as a result of enhancing its computerised distribution and despatch system.

The Group places significant emphasis on the use of a direct sales force in its marketing. This is particularly important due to both the fragmented nature of tobacco retailing in the UK, comprising some 210,000 outlets, and the restrictions on the use of advertising in promoting the Group's products.

Since 1994, the use of hand-held computer terminals by the sales force has led to significant improvements in efficiency, and increased Imperial Tobacco's ability to measure market penetration. In addition, Imperial Tobacco is increasing its use of direct marketing techniques and loyalty schemes to help convert and retain existing consumers.

The Group operates vending machines in public houses, hotels and leisure outlets across the country through its subsidiary, Sinclair Collis, the UK's second largest cigarette vending company.

Internationally, the primary distribution of the Group's tobacco products is managed from Nottingham, whilst secondary distribution is handled by the Group's network of agents and distributors.

Imperial Tobacco supports its products with substantial advertising and promotional expenditure in the UK and promotes its brands as appropriate in other markets where advertising is permitted.

REGULATIONS AND RESTRICTIONS AFFECTING THE TOBACCO INDUSTRY

General

The advertising, sale and consumption of cigarettes and other tobacco products in many countries including the UK has been subject to regulatory pressure from governments, health officials and anti-smoking groups, principally due to claims that cigarette smoking and tobacco products are harmful to health.

These actions have resulted in a number of substantial restrictions on the marketing, advertising and consumption of cigarettes, which have been introduced by regulation or voluntary agreements. In addition, activities by anti-smoking groups have been designed to curtail cigarette sales and to diminish the social acceptability of smoking. Legislation imposing restrictions on smoking in public places has also been enacted in a number of countries and some employers have initiated restrictions or bans on smoking in the workplace.

The Directors believe, subject to the following matters affecting product liability insurance, that the Group has adequate insurance to cover liabilities arising in the ordinary course of its business. The Group has some product liability insurance in respect of snuff. However, the Group cannot otherwise insure itself against liabilities that could arise in respect of alleged or potential health hazards of smoking tobacco products since no such insurance is available in the market. The Directors believe that the Group's insurance coverage is in accordance with industry practice.

Restrictions on advertising, sponsorship and product design

Since 1971, the tobacco industry in the UK has negotiated voluntary agreements with HM Government covering advertising, sponsorship and product design.

The current voluntary agreement on tobacco advertising and promotion, between the Minister for Health and the manufacturers and importers of tobacco products in the UK, sets out the rules for the advertising and promotion of tobacco products and will run until at least 1 June 1999, with provision for amendment in the light of any UK legislation necessary to enact EU Directives. The agreement covers the content of cigarette advertisements, the placement of tobacco advertisements, limits on poster advertising expenditure, promotional activities, the use of health warnings on advertisements and related matters.

The voluntary agreement on the sponsorship of sport by tobacco companies in the UK also lasts until at least 1 June 1999. This limits sponsorship expenditure and the contents of supporting advertisements and requires health warnings on such advertisements. It prohibits sponsorship of sports where the majority of participants are under 18 or where the event is designed to appeal to audiences predominantly under that age. The agreement also incorporates the BBC and ITC codes of practice for television coverage. Proposed sponsorship of sports not previously supported by tobacco manufacturers must be cleared with the Minister for Sport.

Industry performance under both these voluntary agreements is monitored by the independently chaired Committee for Monitoring Agreements on Tobacco Advertising and Sponsorship.

An EU Directive on broadcasting has prohibited television advertising for all tobacco products throughout the EU since 1991.

An EU Directive on labelling requires that all tobacco products carry a health warning on their most visible surface and that a second warning label must also be included on all packs of tobacco products.

There is also an EU Directive which currently limits the tar yield of cigarettes to 15 milligrams, to be reduced to 12 milligrams as from 31 December 1997. This has superseded the UK voluntary agreement on product modification under which manufacturers had already been reducing the average tar yield of cigarettes.

In addition, there are a variety of country-specific restrictions both within the EU, including an advertising ban in France, and in certain other markets outside the EU.

Tobacco taxation

Taxes represent a significant percentage of the retail price of smoking tobacco products and have been steadily increased by governments in many of Imperial Tobacco's markets. In the UK, for example, cigarette excise duties and VAT together comprise around 78 per cent. of the recommended retail price of a premium price cigarette pack. HM Government has a stated policy of increasing tobacco duties on average by at least 3 per cent. a year in real terms.

Further, an EU Directive requires that the minimum excise tax incidence (excluding VAT) on the most popular price category of cigarettes in each EU country must represent not less than 57 per cent. of the total recommended retail price.

Effect on volumes

The Directors believe that the various restrictions and regulations, together with the substantial increases in excise taxes on smoking tobacco products, have had, and are likely to continue to have, a detrimental effect on market size. Future profitability will depend on Imperial Tobacco's continuing ability to maintain brand margins, adapt production capability, increase efficiencies, launch new products and expand internationally.

There can be no assurance that the governments in countries where Imperial Tobacco operates or plans to operate will not adopt additional or more restrictive legislation or regulations that further limit the ability of tobacco companies, including Imperial Tobacco, to develop, market or sell their products. In particular, the UK Labour Party has indicated that, if it were elected, it would intend to initiate a ban on tobacco advertising.

Due to the uncertainty about any potential measures or of any future increases in excise duties in the UK or abroad, it is not possible to predict the results or effects of them on Imperial Tobacco or the tobacco product industry generally. Imperial Tobacco complies with all regulations affecting its industry and has successfully managed its business within this regulatory climate.

LITIGATION

Imperial Tobacco is involved in eleven proceedings in the Court of Session in Scotland in which individual claimants are seeking damages for alleged smoking-related health effects. Ten of these cases were stayed pending the outcome of legal aid applications. Seven of these applications for funding have been rejected by the Legal Aid Board. Imperial Tobacco is awaiting a decision on the three other cases.

In the one remaining case, legal aid funding was applied for and refused. The plaintiff is proceeding without legal aid funding but with the support of the legal advisers who are continuing on a no win, no fee basis. The plaintiff has recently re-applied for legal aid and a decision is awaited.

In September 1992, applications for legal aid, which were filed with the Newcastle Legal Aid Board in England by approximately 200 claimants seeking to bring similar smoking-related health effect proceedings, were denied. Thereafter, the applicants petitioned for judicial review of that decision, and in June 1994, the High Court ruled that the Legal Aid Board had applied inconsistent procedural standards and ordered that the applications be remanded for reconsideration. The Legal Aid Board began reconsideration of the remanded applications in December 1994, and in January 1995 granted "limited" legal aid certificates. These certificates did not extend to the commencement of legal proceedings, but rather, were limited to what were described as preliminary investigations. The Legal Aid Board recently considered the results of these preliminary investigations and announced, on 17 July 1996, that legal

Czech Olympic Committee was inappropriately placed to ask for a reversal of the IIHF's decision and a change in the structure of the quarter-finals of the ice hockey tournament. The arbitrators noted that the Czech NOC's attitude was offensive to the Olympic ideal of fair play. The decision taken by the International Ice Hockey Federation was therefore upheld in all points by the CAS.

These two cases, which have been described briefly, illustrate the Court of Arbitration for Sport's concern to ensure that not only are the regulations are correctly applied, but that sports justice is upheld.

*Counsel to the CAS.

Health and sport

The connection between sport and health is obvious and multifaceted. All physical activities are directly dependent on a healthy way of life, and by the same token, physical activity and sport contribute to a great extent to maintaining our physical well-being. Good health is much more than an absence of illness or infirmity: it is a state of physical, mental and social wellness. It is in this framework that the International Olympic Committee has been cooperating for many years with the World Health Organization (WHO), the United Nations specialized agency whose 191 member states share the mission of promoting cooperation in technical health-related areas among countries and implementing at international level programmes to improve quality of life.

Hence, among the many activities which have been developed in the field of health promotion through sport, the IOC organizes every two years a world congress on sport for all, which regularly includes a theme on health for all. WHO also takes part in a number of conferences and seminars organized by the IOC on subjects linked to sport and human development. In addition, the IOC participates in the International Working Group on active life, created by WHO in 1996, to which representatives of a number of international sport organizations and health institutes belong. This group's goal is to use sport and physical activity as a more direct way of promoting health for all and to coordinate the different activities carried out by these organizations.

Based on this fruitful cooperation, the IOC has also become associated with several projects to promote the fight against smoking. In 1996, WHO decided to dedicate its "World no tobacco Day", which is celebrated each year on 31 May, to the theme of smoke-free sport and arts, an initiative supported by the IOC. It has been broadly acknowledged that the use of tobacco is one of the most hazardous habits to an athlete's health, and consequently that it can undermine their performances. For this reason, the IOC refuses to give its patronage to any advertising activity by the tobacco or alcohol industry. Since the Olympic Winter Games in Calgary (Canada) in 1988, every edition of the Olympic Games, including the XVIII Olympic Winter Games in Nagano, have been declared "Smoke-free" in collaboration with the organizing committees.



UICC Tobacco Control Fact Sheet 1

The Case for Banning Advertising and Promotion of Tobacco

The power of advertising

- Ads and other promotional activities encourage young people to start smoking, and reinforce the habit among those who already smoke. Research suggests that even very young children are profoundly influenced by cigarette advertising.

- Children as young as 6 clearly associate the John Player Special and Marlboro brands with excitement and fast cars. These associations are triggered by simple ads which make no mention of motor racing. Many children assign particular qualities to smoking certain brands, such as toughness, glamour, or "being cool".

- When shown an advertisement for "JPS Grand Prix Holidays" which did not mention cigarettes or carry a Government Health Warning, 91% of 12-16 year-olds said it advertised cigarettes.

- Children aged 10-12 who approve of cigarette advertising are twice as likely to become smokers within a year as children who disapprove of it.

- Under-age smokers pay more attention to cigarette ads, and get more pleasure and reward from them, than non-smokers. They are also consistently better at recognizing and recalling cigarette ads, even when the ads do not show brand names. Children who smoke but who do not approve of ads are more likely to quit. An important role of advertising is recognized to be to reassure existing customers that they have made a wise choice.

Cartoon characters

The use of cartoon characters is proving a highly successful marketing stratagem.

- In the US, Camel cigarettes have been advertised using a large camel character called Joe Camel, or "Old Joe". He appears as a player in a band, always with women nearby. Tee-shirts and other merchandise feature his picture. Recognition and popularity of the camel figure peak in the adolescent age group. Before the launch of the campaign in 1988, Camel brand cigarettes were smoked by less than 1% of under-18 smokers. By 1990, that figure had risen to 33%. Nearly one-third of 3-year-olds correctly identified "Old Joe" as representing cigarettes. As many 6-year-olds recognized Old Joe as recognized Mickey Mouse. 94% of all secondary school pupils recognized it, compared to only 58% adults over 21.

Expenditure

There is a close fit between promotional expenditure and under-age brand preferences. Children, not adults, consistently buy the most heavily advertised brands.

Avoiding ad bans

Cigarette companies have known for years that advertising their brands would become increasingly difficult. Many have suspected that a total ban was "only a matter of time".

In 1979, British American Tobacco circulated a memo stating:

"Opportunities should be explored ... so as to find non-tobacco products and other services which can be used to communicate the brand or house name, together with their essential visual identifiers ... The principle is to ensure that tobacco lines can be effectively publicized when all direct forms of communication are denied."

The loss of TV advertising in a number of countries was a particular blow, since TV reaches millions of viewers - far more than all the other mass media put together (e.g. billboards, cinema, radio, newspapers and magazines).

Sports sponsorship

Sponsorship of sports and other events with guaranteed TV coverage is especially important. Costs are high, yet compared to costs of advertising products in the normal way, sponsorship is in fact quite "cheap".

- Sponsors of the entire event ("billing"). Hence Marlboro Rally, Embassy World Professional Snooker, etc. ➡

Tobacco and Cancer Programme
International Union Against Cancer
3, Rue du Conseil-Général, 1205 Geneva • Switzerland • Tel: (41-22) 320 1811 Fax: (41-22) 320 1810

- Seen at the event. Billboards are placed at key playing positions where the camera will linger ("camera sightlines"), such as behind corner flags, playing pitches, etc.

- Heard at the event. The companies receive regular mentions or "plugs" in the commentary.

- Competing in the event. Competitors, equipment, racing cars, team vehicles, mechanics and other assistants etc. in brand colours, with logos and other "visual identifiers" clearly evident.

- Gitanes, Camel, and Marlboro all sponsor Formula One motor racing teams. Marlboro spends at least £30 million a year on backing the McLaren team, and a further £12 million paying Ferrari drivers' salaries. Its reward is that the majority of teenagers associate its name with motor sport.

Sponsoring music events
Music and dance sponsorship is used extensively in some parts of the world. In the UK, both Marlboro and Silk Cut have travelling disco roadshows. A common promotional strategy at sponsored discos is for young women dressed in brand colours to distribute free cigarettes, and to offer full packs in exchange for half-empty ones of another brand.

In the UK for example, Marlboro promotes a Midnite Lights Disco Tour, which includes a tour bus, DJ and dance team. It also sponsors the Marlboro Lights Disc Jockey of the Year.

New Markets
Cigarette companies are particularly attentive to the use of music in the huge markets now opening up in Eastern Europe and Asia.

- Philip Morris, makers of the US top-selling brand Marlboro, has sponsored televised rock concerts in e.g. Budapest, Hungary. Young women in Marlboro suits dispensed free samples of Marlboro cigarettes, while concert-goers who agreed to smoke the cigarettes received a complimentary pair of "designer Marlboro sunglasses". In Beijing, China, they have sponsored a "Marlboro American Music Hour", which features songs by Elvis Presley and Michael Jackson.

- RJ Reynolds, makers of Camel and Salem cigarettes, sponsored pop videos twice a day on Hong Kong TV. A televised Madonna concert became the Salem Madonna Concert (the company superimposed the Salem logo over the concert introduction). In China, RJ Reynolds sponsored live concerts in a Canton disco, paying the fees of performers and handing out free cigarettes.

Product placement in films
Films - in the cinema, on video and TV - are an increasingly important channel of cigarette promotion. A favoured tactic is "product placement".

- Companies will pay simply for their brandname to be seen in focus on a billboard or passing truck. Better if there's a packshot (the actual pack is shown lying around in focus on the table, say). Better still, have a star actually light up from a clearly identifiable pack. Best of all (and hence costing the most money) is to have the star not only light up, but talk about the brand.

- Marlboro feature in "Crocodile Dundee", "Children of a Lesser God", "Tin Men", "White Knights", "Superman II", "Baby", "Crimes of the Heart", "Risky Business".

- Camel feature in "Desperately Seeking Susan", "Two of a Kind", "Who Framed Roger Rabbit".

- "Beverley Hills Cop": Eddie Murphy holds up a pack of Lucky Strike and says: "These cigarettes are very popular with the children". He goes on to say he personally prefers king-size Kents.

- "Batteries Not Included": a cute little spaceship is fitted with a built-in cigarette lighter; two cute little old folks smoke Salem cigarettes.

- "Crimes of the Heart": Jessica Lange chain-smokes Marlboro Lights.

- "Who Framed Roger Rabbit": Betty Boop offers the detective Camels. Lucky Strike ads feature prominently throughout.

- "Superman II": Philip Morris paid £25,000 to have Marlboro featured. In the film - but not in the comic book, where strict controls have operated for many years - Lois Lane is depicted as a smoker.

- "Supergirl": £18,000 paid to show Eve cigarettes.

- In the James Bond movie "Licence to Kill": £200,000 paid for featuring Lark cigarettes.

- "Big": the heroine smokes long slim cigarettes. A bus passes by with an ad for Virginia Slims.

➡

UICC Tobacco Control Fact Sheet 1

Country	Date of advertising ban	Drop in consumption
Norway	1975	9%
Finland	1977	6.7%
Canada	1989	4%
New Zealand	1990	5.5%

As the chart above shows, countries which have banned tobacco advertising have experienced a significant fall in tobacco consumption.

UICC Recommendation

The International Union Against Cancer in common with the World Health Organization and leading health authorities throughout the world urge all countries to ban all forms of advertising and promotion including sponsorship and other forms of indirect advertising.

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This Tobacco Control Fact Sheet is based on Fact Sheets produced by ACTION ON SMOKING AND HEALTH (ASH), United Kingdom

STRATEGY OF THE TOBACCO INDUSTRY CONCERNING LEGISLATION ON TOBACCO ADVERTISING IN SOME WESTERN EUROPEAN COUNTRIES

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One part of an efficient anti-tobacco campaign is a total ban on tobacco advertising. During the last ten years, a set of regulations has been achieved in different countries. A survey of the existing legislation can be found in the publication of the World Health Organization (1).

In Western Europe, four countries (Italy, Iceland, Norway, Finland) have a total ban on tobacco advertising. In other countries, like France, Belgium and Sweden, the law allows only functional information.

The strategy of the tobacco industry will be, in the first place, to try to prevent any total ban on tobacco advertising using political pressures, financial efforts, misleading information or the drawing-up of codes. If a law or a code exists, the tobacco industry will try to get round it.

POLITICAL PRESSURE

One of the speakers at the Fourth World Conference on Smoking and Health in 1979 was Sir George Young, Parliamentary Undersecretary of State for Health, Department of Health and Social Security (UK). He made the following statement:
"I totally reject the argument that advertising has no effect on total consumption, but simply redistributes consumption between competing brands. I admire the pioneering courage of Norway and Finland which have banned advertising altogether." (2)

In 1981, Patrick Jenkin and Sir George Young were replaced in the Department of Health and Social Security (D.H.S.S.). Two press commentaries from the British press are obvious enough:

> "A front page story by the Observer's Political Editor, Adam Raphael, said that representations from the tobacco industry were believed in Westminster to have played a part in persuading the Prime Minister to shift Mr Patrick Jenkin and Sir George Young (Secretary and Parliamentary Undersecretary of State respectively) from the DHSS and dismiss the Scottish Health Minister, Mr Russel Fairgrieve, in her recent reshuffle. The tobacco industry found the former ministerial team difficult to

deal with. Last year during the negotiations on the voluntary agreement on advertising, "Sir George Young...was approached by Conservative whips and warned that if the companies were driven too far against the wall, the industry's support for the party would be in jeopardy"." (3)

"Moreover, now that the recent ministerial changes at the Department of Health have replaced the two anti-smoking "hardliners" (Patrick Jenkin and Sir George Young), the industry does not expect the present Government to take a tough line on cigarette advertising before the next election." (4)

FINANCIAL EFFORTS

On 18th February 1979, a referendum on the ban on tobacco advertising was held in Switzerland. The proposal to ban tobacco advertising was rejected by 59% against 41%. The financial means of those opposing the ban were much more powerful than those of the advocates of the ban.

We have verified that the advertising space in favour of negative voting in the Swiss newspaper "Tribune e Geneve" (12th February - 17th February 1979) was 18 times larger than the space occupied by those in favour of the ban.

MISLEADING INFORMATION

The tobacco industry, as well as advertising circles, does not hesitate to give misleading information about the effects of a ban on tobacco advertising. This is especially the case in Norway where new misleading conclusions are always published.

We quote, for example, the following from a brochure "Advertising and Cigarette Consumption" published in 1982 by the Advertising Association in the U.K.

"Further evidence comes from Norway where a law, brought into effect from 1st July 1975, prohibits all forms of tobacco advertising in promotion. In addition an anti-smoking campaign was launched.

Trends in this market are complicated by the prevalence of handrolling tobacco which accounts for some two-thirds of total units smoked and which is an element made volatile by tax increases. However, it can be seen that fluctuations in consumption over the past ten years have been very small.

In other words, the market in Norway, having reached maturity by 1970, five years before the Tobacco Act, has, like many other fully developed markets, largely flattened out. The constant factor of the advertising ban since 1975 has had no discernible effect on consumption." (5)

Global sales figures are not very accurate indicators of a country's smoking habits. Public polls held by the Central Bureau of Statistics in Oslo give the following results.

From June 1975 till December 1982 the percentage of male daily smokers fell by 12%! During the same period, percentages of female smokers stabilized and no statistically significant differences have been verified. These figures belie the statements of the advertising association.

DRAWING-UP OF CODES

The industry prefers codes because they are generally less binding than legislation and because they cannot be made compulsory through the courts, which is the case for legislation. Results can be astonishing.

a. Netherlands

In 1979 the College of Appeal of the Dutch Advertising Code Commission accepted advertising showing the top football player Johan Cruyff advocating low tar and nicotine cigarettes. The judges stated that he had appealed to the public not as a top sportsman, but as a smoker. The same College also considered that urging people to smoke low tar and nicotine cigarettes was wise.

According to the Stichting Volksgezondheid en Roken, this decision was hypocritical because the image of Cruyff cannot be separated from his sports image.

An advertisement against smoking issued by the Stichting Volksgezondheid en Roken "No consideration for smokers" was condemned by the same College of Appeal. The College stated that many millions of Dutch smokers could not simply be seen as "not being considered".

b. Belgium

The first Belgian legislation on tobacco advertising goes back to 1980. Previously, in 1971, Fedetab, the federation for the tobacco manufacturing industry, had drawn up a code to regulate advertising and decided,amongst other things, that tobacco advertising should not be aimed directly at young people. Nevertheless, the themes adopted by the advertisements (sociability, love, cowboys, popular sport, strip heroes and motorcycles) were aimed first of all at young people, so that the code did not have any meaning and legislation became necessary.

c. Great Britain

Great Britain already has a long tradition of codes for regulation of advertising in general and of tobacco advertising in particular. Nevertheless, the public is not impressed by the efficiency of this code. In November 1980, a Gallup poll showed that 63% of the population was in favour of a ban on cigarette advertising (6).

GETTING ROUND LEGISLATION AND CODES

When legislation exists, the tobacco industry will do all it can to get round it. Professional literature by the tobacco industry such as World Tobacco even gives tips for this purpose (7).

We found a series of striking examples in the following countries.

a. France

The French law of 9th July 1976 only allows tobacco advertising through graphical or photographical display of the product, its packaging or trade symbol, i.e. only product advertising is allowed. Smoking cannot be associated with stout cowboys, attractive ladies and adventurous travel. Nevertheless;

i. Marlboro displayed its mystical cowboy on the packet and thus can go on advertising using the cowboy-theme.

ii. Camel, Marlboro, Seitanes and Royale use psychological advertising with the classical themes: they do not do it for cigarettes but for lighters of the same trade mark.

A judgement of the Paris Court of Appeal (20.01.1981) stipulated that this kind of advertising was not contrary to the law of 9th July 1976 on tobacco advertising. However, in a recent civil court judgement (Tribunal de Grande Instance de Paris, 10.06.1983) it was held that Camel has to stop the advertising of Camel lighters on billboards. This is because the Camel lighters carry the same visual image as the cigarettes. The court said there was a definitive association between the lighter advertising and the cigarette.

iii. When launching new trade marks, the name, trade symbol and packaging are of crucial importance. In an interview with Le Monde (20.09. 1978) Mr. Ph. Croissant, Manager of the French state-managed Seita made the following point:

"The packet has become the most important element of communication. The "sand coloured" packet we chose for "Rich and Light" suits its character well. Even if there is no question of changing anything in the existing cigarettes, future packaging will have to be more and more meaningful. The mere presence of the packet should make it possible to identify the major characteristics of the product." (8)

Since 1976, Seita has launched several new trade marks, among others "Rich and Light", "Seitanes", "Blue Way", and "News". The "News" trade mark deserves special mention as the packet shows four microfilmed pictures allowing the advertisement to display a different blow-up each time.

iv. "Rich and Light" takes out a full page advertisement in a magazine and puts three quarters of the page at the disposal of the travel agency "Club Mediterranée". By allowing Club Mediterranée to share a page, "Rich and Light" benefits from the holiday club atmosphere for its cigarette advertising.

b. Belgium

Although Belgian legislation does not allow free distribution of cigarettes, Camel offers free cigarettes for "testing".

c. Italy

Tobacco advertising is not allowed in Italy. Nevertheless, all the Formula One car races are broadcast on television and are very popular. Marlboro is one of the most important sponsors of these races and Marlboro is also number two in the list of the most widely-sold cigarettes in Italy. Besides, according to a Marlboro spokesman, this trade mark is interested in car races for another reason:

> "The car racer can be considered as the cowboy of the modern times; he carries the same image: adventure, virility, a thirst for danger, freedom,... With a cowboy on one side and a car on the other, Marlboro shows itself as "authentically and ancestrally modern"." (9)

d. Other countries

Even when tobacco advertising is not allowed, cigarette manufacturers will go on spreading the name of their trade mark, not by advertising for Camel cigarettes but for Camel boots or Camel Expeditions. The characters are the same, the lay-out is the same and even the surrounding jungle is the same as the one used for cigarette advertising. The only difference: it is advertising for shoes and travel agencies and not for cigarettes. We also find Marlboro Leisure Wears, Marlboro Adventure Holidays and Marlboro-Western Cooking. Camel does not want to give up adventure and the jungle, the same goes for Marlboro and its western myth.

We can thus conclude that it is not enough any more to ban tobacco advertising totally; an answer has also to be found to the subtleties employed by the tobacco industry in getting round legislation.

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SUCCESS AND FAILURE OF THE LEGISLATIVE ACTION AGAINST SMOKING IN BELGIUM

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The smoking prevalence in Belgium in 1987 (both sexes combined) is the lowest of the twelve Member States of the European Economic Community : 37 % in the whole community, but only 32 % in Belgium. (1)

The legislative action in Belgium has been characterised by two events : success of the smoking ban in public places and failure to restrict tobacco advertisments.

THE SMOKING BAN

An act of Parliament of January 24 th 1977 made it possible to restrict smoking in public places by Royal Decree. Since the government didn't formulate any concrete proposals to promulgate the smoking ban, the Flemish Tobacco Prevention Coordinating Comitee decided in 1985 to launch a large campaign with the slogan "two out of three" : two persons out of three want a smoking ban in public places. In this campaign we used posters, spots on local radio stations, a specially designed "smoking ban" game and a booklet on passive smoking.

Our main arguments during the campaign were :

1. There is a non-smoking majority in Belgium. (2)
2. Three out of four non-smokers and even one out of two smokers want a smoking ban in public places.
3. Most political parties agreed with the smoking ban.
4. According to the World Health Organisation, passive smoking is an undeniable health risk.

In 1987 we reached our goal : the Royal Decree of March 31 restricted smoking in all indoor areas to which the public is admitted, as in postoffices, hospitals, schools, universities, old people's homes, musical and sport halls, theatres, railway-stations, municipal, federal and national government buildings, courthouses and parastatal banks. Smokers faces fines of between 40 and 500 U.S. dollar. The smoking ban came into effect the first of September 1987. The response of the public and the media was considerable : during almost four days the smoking ban was the major topic in the media. The fact that there was a clear date for the enforcement of the smoking ban gave journalists a good reference point for their editorials. Stories also appeared in many foreign newspapers, such as Le Monde, El Pais, The Times, Der Spiegel, etc.

Figure 1 : Advertisement for cigarettes (left) and for matches (right) *

Do you remark the difference ?

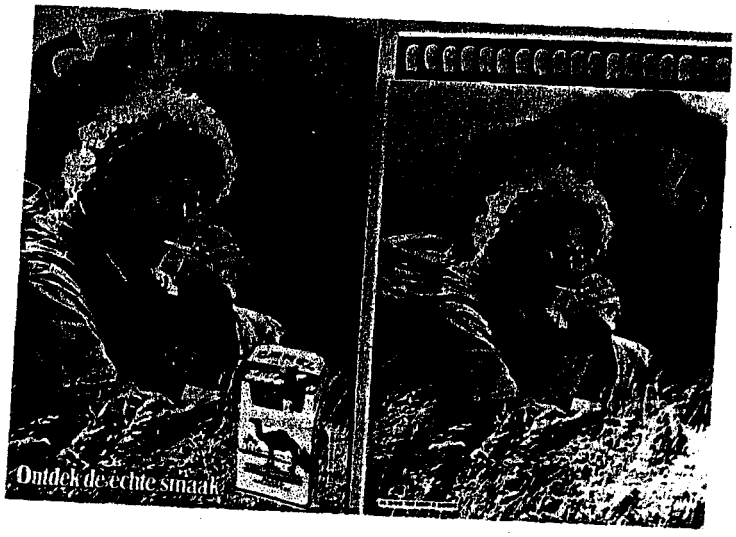
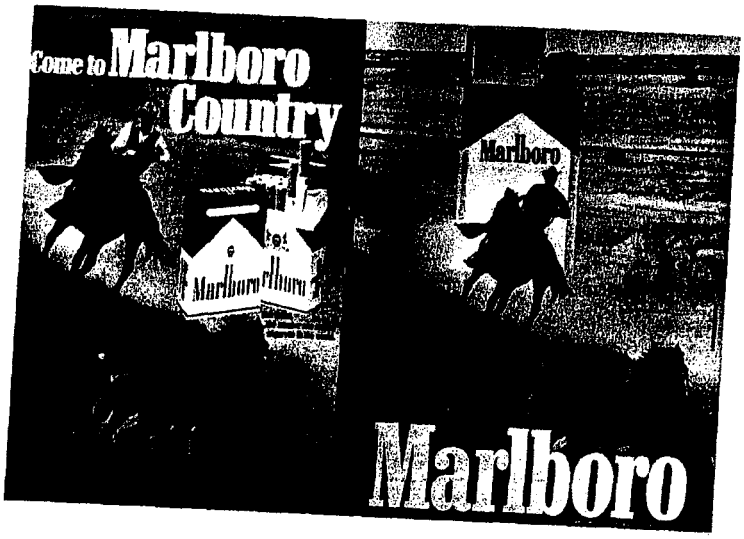


Figure 2 : Advertisement for cigarettes (left) and for lighters (right)*



* Our centre (O.I.V.O.) disposes of a serie of slides containing other examples of advertisements for matches and lighters.

OUR CONCLUSIONS :

1. The support for the smoking ban by the public was very high and this support is perhaps the most important incitement to convince political leaders to promulgate a smoking ban. E.E.C. countries can refer to the survey which indicated in 1987 that 77 % of the 11.651 interviewed persons were in favour of restricting smoking in public places. (1)

2. To be credible a smoking ban requires fines which are essential for convincing smokers to respect the Decree.

3. The public has to be well informed about the law. Besides the considerable attention on the media, the smoking restrictions were also announced on the day itself via the internal broadcasting system of the major railway-stations. The high level of awareness by the public resulted in an easier enforcement of the law.

THE RESTRICTION OF TOBACCO ADVERTISEMENTS

In Belgium the law allows functional information and a tobacco advertisement may contain only :

1. the name and address of the producer or importer ;
2. the name and kind of the product ;
3. the brand and brand symbol, the (pictorial) representation of the product and of goods which are normally linked to the use of tobacco ;
4. the tar and nicotine contents ;
5. information on price and quantity ;
6. the (mandatory) warning on the health danger of smoking.

(Royal Decree 20.12.1982).

The purpose of this legislation was to avoid the Marlboro cowboy or the Camel traveller images and to break the link tobacco products have acquired with attractive values such as friendship, love, adventure, success, etc. However, the cowboy and the traveller reappeared in advertisements for matches, lighters, etc. In some cases the tobacco industry used the same picture before and after the legislation : what has been an advertisement for cigarettes, became an advertisement for lighters (figures 1 and 2).

Nearly all Belgians (95 %) are considering the advertisement for Marlboro lighters as advertisement for Marlboro cigarettes, according to industry surveys.

Those advertisements are not infringing the law, because the Royal Decree was based on a law which regulated only tobacco products and not lighters or matches.

OUR CONCLUSIONS

1. A law which regulates only direct tobacco advertisement is useless.
   A provision which regulates also indirect advertisement is necessary.
2. The experience in several countries (Sweden, Belgium and France) has proven the tobacco industry will employ many subtleties in getting around legislation and the industry dispose of great financial means to set up different kind of advertisement campaigns. A law which restricts advertisement of tobacco-products has to provide an easy enforcement and high fines to discourage the many attempts of the industry to get around or breach the law.

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Adolescent Exposure to Cigarette Advertising in Magazines

An Evaluation of Brand-Specific Advertising in Relation to Youth Readership

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Context.—Understanding the relationship between cigarette advertising and youth smoking is essential to develop effective interventions. Magazine advertising accounts for nearly half of all cigarette advertising expenditures.

Objective.—To investigate whether cigarette brands popular among adolescent smokers are more likely than adult brands to advertise in magazines with high adolescent readerships.

Design.—Cross-sectional analysis of 1994 data on (1) the presence of advertising by 12 cigarette brands in a sample of 39 popular US magazines; and (2) the youth (ages 12-17 years), young adult (ages 18-24 years), and total readership for each magazine.

Main Outcome Measures.—The presence or absence of advertising in each of the 39 magazines in 1994 for each of the 12 cigarette brands.

Results.—After controlling for total magazine readership, the percentage of young adult readers, advertising costs and expenditures, and magazine demographics, youth cigarette brands (those smoked by more than 2.5% of 10- to 15-year-old smokers in 1993) were more likely than adult brands to advertise in magazines with a higher percentage of youth readers. Holding all other variables constant at their sample means, the estimated probability of an adult brand advertising in a magazine decreased over the observed range of youth readership from 0.73 (95% confidence interval [CI], 0.50-0.96) for magazines with 4% youth readers to 0.18 (95% CI, 0.00-0.47) for magazines with 34% youth readers. In contrast, the estimated probability of a youth brand advertising in a magazine increased from 0.32 (95% CI, 0.00-0.65) at 4% youth readership to 0.92 (95% CI, 0.67-1.00) at 34% youth readership.

Conclusion.—Cigarette brands popular among young adolescents are more likely than adult brands to advertise in magazines with high youth readerships.

JAMA. 1998;279:516-520

AT THE HEART of the public health debate about interventions to reduce teenage smoking lies the question of whether cigarette advertising influences youth.[1] Of all the media by which cigarettes are advertised—newspapers, magazines, billboards, and mass transit—magazines receive the largest share of tobacco company expenditures.[2] In 1994, the tobacco industry spent $252 million, or 46% of its total cigarette advertising expenditures, on magazine advertising.[2]

Although the Food and Drug Administration's tobacco regulations[3] and the proposed global tobacco settlement[4] address magazine advertising, the specific impact of cigarette advertising in magazines on youth smoking behavior has not been well studied. Previous studies have provided indirect evidence that cigarette advertising in magazines targets youth readers. This evidence derives primarily from studies of differences in the number or proportion of cigarette advertisements in youth-oriented compared with adult-oriented magazines,[5-12] changes in the number of advertisements in youth-oriented magazines over time,[5,7-9,13] demonstrations of the appeal of magazines' cigarette advertisement themes and images to youth,[14-16] and differences in the themes and images used in cigarette advertisements in youth-oriented and adult-oriented magazines.[7,8,12,17]

See also pp 511 and 550.

Two methodological problems limit the ability of the existing studies to draw definitive conclusions. First, since most youth-oriented magazines have many more adult than youth readers, these studies cannot exclude the possibility that cigarette advertisements in these magazines target adult, rather than youth, readers. Cigarette advertisements in these magazines may be targeting young adult readers (18- to 24-year-olds), rather than those younger than 18 years. The tobacco industry itself has defended its advertising practices on the grounds that its advertising is reaching young adults, rather than youths.[18]

Second, these studies only examined aggregate cigarette advertising. Youth tend to smoke only a few cigarette brands.[3] By aggregating all brands, even those smoked almost exclusively by adults, previous analyses may have reduced their power to detect a significant association between cigarette advertising and youth readership.

In this study, we examine whether brands smoked by a significant number of adolescents are more likely to advertise in magazines with higher youth readerships than cigarette brands smoked almost exclusively by adults. The analysis addresses the major limitations of previous research by (1) using data on adult and youth magazine readership as con-

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tinuous variables instead of classifying magazines as either adult or youth; (2) controlling for adult readership and young adult (ages 18-24 years) readership in the analysis; (3) using brand-specific, rather than aggregate, cigarette advertising data; and (4) comparing brands smoked by a substantial proportion of youths with those smoked almost exclusively by adults.

Although a finding that youth cigarette brands are more likely to advertise in magazines with more youth readers does not demonstrate an intent on the part of cigarette advertisers to expose adolescents to their advertising messages, such a finding would demonstrate that adolescents are more likely to be exposed to advertising by cigarette brands that are popular among youth smokers.

METHODS

Model of Advertising Behavior

Using a probit model, we analyze whether—controlling for the other factors that might affect a cigarette brand's magazine advertising—youth brands are more likely than adult brands to advertise in magazines with a high percentage of youth readers. We also compare the effect of different demographic readership characteristics on the likelihood that a cigarette brand advertises in a magazine.

Since only the outcome of the advertising decision is observed, the empirical specification uses a binary choice model of advertising behavior. The dependent variable is the presence or absence of advertising for a specific brand in a given magazine in 1994. The predictor variables in our model include the following: (1) the demographic characteristics of a magazine's readership, including the total number of readers (ages 12 years and older) and the percentage of readers in various demographic subgroups (youth [ages 12-17 years], young adults [ages 18-24 years], females, blacks, smokers, heavy smokers, and menthol smokers); (2) the cost per reader of placing an advertisement in a given magazine (the cost of a full-page, 4-color advertisement divided by the total number of magazine readers); (3) the number of annual magazine issues; (4) the total magazine advertising expenditures of a cigarette brand; (5) the popularity of the magazine (the percentage of readers who consider that magazine to be their favorite); and (6) the median income of magazine readers.

Regression Specification

For each cigarette brand, we determine whether that brand advertised in each of the 39 magazines in our sample. We create a record for each of these brand-magazine pairs. Since there are 12 brands and 39 magazines, the data set comprises 468 records. For each record, the dependent variable is 1 if the cigarette brand advertised in that magazine and 0 if the brand did not advertise in that magazine.

To assess possible differences in the advertising behavior of adult and youth cigarette brands, we constructed an indicator variable, δ, that is 0 for adult brands and 1 for youth brands and created an additional series of regressors by multiplying each explanatory variable by δ. These interaction variables allowed us to estimate separate regression coefficients for youth and adult brands. For example, the interaction variable for youth readership is defined as $\delta \times$ (*% youth readers*). This interaction variable enabled us to measure differences in the advertising patterns for adult and youth brands with respect to the level of youth readership in magazines in which they advertise.

In our complete probit model, the probability, P, that a given brand advertises in a particular magazine is $P = \Phi(y^*)$, where Φ is the cumulative distribution function for the standard normal and

$$y^* = A + A_i\,\delta + (B + B_i\,\delta) \times (\%\ Youth\ Readers) + (C + C_i\,\delta) \times (Total\ Number\ of\ Readers) + (D + D_i\delta) \times (Advertising\ Cost\ per\ Reader) + (E + E_i\,\delta) \times (Total\ Advertising\ Expenditures\ for\ Brand\ Among\ All\ 39\ Magazines) + (F + F_i\,\delta) \times (Number\ of\ Annual\ Issues\ of\ Magazine) + (G + G_i\,\delta) \times (\%\ Young\ Readers) + (H + H_i\,\delta) \times (\%\ Female\ Readers) + (I + I_i\,\delta) \times (\%\ Black\ Readers) + (J + J_i\,\delta) \times (\%\ Hispanic\ Readers) + (K + K_i\,\delta) \times (\%\ Smokers) + (L + L_i\,\delta) \times (\%\ Heavy\ Smokers) + (M + M_i\,\delta) \times (\%\ Menthol\ Smokers) + (N + N_i\,\delta) \times (\%\ Favorite\ Magazine) + (O + O_i\,\delta) \times (Income) + Error.$$

Here $\delta = 1$ for youth brands and $\delta = 0$ for adult brands.

By including both a variable and its interaction term in the regression specification, we can determine whether differences in the probability that adult and youth brands advertise in a magazine are statistically significant for each independent variable in the model. For example, the coefficient B reflects the change in likelihood of advertising as youth readership increases for adult cigarette brands, and the coefficient $(B + B_i)$ reflects the change in likelihood of advertising as youth readership increases for youth brands. Under the null hypothesis—that the probability of a cigarette brand advertising in a magazine is unrelated to the magazine's youth readership—both the coefficients B and B_i would be 0. If adult brands, but not youth brands, were more likely to advertise in magazines with higher youth readership, then the coefficient B would be positive and the coefficient $(B + B_i)$ would be 0 (B_i would be negative and equal in magnitude to B). If youth brands, but not adult brands, were more likely to advertise in magazines with higher youth readership, then the coefficient B would be 0, but the coefficient $(B + B_i)$ would be positive (B_i would be positive).

The statistical significance of the coefficient B_i allows us to assess the significance of any difference between adult and youth brands in the likelihood of advertising in magazines at varying levels of youth readership.

Magazine Sample Selection

To select a sample of magazines, we identified the 60 national magazines with the highest overall readership for 1994 using data from Simmons Market Research Bureau, Inc.[19] Of these 60 magazines, we included in the sample only those for which 1994 information on adult and youth readership and brand-specific cigarette advertising was available. Ten magazines were excluded because these data were unavailable. An additional 10 magazines were excluded because, as a policy, they did not accept tobacco advertising in 1994. One magazine was excluded because it contained cigarette advertisements for only 1 brand in 1994, and the other magazines in which that brand advertised were not among the 60 in our study. The final sample consisted of 39 magazines (Table 1).

Data Sources

Magazine Advertising Expenditures.—From the *Leading National Advertisers Brand Detail Report* for 1994, we determined whether each cigarette brand advertised in each of the 39 magazines in 1994 and estimated each brand's total expenditures for advertising in the 39 magazines in 1994.[20] These estimates of advertising expenditures are based on the number of pages of advertising and the price per advertising page for the magazine, not on actual dollars negotiated with a publisher.

Cost of Advertising.—We used the *SRDS Consumer Magazine Advertising Source* to obtain the cost for a single, full-page, 4-color advertisement in each magazine in 1994 and the annual number of issues for each magazine.[21]

Adult Magazine Readership.—Data on the adult (ages 18 years and older) readership for each magazine were obtained from the 1994 *Study of Media and Markets*,[19,22,23] produced by the Simmons Market Research Bureau, Inc. From the Simmons data, we also collected the following demographic information about

Table 1.—Readership Characteristics and Tobacco Advertising Expenditures in 39 Magazines*

Magazine	Youth Readers, Millions	Young Adult and Adult Readers, Millions	Percentage of Youth Readers	Percentage of Young Adult Readers	Tobacco Advertising, $ in Millions	Percentage Ratio of Tobacco Advertising Pages to Total Advertising Pages
Better Homes and Gardens	2.0	35.1	5.5	6.2	7.0	2.4
Car and Driver	1.5	6.5	18.3	25.1	18.3	5.1
Cosmopolitan	2.3	15.5	12.8	25.2	9.4	5.5
Ebony	2.1	11.3	15.8	17.7	22.0	5.2
Elle	0.8	3.8	17.8	33.8	1.8	2.3
Entertainment Weekly	0.7	3.7	15.4	24.9	8.8	10.7
Essence	1.3	6.2	16.9	20.2	1.8	4.7
Family Circle	1.2	27.6	4.2	5.8	6.2	1.9
Field and Stream	1.8	14.1	11.1	15.0	6.3	11.2
Glamour	2.2	10.7	17.1	33.0	6.0	4.8
GQ	1.0	5.8	15.1	30.6	2.0	3.3
Harper's Bazaar	0.7	3.2	18.2	16.4	1.0	1.9
Hot Rod	2.3	5.8	28.2	32.1	2.5	11.2
Jet	1.7	8.6	16.7	20.4	1.3	6.4
Ladies Home Journal	0.8	18.2	4.4	4.9	5.1	2.4
Life	2.7	18.0	12.9	14.1	4.7	13.8
Mademoiselle	1.4	5.6	19.7	35.6	3.1	5.8
McCall's	1.3	17.7	6.7	8.2	5.0	3.7
Motor Trend	1.4	4.9	22.1	28.8	2.5	6.1
New Woman	0.7	4.2	14.0	12.2	3.3	9.6
Newsweek	1.9	22.0	8.0	11.0	7.3	2.1
Outdoor Life	1.6	7.2	18.0	18.4	3.9	9.8
People	3.0	35.7	7.8	13.8	29.6	6.2
Popular Mechanics	1.6	9.5	14.5	15.1	4.5	8.8
Popular Science	1.9	7.3	20.8	12.6	1.2	1.7
Redbook	1.2	13.6	7.8	11.2	5.2	4.6
Road and Track	1.2	4.8	20.6	28.8	3.2	4.9
Rolling Stone	1.9	8.2	18.5	38.0	5.9	6.4
Self	0.8	4.1	16.2	18.2	1.1	1.9
Soap Opera Digest	1.3	7.8	14.3	21.0	3.2	14.6
Sport	2.3	4.5	33.8	23.3	2.4	15.2
Sporting News	1.4	3.6	27.8	24.7	1.0	6.4
Sports Illustrated	5.2	23.7	18.0	21.4	30.2	7.7
Time	2.0	23.6	7.7	12.6	12.2	3.0
True Story	0.7	4.3	14.8	10.8	1.5	13.5
TV Guide	6.7	44.3	13.2	15.7	19.7	4.3
Us	0.8	5.1	13.8	21.9	3.6	13.6
Vogue	2.2	10.2	18.0	30.8	3.0	2.3
Woman's Day	1.2	23.8	4.8	5.9	9.0	4.2
Total	68.8	489.8	...	...	232.0	...
Average per magazine	1.8	12.6	12.3	16.1	5.9	5.3

*Data are from Simmons Market Research Bureau, Inc,[19,22-24] Mediamark Research Inc,[25] and Leading National Advertisers.[20] Readers are defined as youth, ages 12 through 17 years; adult, ages 18 years and older; and young adult, ages 18 through 24 years. Ellipses indicate data not applicable.

adult readers for each magazine: median individual income; percentage of female, black, Hispanic, and young adult (ages 18-24 years) readers; percentage of readers who are smokers, heavy smokers (≥30 cigarettes per day), and smokers of menthol brands; and percentage of readers who reported a magazine to be their favorite.

Youth Magazine Readership.—Data on the number of youth (ages 12-17 years) readers for each magazine were obtained from the 1994 *Simmons Teen Age Research Study (STARS)*,[24] produced by the Simmons Market Research Bureau, Inc, and the *Mediamark Research Inc (MRI) Twelve Plus* report,[25] produced by MRI.

Data Collection

The data were extracted from the above publications and entered into an Excel spreadsheet. Data entry was 100% verified by comparing printouts of the spreadsheet with the data in each publication. After verification, a SAS data set was created by converting the Excel spreadsheet using DBMS/COPY.[26] We used SAS[27] and Stata[28] to conduct all analyses.

Classification of Youth and Adult Brands

In classifying adult and youth cigarette brands, we used data from the national Teenage Attitudes and Practices Survey-II (TAPS-II).[29,30] Using data obtained from 70 smokers in a cross-sectional, probability sample of 4992 youths between the ages of 10 and 15 years, we divided cigarette brands into 2 groups: those smoked almost exclusively by adults ("adult" brands) and those smoked by a substantial proportion of adolescent smokers ("youth" brands). Although there were only 70 smokers in our sample, the classification of adult and youth cigarette brands was identical to that obtained using the full sample of 438 smokers aged 12 through 17 years.

Because the TAPS-II survey did not record the name of every cigarette brand, the usual brand smoked for 2.5% of 10- to 15-year-old smokers was reported as "other." We therefore defined youth brands as those smoked by at least 2.5% of smokers aged 10 to 15 years in TAPS-II and adult brands as the usual brand smoked by less than 2.5% of 10- to 15-year-old smokers in TAPS-II. Based on these criteria, we classified 7 brands as adult brands (Salem [smoked by 0.6% of youth smokers], Virginia Slims [<2.5%], Benson & Hedges [<2.5%], Parliament [<2.5%], Merit [<2.5%], Capri [<2.5%], and Kent [<2.5%]) and 5 brands as youth brands (Marlboro [42.9%], Newport [24.6%], Camel [13.2%], Kool [4.1%], and Winston [2.8%]). Two generic brands (Basic and Doral) were classified as unknown and were excluded from analyses that compared adult and youth brands because we could not determine whether they were smoked by 2.5% or more of 10- to 15-year-old smokers (TAPS-II did not record the specific names of generic cigarette brands).

Since 1994 youth market share data were not available, the brand market share data were obtained from a 1993 survey. It is unlikely that changes in brand use among youth smokers from 1993 to 1994 would have been large enough to change the classification of brands as adult or youth brands in this study. Moreover, using 1993 youth market shares and then examining brand advertising behavior in 1994 alleviates the potential problem of advertising simultaneously affecting youth market share.

RESULTS

Descriptive Analysis

The 39 magazines in this study accepted $4.1 billion in total advertising in 1994, of which tobacco advertisements accounted for $232.0 million (5.7%) (Table 1) and cigarette advertisements accounted for $207.1 million (5.1%). There were 51 579 pages of total advertising in these magazines, of which 2737 (5.3%) were cigarette advertisements. These

Table 2.—Results From Probit Regression Model: The Effect of Magazine Readership Characteristics on the Probability of a Cigarette Brand Advertising in a Magazine

Independent Variable*	Coefficient (SE)
Youth readers, %	−0.051 (0.031)†
δ × (% youth readers)	0.113 (0.052)‡
Young adult readers, %	0.004 (0.022)
δ × (% young adult readers)	0.025 (0.037)
Female readers, %	0.007 (0.006)
δ × (% female readers)	−0.009 (0.013)
Black readers, %	0.002 (0.016)
δ × (% black readers)	−0.009 (0.026)
Hispanic readers, %	0.047 (0.046)
δ × (% Hispanic readers)	−0.080 (0.073)

*δ is 0 for adult cigarette brands and 1 for youth cigarette brands.
†Coefficient is significant at the 90% level ($P<.10$).
‡Coefficient is significant at the 95% level ($P<.05$).

cigarette advertisements represented 2085 separate insertions.

Youth readership ranged from 674 000 (*Entertainment Weekly*) to 6.7 million (*TV Guide*), and the proportion of total readership made up of youths ranged from 4.2% (*Family Circle*) to 33.8% (*Sport*) (Table 1).

Probit Regression Analysis

Four variables—the total advertising expenditures of a brand, the annual number of magazine issues, the percentage of readers who consider a magazine their favorite, and the percentage of youth readers—were found to affect significantly the probability that a cigarette brand would advertise in a given magazine. Of all the demographic magazine readership variables examined, only the percentage of youth readers was a significant predictor of whether or not cigarette brands were advertised in a given magazine (Table 2).

The coefficient for the youth readership interaction variable was statistically significant, indicating that the relationship between advertising and youth readership differed for youth and adult brands (Table 2). The probability of advertising in a magazine decreased with the percentage of youth readers for adult brands but increased significantly with the percentage of youth readers for youth brands. In other words, adult brands were increasingly less likely to advertise in magazines as the percentage of youth readers increased, and youth brands were increasingly more likely to advertise in magazines as the percentage of youth readers increased.

Holding all other variables constant at their sample means, the probability of an adult brand advertising in a magazine decreased from 0.73 (95% confidence interval [CI], 0.50-0.96) at a youth readership level of 4% (the lowest level in the sample magazines) to 0.58 (95% CI, 0.48-0.68) at a youth readership of 12% (the mean level for all magazines) to 0.18 (95% CI, 0.00-0.47) at a youth readership level of 34% (the highest level in the sample magazines) (Figure 1). In contrast, the probability of a youth brand advertising in a magazine increased from 0.32 (95% CI, 0.00-0.65) at a youth readership level of 4% to 0.51 (95% CI, 0.38-0.63) at a youth readership level of 12% to 0.92 (95% CI, 0.67-1.00) at a youth readership level of 34%.

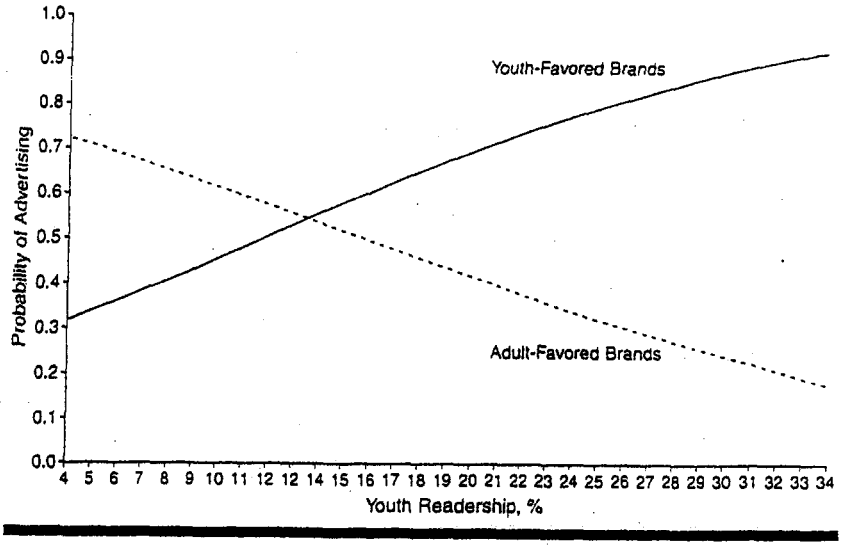


Figure 1.—Probability that a cigarette brand is advertised in a magazine as a function of the magazine's percentage of youth readers, holding all other variables fixed at their mean values in the sample: adult vs youth cigarette brands.

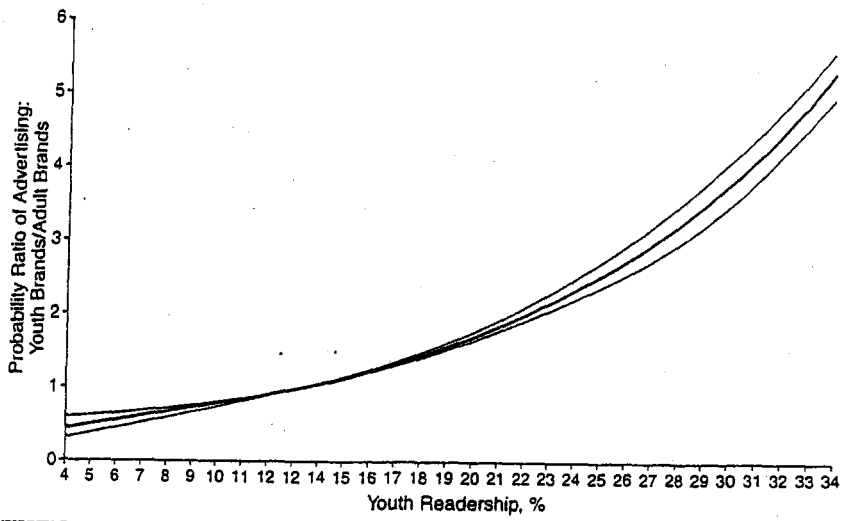


Figure 2.—Ratio of the probability that a youth cigarette brand is advertised in a magazine to the probability that an adult brand is advertised in that magazine as a function of the magazine's percentage of youth readers, holding all other variables fixed at their mean values in the sample (95% confidence intervals shown).

The ratio of the probability of advertising for a youth brand compared to an adult brand increased with increasing youth readership (Figure 2). At a youth readership level of 14% with all other variables evaluated at their mean values, the ratio of advertising probabilities was 1.04 (95% CI, 1.03-1.04), indicating that youth and adult brands were about equally likely to advertise in these magazines. At a youth readership level of 4%, the ratio of probabilities was 0.43 (95% CI, 0.29-0.58), indicating that youth brands were about half as likely to advertise in these magazines. At a youth readership level of 34%, the ratio was 5.21 (95% CI, 4.87-5.54), indicating that youth brands were about 5 times more likely to advertise in such magazines.

COMMENT

To the best of our knowledge, this article is the first to examine systematically the relationship between cigarette brand-specific advertising and youth readership among a large, nearly complete, sample of the most highly read magazines over a full year. This is also

the first study, to our knowledge, of cigarette advertising in magazines that compares advertising patterns for brands smoked by young adolescents with those smoked almost exclusively by adults. We found that youth brands were more likely than adult brands to advertise in magazines with a higher percentage of youth (ages 12-17 years) readers.

Although young adult readership is a potential confounder of the observed relationship between advertising and youth readership in previous studies, our analysis controlled for the effects of young adult readership on the likelihood of cigarette brand advertising in magazines. Both adult and youth brands were more likely (although not significantly) to advertise in magazines as young adult readership increased, but even after controlling for this effect, youth brands were still significantly more likely than adult brands to advertise in magazines with higher youth readership. The magnitude of the effect of youth readership was also greater than that observed for young adult readership. The percentage of youth magazine readers was the only demographic variable that was significantly related to cigarette advertising in magazines.

There are several important limitations to this study. First, although it is unlikely that our findings are explained entirely by the hypothesis that cigarette brand advertising is related to young adult, rather than adolescent, readership, it is probable that some of the observed effect of youth readership may arise from an overlapping effect of young adult readership. The presence of minor multicolinearity is suggested by the simple, pair-wise correlation of youth readers and young adult readers (r = + 0.68). A potential consequence of such multicolinearity would be to diminish the precision with which the coefficients are estimated.

Nevertheless, in the presence of this multicolinearity, our finding that cigarette advertising was significantly related to youth, but not young adult, readership strengthens our conclusion. If the tobacco industry, as it claims, were only attempting to reach 18- to 24-year-olds, one would expect the relationship between advertising and young adult readership to be stronger than that for advertising and youth readership.

Second, the study does not allow us to make inferences regarding the potential role of cigarette advertising in magazines on smoking behavior, including smoking initiation, among adolescents. Third, it is impossible to demonstrate an intent to target youth from an analytic study such as this one, even though the data indicate a brand-specific relationship between advertising and youth readership.

Despite these limitations, our findings provide new evidence that cigarette advertising in magazines is correlated with youth readership, and that this relationship is different for youth and adult cigarette brands. Youths are more heavily exposed to magazine cigarette advertisements for brands that are popular among youth smokers than for brands smoked almost exclusively by adults.

This finding has important public health policy implications. By adding to the evidence that cigarette advertising in magazines is related to youth readership, the results of this study strengthen the justification for regulating cigarette advertising in magazines. Based on the documentation in this and other studies[5-17] of widespread and heavy exposure of youths to cigarette advertising in magazines, public health considerations argue that cigarette advertising in all magazines should be eliminated.

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THE TOBACCO INDUSTRY AND THE BAN ON ADVERTISING

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INTRODUCTION

The Norwegian Tobacco Act was passed ten years ago and came into force two years later. It contains a ban on the advertising of tobacco products which is virtually without exemptions. The enactment of this legislation brought about the disappearance of the large amount of advertising in newspapers, periodicals and journals; it put an end to commercials; posters, signs, neon lights and other kinds of outdoor advertising were removed; window displays and advertising in shops were not allowed any more.

The purpose of the Tobacco Act is "to limit the health damage involved in the use of tobacco products". The Act gives a clear signal of the authorities' deep concern with the health damage caused by smoking.

When the Act came into force, there was a marked reduction in the consumption of tobacco products, and there is reason to believe that this, to some extent, is due to the advertising ban. This reduction must be regarded as positive, in view of the national health situation and the purpose of the Tobacco Act. For the tobacco industry, however, the development is, of course, rather worrying. This shows the heavily conflicting interests involved. Not surprisingly, the industry tries to exploit all possibilities of advertising in order to avoid a decline in sales.

Most legal provisions give rise to problems of interpretation, and this goes for the advertising ban in the Tobacco Act too. The problems have, however, not been very big. Nor has enforcement of the Act been the cause of much difficulty. Most dealers and manufacturers so far have been very loyal.

The advertising ban has on the whole been accepted. The frontline has been moved to certain special areas, first and foremost to advertising in trade journals, surreptitious advertising in the press, in commercials, and in window displays, the placing of tobacco products in shops, and the combination of tobacco advertising and advertising of other products. The attempts appear quickly, efficiently and are well organised. When other forms of advertising have been banned, it is possible to gain financially by balancing on the edge of the law or actually breaking it.

In the following I shall talk about the practising of the law in relation to the tobacco industry. As regards the background for the Act and its presumed effects, I refer to the papers by Bjartveit, Eide and Hauknes at this conference (1,2,3).

On the international level the following features have been particularly conspicuous: As the expansion potential of the tobacco industry in the industrialized world has been exhausted, there has been a heavy increase in its sales promotion in developing countries. The advertising presented extols the lifestyle of the established, prosperous, "happy" and successful people of the western world. In several industrialized countries there have been proposals to ban tobacco advertising, which have been met with considerable opposition from the tobacco industry. A survey of the limitations of tobacco advertising possibilities has been provided by Roemer (4).

During the eight years in which the Norwegian Act has been in force, Norwegian authorities have dealt with approximately one hundred cases of violation of the law, that is an average of one case a month. Most of them ended with a statement by the Ministry of Social Affairs saying that the law had been violated. So far no such case has been brought before the courts.

In this paper, I shall confine myself to mention cases which have given rise to special problems and which have roused considerable attention in Norway. First, I want to say that advertisements for Marlboro leisure wear have been stopped because they represented indirect advertising of tobacco.

THE CAMEL BOOTS ADVERTISEMENTS

The largest Norwegian newspaper issues a weekly magazine called A-Magasinet. In 1981-1982 this magazine presented three versions of advertisements for "Camel Boots".

The first shows a man in a canoe going down a river. Most prominently featured in the picture are the man, the landscape, the heading ("Camel Boots"), the trademark (picturing a camel) and a text ("For men who go their own ways"). One can see that the man in the picture is wearing boots, but they do not show very well, as they are partly hidden down in the canoe and are partly of the same colour as the canoe.

The question is whether this is in conflict with the advertising ban of the Tobacco Act. The act says that tobacco products must not appear as part of advertisements for other goods or services.

The provision must be interpreted on the basis of the pre-legislative reports. It says that "also the use of tobacco products and the featuring of smokers or smoking is banned in advertisements of other goods and services". In the Camel Boots advertisement there are no persons smoking or showing packets of cigarettes or tobacco. But the entire advertisement is apt to turn the attention to a certain brand of cigarettes, i.e. Camel. The trademark is the same for both the cigarettes and the boots. The spelling is the same, the letters are typographically similar, and they appear in the same curved shape on the packets of cigarettes and in the Camel Boots advertisements. The same symbol is used for both products, but the camel

for the boots is a little thicker than the cigarette camel. The advertisement does not say whether the boots are made of camel hide.

Also to be mentioned is the fact that the advertisement used for "Camel Boots" in this country is very similar to those used for "Camel cigarettes" in several foreign journals, (for instance Time and in Scanorama, issued by the Scandinavian airline SAS). In these publications the advertisement "Camel - None tastes better" appears. The same man, in the same clothes and boots, in the same surroundings and with an identical heading (Camel) appear in these and the "Camel Boots" advertisements.

In a statement I said that the advertisement for "Camel Boots" contained advertising of tobacco products and therefore was in confict with the advertising ban of the Tobacco Act. The National Council on Smoking and Health and the Ministry of Social Affairs accepted this statement. A-Magasinet was informed.

Two months later the second version of the "Camel Boots" advertisement appeared in A-Magasinet. This one was very like the first version. The person, the canoe, the surroundings and the heading are identical in the two versions. What is new in the second version is a boot figuring, at the front, the name, address and telephone number of the agent and the picture of the camel is a bit smaller. These differences could not, however, make the second version of the advertisement legal.

A third version of the "Camel Boots" advertisement appeared in A-Magasinet one month later. The owner of A-Magasinet stated that the following changes had been made:

1. The name "Camel" is now different from the name as it appears on the packets of cigarettes.

2. The camel has been removed.

3. The background motive is not shown in cigarette advertisements in international publications.

4. There is no doubt that the advertisement is for boots.

The character of the advertisement has now been changed. Many of the features of the first two versions, making them seem like advertisements for tobacco, have been removed. Certainly it is now possible to maintain that this is, apparently, an advertisement for boots. However, there can be no doubt that this is actually an advertisement for cigarettes. This becomes evident from the use of the name "Camel" and because it features the same man and the same surroundings ("life-style") as can be seen in foreign journals.

The fact that the intention is to advertise that particular brand of cigarettes has been openly admitted by R.J. Reynolds in connection with the introduction of the offer. In the journal, World Tobacco, it is reported; R J Reynolds says this type of marketing was adopted to expand awareness of the Camel brand and to fit in with the life-style of potential customers by

providing catalogue shipping conveniences for the man who wants to spend more leisure time at rugged outdoor "activities"."

It is obvious that the name "Camel" could not have been used if products from the same manufacturer had not been involved or the consent of the manufacturer had not been obtained. Such use of the name and the trademark might be in conflict with both the Act on Trade Marks and the Act on Marketing and is therefore not likely.

However, it is not necessary to decide whether the third version of the advertisement, viewed separately, might get around the advertising ban, because the three versions must be considered as a whole. The third version is designed to establish associations with the first two versions. The man is the same, so are the colours, the heading and the text in all three advertisements, although the heading is now written horizontally instead of as a curved line. The name of the agent and the picture of the boots are the same in the second and third versions. The changes which have been made do not make the advertisement lose its main impact. Many people will not be able to distinguish between the different versions. In this case, a chain of associations to the advertisement for tobacco products has been maintained.

If it were possible to create a chain of associations by advertisements starting with a breach of the law and ending in a product which, in itself, is innocent, it would be quite easy to circumvent the advertising ban. Care should be taken when considering separately single advertisements that are part of a series.

All considered, we have found that the advertisements appearing in A-Magasinet for "Camel Boots" constituted an infringement of the advertising ban of the Tobacco Act. A-Magasinet has been informed accordingly by the Ministry of Social Affairs and the advertising of Camel Boots has ceased.

THE USE OF THE "LAST NORWEGIAN VIKING" AS AN ADVERTISING FIGURE

"Perspektiv" is a publication issued by a national Norwegian airline. It contains a report under the following heading: "Ragnar Thorseth - Explorer of the North Pole - with new plans. He is the last Viking".

The article says that he is going to launch a viking ship in April 1983, and that shortly afterwards he is starting on a comprehensive European voyage. Next summer he is going on a round-the-world trip with the ship.

The advertisement features a picture of Ragnar Thorseth covering more than one page in the journal. He is holding a packet of tobacco - Tiedemanns Gul Mixture Nr. 2. The text in the corner of the picture reads: "A great moment for Ragnar Thorseth. The North Pole has been conquered. He has been called Norway's last adventurer - now we can safely say that he is also the last Viking."

This is not just an advertisement, but more of a feature. The basic rule must be that journalists, photographers and editors ought to have a certain amount of liberty to use pictures also showing tobacco products. But some

caution should be shown where certain brands can be identified. In this case, Tiedemanns Gul has a central place in the picture, and the possibility of this being a case of surreptitious advertising can therefore not be excluded. The picture tends to make smoking seem positive, as it is connected with a tough life and a person to be admired by young people. The picture brings to mind advertising of tobacco products which was legal in Norway ten years ago and which is still seen in many countries, but the picture is, of course, not accompanied by a text advertising tobacco. There is, however, a rather peculiar contrast between the upper part of the picture where Ragnar Thorseth has "a rimy beard and frostbite in his cheeks" and the lower part of the picture showing his bare hands holding a packet of tobacco. These factors indicate that the picture comes within the advertising ban.

I emphasized above that the decisive factor must be whether the picture with the packet of tobacco is a natural and characteristic portrayal of Ragnar Thorseth. I knew nothing about his smoking habits and could therefore not say anything about this queston. But if this was how those who have met him often had seen him, with a packet of Tiedemanns Gul in his hands, then journalists, photographers and editors must be able to present him like that. If, on the other hand, the packet of tobacco appears inappropriate to the situation, it will, in my opinion, be a case of tobacco advertising.

After this statement was made, my attention was called to an advertisement covering a whole page for Tiedemanns Gul in Scanorama, where tobacco advertising is permitted when the aircraft flies in international territory. Half of the page is taken up by the same picture of Ragnar Thorseth as appeared in Perspektiv. It says above the picture: "On May 29th 1982 Ragnar Thorseth led the first successful Norwegian expedition to the North Pole." The following text is found below the picture: "When you are on an expedition in the arctic you can't take along many friends. The few you do take are very important." Signed Ragnar Thorseth, and below the signature is a packet of Tiedemanns Gul Nr. 2. The trademark and name of the tobacco manufacturer, J.L. Tiedemanns Tobaksfabrik, appears at the bottom of the page.

The manufacturer publishes a magazine which contained an article of significance to the assessment of the advertisement in Perspektiv. The heading of the article reads: "The History of Tobacco Advertising - II: On Polar Expeditions and Tiedemanns Advertising". The article underlines that most known Norwegian polar expeditions have a central place in Tiedemanns advertising. "Virtually all large Norwegian scientific expeditions in the North and in the South have brought with them tobacco from Tiedemmans Tobaksfabrik". And the article contains quotes by Fridtjof Nansen and Roald Amundsen, and it is stressed that this "will naturally be used in Tiedemann's advertising".

The article, which is legal because it appears in a trade journal, also carries the same picture of Ragnar Thorseth that appeared in Perspektiv and Scanorama. The text next to the picture says: "Here Ragnar Thorseth is rolling a "Tiedemanns Gul" on the exact North Pole on May 2, 1982." It says in the article that the expedition was sponsored by Tiedemman who also furnished the expedition with tobacco. Ragnar Thorseth reached the North Pole on May 3, 1982 and planted the Norwegian flag on the North Pole for the first time. This event has been featured in Tiedemann's advertising too, but not

to the same degree as for previous expeditions. The natural explanation is the ban on tobacco advertising in Norway.

There is nothing illegal in Tiedemanns Tobaksfabrik's furnishing tobacco to Ragnar Thorseth or in the financial support of this expedition. But it cannot be used for advertising purposes by the manufacturer. The question is whether the ban has been violated by the article in Perspektiv.

The apparently journalistic feature in Perspektiv must be viewed in the context of the obvious cases of tobacco advertising in Scanorama and the article in the firm's own magazine. Ragnar Thorseth is an important advertising figure to Tiedemanns Tobaksfabrik, and the firm has reimbursed him in many ways for his activities designed to induce smoking. The same picture showing the packet of tobacco in a central place is used in Perspektiv as well as in Scanorama and the manufacturer's magazine. The picture tends to present smoking as positive and the brand of tobacco is easily identifiable.

Considering these circumstances, I find that the advertising ban contained in the Tobacco Act has been violated. The Ministry of Social Affairs has so far not made any decision in the matter.

ADVERTISEMENT FOR "SILK CUT MASTERCLASS HOLIDAYS" DURING THE BISLET GAMES

Several tobacco manufacturers have gone into the travel agency business. This is also the case for Silk Cut.

During the Bislet Games on June 28, 1983, the Norwegian Council on Smoking and Health received several phone calls from members of the Action on Smoking and Health in England. They had observed "Silk Cut" advertisements in a BBC broadcast from Bislet Stadion. In a subsequent Norwegian television broadcast, three advertisements were observed, all located on the finishing straight.

"Silk Cut" is a cigarette brand with several different types on the English market, but none on the Norwegian. These carry names and logos typographically identical with the advertised "Silk Cut Masterclass Holidays". On the advertising posters one can find neither the words tobacco and cigarettes nor a smoking situation.

Today, an advertisement for "Silk Cut" will carry little meaning to Norwegians. But some will surely recognise the name as a cigarette brand from travels abroad. Others will see it for the first time, but retain it consciously or subconsciously. If this brand were to be introduced in Norway later, or if they were travelling abroad they may be more inclined to try it.

It seems obvious that the advertisement for "Silk Cut" may have the effect of promoting smoking. The typography, headline and colours are those on the cigarette packets. The rest of the advertisement is in small letters. Thus, the poster is undoubtedly designed to create associations with cigarettes.

As this was a case of advertising of cigarettes, I therefore conclude that the Tobacco Act has been violated. The manager of the Bislet Games has later

made it clear through a major Norwegian newspaper that the advertisements will be removed before the next Bislet Games.

CONCLUSION

So far the Tobacco Act and those who enforce it have been victorious as regards the industry's advertising drive. There are three explanations.

First, there is a total ban on tobacco advertising in Norway, and it is therefore virtually impossible for the industry to find any loopholes in the law.

Second, most of the dubious issues have been thoroughly discussed in the pre-legislative reports. Problems arising in connection with enforcement can nearly always be solved by referring to these reports.

Third, Norwegian opinion and the National Council on Smoking and Health have been keeping a watchful eye on the marketing practices of the tobacco industry. The authorities have cracked down on illegal advertising, thus preventing slip-ups.

In my opinion, the Norwegian Tobacco Act must be considered a great success. During the preparation of the Act, the work was ridiculed by powerful opponents and it was believed that it would suffer a miserable fate. It was even maintained that the Act was in conflict with constitutional principles of freedom of expression. These voices have now died down, and in the course of the last five years I have never heard anyone in Norway say that they wanted tobacco advertising back.

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RESEARCH REPORT

Cigarette advertising and adolescent experimentation with smoking

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Abstract

The extent to which cigarette advertising contributes to increases in smoking has been debated by public health professionals and the tobacco industry. One aspect of this debate has been the degree to which advertising influences smoking among adolescents. Previous research suggests that there are significant relationships between measures of advertising and smoking. However, potential simultaneous relationships between these measures have not been addressed. Observed correlations may arise from the effects of advertising on smoking or from smokers' selective exposure to advertisements. This study examined relationships between cigarette advertising and smoking experimentation. Using environmental and psychological measures of advertising exposure, it was demonstrated that adolescents who experimented with cigarettes were better able to recognize advertised products than those who had not, a selective exposure effect. Conversely, subjects who were better at recognizing advertised brands were more likely to have experimented with cigarettes, an effect due to their exposure to cigarette advertising.

Introduction

The extent to which cigarette advertising contributes to increases in smoking behavior among youth has been debated by public health professionals and the tobacco industry for several decades. The withdrawal of cigarette advertising from radio and television on 2 January 1970 has done little to reduce the furor of this debate and literature searches conducted as part of the current research revealed over 2300 pages of congressional testimony and 90 articles on this subject published in the last 15 years.

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Several mechanisms by which cigarette advertising may contribute to increases in youth smoking have been proposed. These include the proposition that heavy reliance on cigarette advertising revenues has resulted in a total 'blackout' of newspaper and magazine accounts of the health consequences of smoking (e.g. Whelan *et al.*, 1981; Cromer, 1983; Richards, 1983), the proposition that the sheer volume of cigarette ads contributes to a fallacious belief that smoking is normative (Wong-McCarthy & Gritz, 1982; Gritz, 1984), and the proposition that cigarette advertisements attempt to downplay or counter evidence concerning the health consequences of smoking (Federal Trade Commission, 1981; Warner, 1985).

The most common proposition is that cigarette advertising is a direct causal factor in smoking

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initiation among young people. A favored spokesperson for this position, Emerson Foote, has been repeatedly quoted to the effect that cigarette advertising is designed to increase demand (e.g. Chapman, 1983; Whelan, 1984). His dismissal of claims that cigarette advertising promotes only brand switching among committed smokers as 'utter rot' (Foote, 1977) appears regularly in congressional testimony. The tobacco industry, on the other hand, generally maintains that cigarette advertising is intended to capture segments of an existing market and that ads are aimed at adult smokers, not at non-smoking youth (TJI Report, 1984).

Current data shed little light on the advertising controversy. For example, Yankelovich *et al.* (1977) suggest that young women found the models in smoking advertisements attractive, and Ross (1971) found that college students preferred brands whose advertised image was congruent with their ideal self-concepts. On the other hand, data on the direct effects of cigarette advertising on demand for cigarettes are inconclusive. Econometric studies show little or no effects of cigarette advertising on overall demand for cigarettes (Schoenberg, 1933; Basmann, 1955; Maier, 1955; Sackron, 1962; Houthakker & Taylor, 1970; Schmalensee, 1972; Parsons & Schultz, 1976; Leone & Schultz, 1980; Reuiji, 1982).

Goldstein *et al.* (1987) demonstrated a correlation between exposure to cigarette advertisements (as measured by the extent to which teenagers can recall the brand advertised in print advertisements from which brand information has been eliminated) and levels of smoking. Similar correlations between exposure and levels of use have been demonstrated in cross-sectional surveys of youth alcohol use (Strickland, 1983; Atkin & Block, 1983; Adlaf & Kohn, 1989). In general, the results of these survey studies indicate that there is a small, but significant correlation between exposure to tobacco or alcohol advertising and drinking or smoking by young people.

They do not, however, clarify the nature of the relationship between measures of exposure and measures of consumption. These studies sometimes make the attribution that advertising exposure causes changes in consumption. However, it is possible that youth who smoke or use alcohol seek out cigarette or alcohol advertisements in order to become more informed about the substance, to seek justification for negatively sanctioned behavior, or in order to model cultural images of cigarette and alcohol consumers. Thus, it is reasonable to argue that cigarette and alcohol consumption itself promotes increased exposure to cigarette or alcohol advertising. Of course, both explanations may be correct and operate simultaneously.

An additional problem with past studies of the relationship between advertising and use of cigarettes has been the divergence of definitions used to operationalize advertising exposure. These include anything from measures of advertising dollars spent on media (Houthakker & Taylor, 1970) to measures of the ability of subjects to identify (e.g. recall from long-term memory) the brand names of products (Goldstein *et al.*, 1987).

The varied definitions of exposure reflect the complexity and ambiguity of this construct. To be exposed to an advertisement could mean that one has had the opportunity to see it, that one has actually looked at the ad, that one has extracted some content from the ad, or that one recognizes or remembers the content of the ad. Previous researchers have tapped the concept at each of these different levels. Strickland (1983) restricts his analyses to estimates of potential environmental exposure. Atkin *et al.* (1984) emphasize a mixture of environmental exposure and attention. Goldstein *et al.* (1987) and Aitken *et al.* (1988) emphasize the retrieval from memory of information about the ads themselves. Thus, researchers in the field have measured advertising exposure both in terms of the physical presence of advertisements in individuals' environments and in terms of the psychological processes underlying individuals' memories for these advertisements. Operationalizations of advertising exposure have presented readers with a mix of physical and psychological measures without an integrating conceptual framework.

The current research is based upon a model of the effects of advertising exposure derived from theories of memory and attention available in the psychological literature (Craik & Lockhart, 1972; Neisser, 1976; Posner, 1978; Lachman *et al.*, 1979). The view put forward here is that the effects of exposure to advertising are mediated by attentional mechanisms which determine what the subject perceives and memorial mechanisms which determine the amount of information retained from each ad. Differing amounts and types of information will be retained from advertisements depending upon the amount and manner of attention paid by subjects to ad stimuli and their efficiency in transferring this information from short- to long-term memory stores.

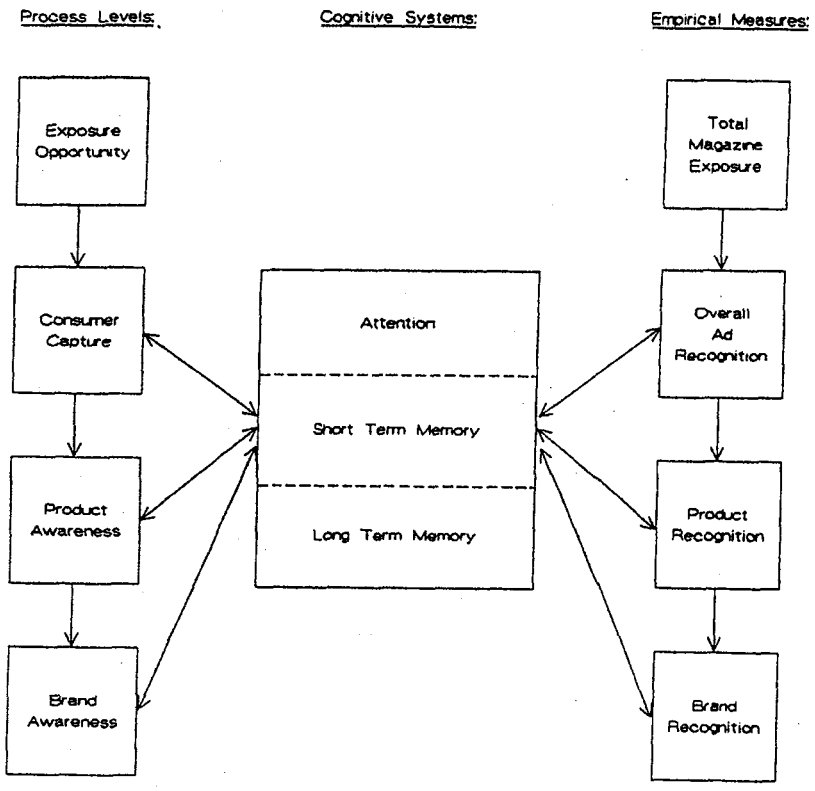


Figure 1. *An outline of the advertising exposure model.*

The effects of advertising exposure can be conceptualized as a four-level process (Fig. 1). The first level, 'Exposure Opportunity', refers to the extent to which an individual might be exposed to advertising for a given product given that other conditions are met. If the ads appear in magazines, the individual's Exposure Opportunity is a function of the number and type of magazines looked at. If the ads are on television, television watching must occur for Exposure Opportunity to be non-zero. The second level, 'Consumer Capture', refers to the penetration by an advertisement of an individual's attentional and memory system to the extent that the individual can report that he or she has seen the ad before, but not necessarily to the extent that he or she remembers any specific information it contains. The third and fourth levels ('Product Awareness' and 'Brand Awareness'), refer to further penetration of the attentional and memory system which include, respectively, recognition of the product and brand being advertised. The model assumes that the effects of advertising on consumption are mediated by the cognitive processes of attention and memory. In the absence of attention to ad stimuli, no degree of Exposure Opportunity will lead to changes in consumption. In the presence of attention to ad stimuli, and with sufficient attention to establish long-term associations between ad images, products and brands, advertising may lead to changes in consumption.

The goal of the current research was to clarify the relationships between measures of the effects of advertising exposure derived from this cognitive model and youthful experimentation with cigarettes. It was assumed that experimentation with cigarettes would prompt subjects to attend to and retain information from cigarette ads, a selective exposure effect. It was also assumed that exposure to the ads themselves, mediated by the depth to which information from the ads was processed, would prompt subjects to experiment with cigarettes, an effect of advertising exposure. Using cross-sectional data measuring subjects' exposure to and recognition and recall of advertisements and subjects' histories of

smoking experimentation, the strengths of these relationships could be examined. In order to test these hypotheses, a simultaneous equation model was developed and solved using two-stage least squares (2SLS) procedures (Judge *et al.*, 1985). With properly defined and tested models of smoking experimentation and the effects of advertising exposure, this procedure provides a mechanism by which the independent effects of the simultaneous relationship between smoking experimentation and advertising exposure can be tested.

Methods

Adolescent subjects were asked to identify magazine and newspaper ads for cigarettes, alcoholic beverages, and perfumes from which product and brand identifying information had been removed. The alcoholic beverage and perfume ads served as distractors and allowed assessments of the relative exposure to cigarette ads when compared to ads using similar life-style based appeals. Data were also collected on current and past smoking behavior as well as subject demographic characteristics.

Ads were sampled from 37 United States magazines which, according to Whelan (1984), had the highest proportion of cigarette ads, and from two major newspapers in the study area. Five additional magazines were added to the sample based upon pilot studies of youth magazine readership habits. Thus, the sample was collected from 42 magazines and 2 newspapers.

The sample was drawn from magazine and newspaper issues for the 6-month period March–August 1987. One issue per month of each magazine was included. For magazines with more than one issue per month, one issue per month was selected at random. One issue per week of both newspapers was selected at random, including one Sunday issue per month selected at random in the case of the largest local newspaper. The sampling universe consisted of 650 unduplicated, usable ads (217 cigarette, 230 alcohol and 203 perfume). Ads were considered unusable if blocking of information which identified product and brand eliminated all pictorial and all text elements.

Two hundred and ninety-five subjects from three separate school districts in an east coast urban/suburban area of the United States were randomly selected from school census lists. Subjects were selected to obtain equal numbers within three grade strata: (1) fifth and sixth, (2) seventh to ninth, and (3) tenth to twelfth. The sample was composed of equal numbers of males and females with a roughly equal representation of subjects within grade groups (35, 35 and 31%, respectively). The racial composition of the sample was 25% black, 66% white and 9% from other racial groups (largely hispanic and asian), and was drawn from highly educated families (79% of the subjects had a father and 60% had a mother with college educations).

Forty-one per cent of the sample had smoked at some point in their lives. Of these 122 subjects, 47% considered themselves smokers at the time of the study and 27% had smoked every day. Smokers typically reported having begun smoking in the seventh grade (29%). Four per cent of the non-smokers believed they would begin smoking within the next one to five years.

Data were collected in individual interviews conducted by trained field staff during the period November–December 1987. Four prompt cards were used during the presentation of ad stimuli in each interview, listing possible choices of product and brand. The first listed the three generic products for the product recognition task (cigarettes, alcoholic beverages and perfumes or colognes). The remaining three prompt cards, one for each product, listed a choice of brands. Each of the brand prompt cards listed 20 possible choices. To control for order effects, six prompt card sets were constructed for each ad stimuli set, with products and brands listed in a different random order on each.

The 60 ads comprising each of the stimulus sets were presented sequentially in a manner which counterbalanced order and stimulus set effects across subjects. Because of their considerable inattention to ads presented later in the task, the youngest subject group (fifth and sixth grades) were presented with half of the 60 stimuli. Presentations of these two stimulus sujbsets were counterbalanced across this youngest group of subjects. (Preliminary analyses of the data showed that errors of estimate for these smaller stimulus sets were similar to those derived from the total stimulus sets.)

For each ad presented, subjects were asked (1) whether they had ever seen the ad before, (2) which of the three generic products (cigarettes, alcoholic beverages, perfume or colognes) they thought the ad was for, and (3) which brand of the identified product they thought the ad was for. In order to avoid learning and feedback effects, a brand choice was requested whether or not the product choice was correct.

Data were also collected for each subject on total exposure to magazines and newspapers. This variable provided a measure of Exposure Opportunity. The measure of total magazine exposure was developed from subjects' responses to a checklist on which they were to indicate whether they had never seen, looked at occasionally or read regularly each magazine listed. The subjects were also asked how many other unlisted magazines they looked at occasionally or read regularly.

Finally, subjects were asked to complete a smoking history questionnaire which gathered data on lifetime use of cigarettes, current use, intentions to use, and exposure to tobacco education, as well as basic demographic variables.

Four dependent measures were developed from these data. Summing across all advertisements within product types (cigarettes, perfumes and alcohol), the proportion of ads identified as having been seen before was used to index overall ad recognition. Summing across ads within product types, the proportion of cigarette ads in which the product was correctly recognized was used to index product recognition. Summing across ads within product types for every correctly recognized product, the proportion of brands correctly recognized was used to index brand recognition. These measures were calculated for each product type. Logit transformations provided conditional normal distributions for each.

The fourth dependent measure, smoking status, was indexed by whether or not subjects had ever smoked cigarettes. It was assumed that mere interest in cigarette smoking (reflected in even brief occasions of cigarette use) was sufficient to indicate some influence of cigarette advertising upon smoking behavior. Given the limitations of the sample drawn for the study, other measures of smoking, such as current smoking status and frequency of consumption, did not provide sufficient data with which to examine the relationship of advertising to either the maintenance or intensity of current smoking behavior.

Six independent measures were used in the analyses. One comprised the overall measure of magazine exposure, two represented demographic effects (gender and grade groups), one was used to control for the effects of stimulus set presentations (stimulus set), one was added to statistically control for the stratification of the sample (school district), and another was added to represent the effects of socio-economic status upon magazine exposure, smoking status and ad recognition (occupational status).

The measure of total magazine exposure was indexed by coding subjects' responses as 0 (never seen), 1 (look at occasionally), or 2 (read regularly) for each magazine on the checklist described earlier and each magazine a given subject added that was not on the checklist. The total magazine exposure index was the computed sum for all magazines weighted by these values. The distribution of this measure was positively skewed. A cube root transformation provided conditional normal distributions for this measure.

The school district from which each subject was drawn was coded using dummy variables. This statistically controlled for confounding effects due to the structure of the sampling plan. School districts were found to be significantly related to the racial composition of the sample (phi=0.6979, $\chi^2=142.7$, df=2, $n=293$, $p<0.0001$), suggesting strong collinearity between these measures. For this reason, the race of each subject was not used as a core variable in the analyses to be presented. (Inclusion of this variable in ancillary analyses of these data did not alter the results.)

The socio-economic background of each subject, measured using the occupational status of the father or single parent of each child, was indexed using Duncan SEI scores. Occupational status was dichotomized into low (occupation groups five to eight) versus high (occupation groups one to four). (Educational levels of the mother and father were also considered as a measure of socio-economic status; however, a substantial number of subjects, $n=46$, failed to report these data.)

Out of the available sample of 295 subjects, 272 (92%) had complete data for all variables in the study. The 23 subjects excluded from the analyses did not properly report an occupation for either their father or mother. These 23 subjects did not significantly differ from the remaining subjects on any of the independent variables. Therefore, the analyses which follow are based on the reduced sample.

Results

An examination of the three recognition indices suggest that the study subjects had substantial previous exposure to the ad stimuli. The average overall recognition rates for cigarette ads were 0.38, 0.44 and 0.56 for the youngest, middle and oldest

grade groups. The average rates of correct product recognition for cigarette ads were 0.68, 0.80 and 0.83 for the same groups, and the average rates of correct brand recognition were 0.22, 0.29 and 0.35. Product and brand recognition rates were all substantially above levels expected by chance alone (0.33 and 0.05, respectively).

Significant bivariate relationships between smoking status and the measures of overall, product and brand recognition were observed using Probit models ($p<0.0001$). The relationship between total magazine exposure and smoking status, however, was not significant. The lack of an association between total magazine exposure and smoking status may have derived from the fact that subjects appeared to read magazines containing the highest number of cigarette ads with the lowest frequency. The analysis of the simultaneous relationship between smoking and exposure capitalizes on this finding by using total magazine exposure as a statistical instrument. It is important to note, however, that total magazine exposure was significantly correlated with overall ad recognition (Pearson $r=0.356$, $p<0.001$). Thus, total magazine exposure (and its counterpart, Exposure Opportunity) remains an important construct in the overall analysis.

Advertising exposure and smoking

In any cross-sectional study it is impossible to directly test the causal relationships between any set of variables. The temporal information necessary to establish antecedant causes is not available. However, with the adequate specification of a causal model, the obtained correlations between variables may be determined as consistent or inconsistent with that model (Duncan, 1975; Judge *et al.*, 1985). In the case of the current study, the presumed causal models were sufficiently specified and the data existed to determine whether the cross-sectionally observed relationships were consistent with them.

Figure 2 presents an outline of the simultaneous equation model used to evaluate the relationships of smoking status to adverising exposure. The central group of demographic characteristics used to predict both smoking status and exposure were grade group, gender, the interaction of these two measures, stimulus set and school districts. In the 2SLS analyses, SES was used as the instrument for smoking status in the cigarette ad recognition equations and total magazine exposure was used as the instrument for cigarette ad recognition in the smoking status equations. Data on the specification and statistical evaluation of these instruments are available on request from the authors. In the tables, the instru-

Table 1. *2SLS analysis of smoking status regressed over overall cigarette ad recognition* (n = 272)

Variable	df	T^*	G^2†	p
Constant	(1)	−2.18		
Grade group	(1)	3.14	10.580	0.005
	(2)	1.40		
Gender	(1)	0.29	0.085	0.771
Gender-by-grade group	(1)	−0.07	0.098	0.952
	(2)	0.22		
Stimulus set	(1)	0.17	1.007	0.800
	(2)	0.88		
	(3)	0.69		
School district	(1)	3.26	12.068	0.002
	(2)	0.45		
Occupational status	(1)	−2.74	7.691	0.006
Overall cigarette ad recognition (predicted value)	(1)	1.26	1.592	0.207

*Asymptotic t-statistic.

†G^2 statistic based on removing each variable from the prohibit model and re-estimating the model using the remaining terms.

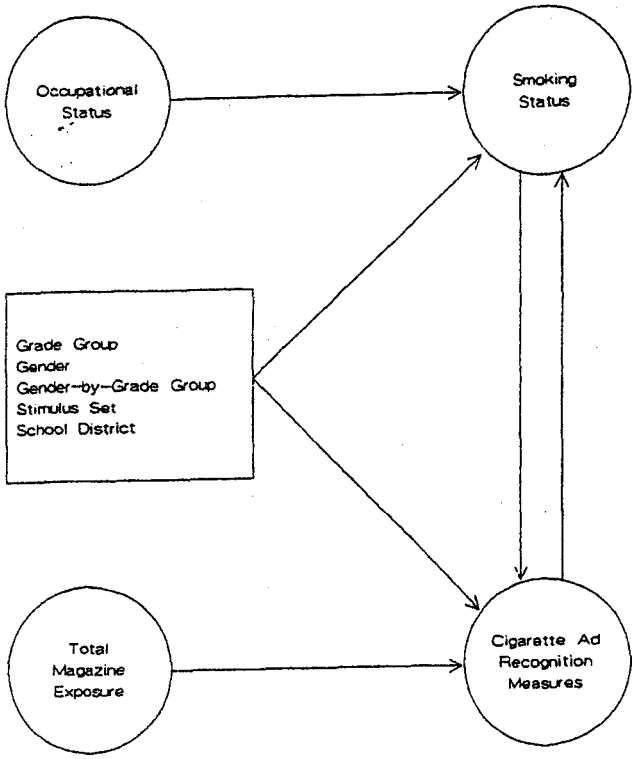


Figure 2. *Simultaneous equation model relating smoking status to the ad recognition measures.*

Table 2. *2SLS analysis of overall cigarette ad recognition performance regressed over smoking status* (n=272)

Variable	df	MS	F	*p*
Grade group	2	1.278	1.180	0.309
Gender	1	0.001	0.001	0.976
Gender-by-grade group	2	1.073	0.991	0.373
Total magazine exposure	1	23.555	21.736	<0.001
Stimulus set	3	0.772	0.713	0.545
School district	2	0.678	0.625	0.536
Smoking status predicted value	1	0.024	0.022	0.882
Error	259	1.083	-	-

ments for each analysis are labeled as predicted values from the first stage of the 2SLS models.

The results of the 2SLS analysis for overall ad recognition and smoking status appear in Tables 1 and 2. Table 1 shows the results of the probit model used to analyse smoking status and Table 2 shows the results of the linear regression model used to analyse overall cigarette ad recognition. In neither model were smoking status and overall ad recognition significantly related. The effects for grade

Table 3. *2SLS analysis of smoking status regressed over cigarette product recognition* (n=272)

Variable	df	T^*	G^2†	p
Constant	(1)	2.22		
Grade group	(1)	1.98	7.710	0.021
	(2)	0.32		
Gender	(1)	0.54	0.286	0.593
Gender-by-grade group	(1)	−0.31	0.383	0.826
	(2)	0.62		
Stimulus set	(1)	0.14	0.935	0.817
	(2)	−0.44		
	(3)	0.87		
School district	(1)	2.64	7.392	0.025
	(2)	−1.84		
Occupational status	(1)	−1.80	3.269	0.071
Cigarette product recognition (predicted value)	(1)	1.91	3.729	0.053

*Asymptotic t-statistic.
†G^2 statistic based on removing each variable from the probit model and re-estimating the model using the remaining terms.

Table 4. *2SLS analysis of cigarette product recognition performance regressed over smoking status* (n=272)

Variable	df	MS	F	p
Grade group	2	1.350	2.209	0.112
Gender	1	0.037	0.061	0.806
Gender-by-grade group	2	0.731	1.196	0.304
Total magazine exposure	1	5.922	9.693	0.002
Overall cigarette ad recognition	1	5.450	8.921	0.003
Stimulus set	3	2.076	3.398	0.018
School district	2	1.284	2.102	0.124
Smoking status (predicted value)	1	4.425	7.243	0.008
Error	258	0.611	–	–

groups and occupational status in the smoking status model reflected higher levels of smoking experimentation in higher grades and lower levels of smoking experimentation in the high SES group. The effect for total magazine exposure in the overall cigarette ad recognition model reflected greater ad recognition with higher levels of exposure to magazines. Since the overall ad recognition measure was not significantly related to smoking status it was included as an instrument in analyses of the remaining two recognition measures.

The results of the 2SLS analysis for product recognition and smoking status appear in Tables 3 and 4. Table 3 shows the results of the probit model used to analyse smoking status and Table 4 shows the results of the linear regression model used to analyse cigarette product recognition performance. In the smoking status model the effect due to cigarette product recognition was not significant. However, in the cigarette product recognition model smoking status did have a significant effect. Subjects who had experimented with cigarettes had better product recognition performance. The effect of grade group in the smoking status model was the same as that obs
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Table 5. *2SLS analysis of smoking status regressed over cigarette brand recognition* (n = 271)

Variable	df	T^*	G^2†	p
Constant	(1)	2.22		
Grade group	(1)	0.54	0.356	0.837
	(2)	0.01		
Gender	(1)	1.33	1.769	0.184
Gender-by-grade group	(1)	−1.44	2.086	0.352
	(2)	0.81		
Stimulus set	(1)	−1.74	5.369	0.147
	(2)	2.25		
	(3)	0.52		
School district	(1)	2.88	8.968	0.011
	(2)	−1.59		
Occupational status	(1)	−3.12	9.953	0.002
Cigarette brand recognition (predicted value)	(1)	2.42	5.871	0.015

*Asymptotic t-statistic.
†G^2 statistic based on removing each variable from the probit model and re-estimating the model using the remaining terms.

Table 6. *2SLS analysis of cigarette brand recognition performance model regressed over smoking status* (n = 271)

Variable	df	MS	F	p
Grade group	2	1.910	3.322	0.038
Gender	1	0.319	0.555	0.457
Gender-by-grade group	2	0.532	0.925	0.398
Total magazine exposure	1	0.300	0.523	0.470
Overall cigarette ad recognition	1	2.352	4.092	0.044
Stimulus set	3	2.196	3.821	0.011
School district	2	0.186	0.323	0.725
Smoking status	1	0.096	0.167	0.683
Error	257	0.575	-	-

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same as that observed in Table 1; however, the effect of SES was marginal. In the cigarette product recognition model both total magazine exposure and overall cigarette ad recognition were significant. Both were positively related to the measure of product recognition.

The results of the 2SLS analysis for brand recognition and smoking status appear in Tables 5 and 6. Table 5 shows the results of the probit model used to analyse smoking status and Table 6 shows the results of the linear regression model used to analyse cigarette brand recognition performance. In the smoking status model there was a significant effect for cigarette brand recognition. Higher cigarette brand recognition rates were related to greater likelihoods of smoking experimentation. In the brand recognition model, on the other hand, there was no significant effect detected for smoking status. The effect of SES in the smoking status model was significant, reflecting greater experimentation among lower SES groups. The effects of overall cigarette ad recognition and grade group in the brand recognition model were also significant, reflecting improvements in brand recognition per-

formance accompanying greater overall exposure to advertising and increased grade.

Discussion

The results of the current study support both arguments put forth in the Introduction: experimentation with cigarettes does affect the extent to which individuals recognize information presented in cigarette advertisements, the selective exposure effect. Young people who express an interest in smoking through their experimentation with cigarettes retain more information from cigarette ads than young people who do not express an interest in smoking. In particular, these young people attend to and retain more product-related information. However, with increased depths of processing it appears that exposure to smoking advertisements does affect the likelihood that young people will smoke. That is, young people who retain more information from cigarette ads than others, for whatever reason, appear more likely to express an interest in smoking through their experimentation with cigarettes. In particular, young people who retain more brand-related information from cigarette advertisements are most at risk of smoking experimentation.

The results of this study must be considered within the context of several limitations. First, it is important to note that inferring causal relationships from correlational data is, in general, a risky enterprise. For any single set of correlational data there is an infinite variety of causal models which may be inferred to generate it. Although it augers well for the current study that the causal issues of interest preceded the analyses of the data, allowing confirmatory tests of the causal hypotheses, results from these cross-sectional data are insufficient to completely confirm the causal model. Longitudinal data will be required for this purpose. Second, and of particular importance in the current study, the statistical instrument used to represent smoking in the 2SLS analyses was not optimal. The single instrument for smoking status (SES) used in the equations predicting exposure could be improved by using a more comprehensive model of smoking status, one which included other predictors of experimentation (e.g. parental and peer modeling, attitudes towards smoking, etc.). The absence of other predictors of smoking experimentation also precluded comparisons of the relative contribution of advertising exposure compared to other possible determinants.

A third problem with the current study appears more problematic than the previous two. Thus, some conceptual difficulties arise for the current analyses when one notes that the measure of advertising exposure was not contemporaneous with incidents of subjects' experimentation with smoking. That is, subjects may have experimented with cigarettes some years before their appearance in the current study. The advertisements used in the study, then, would not be those which they attended to at the time of their initial experimentation with cigarettes and their knowledge of current cigarette advertisements, if they did not continue smoking, would be greatly attenuated. Although this was likely to have been the case for those subjects in the study who experimented with cigarettes but did not continue smoking, it should be noted that this argument is contra-theoretical, suggesting that some attenuation of the relationships between smoking and advertising would occur for these individuals. This being the case, the validity of the observed relationships between smoking and advertising measures would appear strengthened.

The results show that the association between exposure to advertising and consumption is complex, at least for cigarette smoking among adolescents. Rather than reflecting either an effect of selective exposure of smokers to advertising, or an effect of advertising on smoking, the results show that both processes operate simultaneously, though at different depths of processing. In this case, and depending upon the measures used to indicate exposure to advertising (e.g. whether they include aspects of the cognitive processing of this information), estimates of size and statistical significance of the association between measures of exposure and consumption observed in previous studies may be biased (Judge *et al.*, 1985). These biases will operate in research studies relying on simple correlations as well as studies using more sophisticated recursive structural equation models (Adlaf & Kohn, 1989).

How big an effect?

An issue of considerable importance in research on the effects of advertising upon initiation and use of cigarettes among adolescents has been the determination of the size of this effect. As noted in the Introduction, the research has generally indicated that a small but significant effect exists between measures of advertising exposure and smoking incidence. As suggested by the current data, the observed size of this effect will be mediated by the depth of cognitive processing of information from advertisements. Certain measures of exposure (e.g. the overall exposure measure) may have little to no direct relationship to the
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direct relationship to the incidence of smoking. Other measures incorporating the mediating effects of cognitive processes (e.g. brand recognition) may be strongly related to the incidence of smoking. Thus, questions regarding effect sizes may only be answered in the restricted contexts of these operationalized measures.

In the current study it is possible to estimate the size of effect that would be obtained on the rate of smoking experimentation given a 1% increase in the rate of brand recognition among young people. Using the smoking status equation from the 2SLS analysis of brand recognition performance, and calculating the effect at the mean recognition level observed in the study, a 1% change in brand recognition rates would result in a 3% increase in the likelihood that an individual has experimented with cigarettes. Thus, for advertisements which do affect brand recognition rates, at the mean level of observed recognition, a substantial effect may be observed.

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British Journal of Addict

RESEARCH REP

Control versu pathological follow-up

A. BLASZCZYNSKI

* *Department of Clinic Unit, The Prince of Wa*

Abstract

A structured gambling inte Anxiety Inventory, Zucker 63 out of 120 pathological g uncontrollable gambling bel were associated with contin psychopathology. Response depression. Uncontrolled gamb concluded that abstinence i that controlled gambling is gambling.

Introduction

Despite its inclusion in DS Control Disorder Not Else logical gambling has come t conceptualized as an addi many commonalities with dependence.[2–5] As a con disease model of illness as appl been extended to patholo exemplified by the Gambl that pathological gambling is a

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Commentary

A Parting Shot at Tobacco

ON SEPTEMBER 13, 1989, I made my last appearance as Surgeon General before the US Congress. I used the occasion to address the one issue with which previous Surgeons General and I have become most closely associated: tobacco and health. In testimony before the Subcommittee on Transportation and Hazardous Substances, Committee on Energy and Commerce, US House of Representatives, I focused my remarks on two topics that this subcommittee had considered in previous hearings: tobacco advertising and children's access to tobacco products. The purpose of this article is to share with a wider audience the comments I made at that hearing.

Tobacco Advertising

The bill introduced by Subcommittee Chairman Thomas A. Luken (D, Ohio), HR 1250, would eliminate all image-based tobacco advertising (allowing only so-called tombstone advertising). On several occasions during my tenure as Surgeon General, I endorsed proposals that would ban all tobacco advertising and promotion. I certainly support the proposal to restrict tobacco advertising as a reasonable compromise, although I would continue to endorse a total advertising ban as a long-term goal.

It is a curious public policy that we, as a society, allow the most important preventable cause of death to be one of the most heavily advertised consumer products. I know that First Amendment concerns have been expressed about tobacco advertising restrictions. Opponents of these restrictions argue that if a product is legal to sell, it should be legal to advertise. That argument, expressed in a different way, says that if Congress wants to ban the advertising of a product, it first has to ban the sale of that product.

I do not believe our Founding Fathers would have endorsed such a narrow and inflexible range of options for Congress to consider. An advertising ban seems to me to be a reasonable middle ground between the status quo and a total prohibition of tobacco use, which no one seriously proposes.

While I am not a legal scholar, I understand that Congress has the clear authority to prohibit *deceptive* advertising.[1] In my opinion, much of today's advertising for tobacco products is deceptive. Many advertisements portray smoking as a safe, if not healthful, activity, and no advertisements disclose many of the serious and extensive health effects of smoking, such as stroke and nicotine addiction.

One of the more outrageous advertisements (for Newport cigarettes) has used, for at least a decade, the slogan "Alive With Pleasure." This is clearly a message designed to undermine the Surgeon General's warning. If one considers smokers who suffer from lung cancer, emphysema, or stroke caused by smoking, truth in advertising would demand use of the slogan "Dying in Agony" instead of "Alive With Pleasure."

Two advertisements in particular strike me as highly objectionable. An advertisement for Kool cigarettes clearly targets young people; it shows a young-looking couple in teenage attire, with macho antiestablishment facial expressions, standing next to a motorcycle.[2] A recent Camel advertisement suggests violence against women. It describes and graphically depicts the following "smooth dating move": "Run into the water, grab someone and drag her back to the shore, as if you've saved her from drowning. The more she kicks and screams, the better" (*Washington Post*, July 26, 1989:C1, C10). It is interesting that Philip Morris associates Virginia Slims with women's liberation ("You've Come a Long Way, Baby"), whereas RJ Reynolds, in the Camel advertisement, treats women as if it were still the Age of Dinosaurs.

I also object to the promotional placement of cigarettes in movies, to which Congressman Luken[3] has appropriately drawn attention. Cigarette promotions placed in movies such as *Superman II*[4] expose large numbers of children and adolescents to these messages. When these movies are shown on television, the ban on broadcast cigarette advertising is circumvented.

A Rebuttal to the Advertising Industry

Since release of the 1989 Surgeon General's report, *Reducing the Health Consequences of Smoking: 25 Years of Progress*,[5] advertising industry trade associations and publications have taken quotations from the report grossly out of context. I would like to cite three examples and then set the record straight.

In a written statement to the Subcommittee on Transportation and Hazardous Substances for its July 25, 1989, hearing, the president of the Point-of-Purchase Advertising Institute argued against tobacco advertising restrictions by quoting from the report[6(p508)]:

> In the Surgeon General's 1989 Report, it states that "THE MOST DIRECT APPROACH TO ASSESSING THE RELATIONSHIP BETWEEN ADVERTISING AND CIGARETTE CONSUMPTION HAS BEEN TO ASK CHILDREN OR ADULTS ABOUT FACTORS THAT INFLUENCED THEM TO SMOKE. THESE STUDIES TYPICALLY FIND THAT ADVERTISING IS RANKED QUITE LOW ON THE LIST OF RELEVANT FACTORS [capitalization added by the Point-of-Purchase Advertising Institute]."

The witness conveniently omitted the next three sentences, which are as follows[5(p508)]:

Dr Koop recently left his position as Surgeon General of the US Public Health Service, Department of Health and Human Services. He now resides in Bethesda, Md.
Reprint requests to the Director, Office on Smoking and Health, Centers for Disease Control, Park Bldg, Room 1-10, 5600 Fishers Ln, Rockville, MD 20857.

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Marketing experts have questioned the validity of this approach because conscious response to advertising is deemed to be a poor index of actual response (Bergler 1981; Chapman 1986). As such, studies with a similar method and opposite findings also offer little insight into the actual effects of advertising. An example is a study by Fisher and Magnus (1981), which found that most children believe that cigarette ads encourage children to smoke.

Also in written testimony submitted to the subcommittee for the July hearing, the American Advertising Federation stated:

Even the Surgeon General's 1989 report, "Reducing the Health Consequences of Smoking," admits, "There is no scientifically rigorous study available to the public that provides a definitive answer to the basic question of whether advertising and promotion increase the level of tobacco consumption."

Similarly, an article in *Advertising Age* (January 16, 1989) quoted the report as follows: " 'The extent of influence of advertising and promotion on the level of consumption is unknown and possibly unknowable,' the report said."

The entire excerpt, including these statements taken out of context, is as follows (omitted portions italicized)[6(pp510-517)]:

There is no scientifically rigorous study available to the public that provides a definitive answer to the basic question of whether advertising and promotion increase the level of tobacco consumption. *Given the complexity of the issue, none is likely to be forthcoming in the foreseeable future. The most comprehensive review of both the direct and indirect mechanisms [whereby advertising may affect consumption] concluded that the collective empirical, experiential, and logical evidence makes it more likely than not that advertising and promotional activities do stimulate cigarette consumption. However, that analysis also concluded that* the extent of influence of advertising and promotion on the level of consumption is unknown and possibly unknowable *(Warner 1986b).*

The major point being made in this paragraph of the report is that a perfectly designed study to *prove* that cigarette advertising increases cigarette consumption will probably never be performed because of the complexity of this issue. I would emphasize that absolute scientific proof is rarely available when studying human behavior. Humans do not behave like the laws of physics. In medicine and in public health, we rarely await, and we would be foolish to await, definitive proof before taking appropriate action.

In the 1850s, John Snow ended an epidemic of cholera in London by removing the handle of the Broad Street pump, 30 years before the bacterium that causes cholera was first identified. Fortunately, there was no Cholera Institute that lobbied against removal of the pump handle until it could be *proved* that the water from that pump was causing cholera.

In my opinion, the burden of proof should be on the tobacco and advertising industries to show that advertising does *not* increase cigarette consumption. In the absence of such evidence, advertising should not be allowed. This shifting of the burden of proof would represent prudent public health policy for a product that kills 390 000 Americans each year, *when used exactly as intended.*

Children's Access to Tobacco Products

In May 1988, I released the Surgeon General's report, *The Health Consequences of Smoking: Nicotine Addiction.*[6] In the preface to that report, I raised a number of important policy questions concerning the sale and distribution of tobacco products[6(p vii)]:

We as citizens, in concert with our elected officials, civic leaders, and public health officers, should establish appropriate public policies for how tobacco products are sold and distributed in our society. With the evidence that tobacco is addicting, is it appropriate for tobacco products to be sold through vending machines, which are easily accessible to children? Is it appropriate for free samples of tobacco products to be sent through the mail or distributed on public property, where verification of age is difficult if not impossible? Should the sale of tobacco be treated less seriously than the sale of alcoholic beverages, for which a specific license is required (and revoked for repeated sales to minors)?

My answer to each of these three questions is "No." There is no logical reason why we should have a double standard for controlling the sale of tobacco and alcohol, the two major legal addicting drugs used in our society. Would we tolerate the sale of alcoholic beverages through vending machines? Would we allow free samples of alcoholic beverages to be sent through the mail or passed out on public property? Of course not. Why, then, should we be so permissive with the sale of tobacco, when 43 states have laws that prohibit the sale of tobacco to minors?

The issue of whether it is appropriate to sell tobacco products through vending machines is important for two reasons. First, vending machines are a powerful symbol that we do not take seriously the problem of cigarette sales to minors. Second, they allow children to have easy access to cigarettes. At the subcommittee's July 1989 hearing, a representative of the National Automatic Merchandising Association testified that, "About 8 out of 10 cigarette vending machines are located where teenagers are not allowed or rarely frequent." Even if true—and I am not convinced it is—this is a poor argument against banning vending machine sales of cigarettes. Even 20% of the 374 000 cigarette vending machines in the United States (National Automatic Merchandising Association estimate) represents a huge number of sites (75 000) from which teenagers can readily obtain cigarettes . . . illegally.

I agree with past statements by the Department of Health and Human Services that controlling the sale of tobacco to minors is a potentially effective strategy to prevent the initiation of tobacco use among young people. It is disappointing that states have made so little effort to enforce existing laws banning the sale of tobacco to minors. As long as states take no action to enforce these laws, I support federal efforts to prevent the sale of tobacco to minors.

C. Everett Koop, MD, ScD

I gratefully acknowledge Ronald M. Davis, MD, for his assistance in the preparation of this statement.

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Tobacco Advertisements:
One of the Strongest Risk Factors for Smoking in Hong Kong Students

Tai Hing Lam, MD, Siu Fung Chung, MPhil, Carol L. Betson, PhD, Chit Ming Wong, PhD, Anthony J. Hedley, MD

Study objective: To describe the prevalence of smoking in junior secondary school students in Hong Kong and to analyse the relationship between a range of risk factors and ever-smoking experience, including tobacco advertisements.

Methods: Cross-sectional survey using an anonymous standardised self-administered questionnaire.

Setting: 61 randomly selected secondary schools in Hong Kong.

Participants: 6,304 form 1 to 3 Chinese students from 172 classes (51% girls and 49% boys; 90% were aged 12 to 15 years).

Results: The smoking status (95% confidence interval) was: (1) never smoker, 71.1% (70.0%–72.2%), (2) tried only, 15.5% (14.6%–16.4%), (3) used to smoke but not now, 4.2% (3.7%–4.7%), (4) smoked < 1 cigarette per week, 2.9% (2.5%–3.4%), (5) smoked 1–6 per week, 1.7% (1.4%–2.0%), and (6) smoked > 6 per week, 4.5% (4.0%–5.0%). In a backward stepwise logistic regression model, ever-smoking (including categories 2 to 6 above) was independently associated with thirteen factors, including gender (boys), increasing age, place of birth (outside Hong Kong, mainly China), poor knowledge of the hazards of smoking, positive attitudes to smoking, smoking in family members, participation in tobacco promotional activities, and perception of cigarette advertisements as attractive. Among the strongest associations observed was the youth's perception of cigarette advertisements as attractive, with the adjusted odds ratio (95% confidence interval) of 2.68 (2.33–3.07).

Conclusions: Smoking among young people is an important public health problem. Although the causes are multifactorial, in Hong Kong environmental tobacco advertising is an important risk factor that can be removed by banning all forms of tobacco promotion to young people.

Medical Subject Headings (MeSH): smoking, children, tobacco, youth, advertising, risk factors, Chinese, Hong Kong. (Am J Prev Med 1998;14:217–223) © 1998 American Journal of Preventive Medicine

Introduction

Research findings on the high prevalence of smoking in adults in China have attracted much attention in the United States and internationally.[1] A recent report of a 1988 study on risk factors of smoking in youth in Beijing showed that having close friends who smoked and being encouraged by close friends to smoke were strong risk factors for smoking, and that smoking was also associated with lower parental socioeconomic status; having parents, siblings, or teachers who smoked; buying cigarettes for parents; performing poorly in school; and not believing that smoking is harmful to health. However, that study did not examine the influence of tobacco advertisements.[2] In recent years, the tobacco industry has been aggressively expanding its market in Asia, especially China. Many methods of tobacco promotion that are banned by Western governments or claimed not to be used by the multinational tobacco industry in their home countries in the West, are being used widely in Asia.

Hong Kong is a major Asian city where overall smoking prevalence is 16%; 27% in men and 3% in women[3] compared to about 25% in the United States[4] and approximately 30% in the United Kingdom.[5] However, average prevalence figures provide little indica-

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tion of the importance of smoking-related risks by age, gender, and socioeconomic groups. For example, in Hong Kong, studies have shown that children as young as 8 years old have experimented with cigarettes[6] and about 10% of adult daily smokers started smoking weekly at age 15 or younger.[3]

Hong Kong, as a gateway to China, has been subject to massive tobacco advertisements. Since the Government's policy branch has put forward a ban on tobacco advertisements in the print media and on billboards in 1995, a strong lobby against the proposals has been mounted by the tobacco industry. The industry argues that tobacco advertisements do not have any effect on youth smoking. Surveys funded by the industry are used to support the industry's claim that youth either do not smoke or, if they do, they are influenced principally by other factors, such as curiosity, peer pressure, and family smoking.[7,8]

The WHO Action Plan proposes to achieve a tobacco advertisement–free Western Pacific Region by the year 2000. It is, therefore, important that the role of tobacco advertisements on youth smoking be examined in this region. A cross-sectional survey is the cheapest and most practical method that can be used in developing countries. Because many factors have been shown by previous studies in the West to be associated with youth smoking or have been put forward as counter-arguments by the tobacco industry, the design should include as wide a range of risk factors or confounders as possible, including tobacco advertisements. Such studies should also be able to demonstrate that smoking in youth is prevalent and define it as a public health problem.

Studies examining the reasons for young people's starting to smoke have identified a wide range of factors, but few included exposure to tobacco advertising and promotional activities.[9,10] However, most of the studies on youth smoking have been carried out in developed countries (with the exception of the Beijing study[2]). Research is needed on populations with different cultures, such as those in South East Asia, as smoking prevalence rates are different and tobacco promotion by multinational tobacco companies has begun more recently. The purpose of this study is to describe the prevalence of smoking in junior secondary students in Hong Kong and to analyse the relationship between ever-smoking experience in this group of students and various risk factors, including demographic factors; knowledge; attitudes; smoking in family members, teachers, and classmates; and self-confidence; with a main focus on tobacco advertising and promotion. To the best of our knowledge, this is the first report that has examined the relationship between tobacco advertisements and youth smoking in Asia.

Methods

Schooling is compulsory and free in Hong Kong up to Form 3 (secondary year 3) level and non-attendance is both illegal and very uncommon. Students from form 1 to 3 were included, the modal age for each year of study being 13, 14, and 15 years, respectively. The sampling frame was a list of secondary schools supplied by the Education Department. There were 6,660 classes of forms 1 to 3. A two-stage random sampling method was used. In stage 1, the classes were assigned a number from 1 to 6,660. A random number was drawn and the school that included that numbered class was selected. In stage 2, one class from each form of the selected school was randomly selected. Letters were sent to the selected schools and 172 classes from 61 schools participated. The response rate for schools was 92%. Only Chinese-speaking schools were included; English-speaking or international schools, which were a minority, were excluded.

A standardised self-administered and anonymous questionnaire was designed in Chinese and printed on optical mark record forms. The questionnaire included six sections: (1) demographic information, (2) opinions on smoking, (3) family smoking, (4) tobacco promotion, (5) self smoking, and (6) respiratory health. The questionnaire contained 82 questions, some of which included multiple responses.

From May to July 1994, trained field workers went to the schools, and after a brief introduction that stressed confidentiality and anonymity, they distributed the questionnaires. Students completed the questionnaires and returned them to the field worker. No teachers were present at the completion sessions; cooperation from students was good and there was no collusion. Completed questionnaires were checked and then scanned for data entry. A random sample of 50 were re-scanned and there was total agreement. After excluding 12 incomplete questionnaires, 6,304 were used in the analysis. The effective response rate from students was 96%; 3.8% were absent during the survey days.

Smoking habit was classified according to the answers chosen from the following six categories: (1) I have never smoked, (2) I have smoked only once or a few times (including trying), (3) I used to smoke but I do not smoke now, (4) I sometimes smoke, but I smoke less than one cigarette per week, (5) I smoke 1–6 cigarettes per week, and (6) I smoke more than 6 cigarettes per week. Those who had never smoked were classified as never-smokers and all others as ever-smokers. The youth were also asked whether they had smoked in the past 30 days and in the past 7 days, and the average number of cigarettes they smoked per day.

The following factors were examined in relation to ever-smoking experience:

1. demographic characteristics: gender, year of study, age (as a categorical variable), place of birth, district of residence;
2. perception of parental or teacher interference if the student smokes (students were asked three questions of whether or not their fathers, mothers, and teachers, respectively, would interfere if they smoked. "Yes" answers to all 3 questions were coded as zero and as the reference; other answers were coded as one);
3. opinions about whether or not it was all right for teachers or classmates to smoke (2 items analysed separately);
4. seeing teachers or classmates smoke (2 items analysed separately);
5. knowledge about health hazards of smoking, measured by 8 items including breathing difficulties, cough, damage to lung, damage to heart, cancer, health hazards of secondhand smoking, upper respiratory infections, and addiction (correct answers to all 8 items were coded as zero; no wrong answers but "don't know" in one or more were coded as one; one or more wrong answers were coded as two);
6. attitudes to smoking, measured by: smoking is fun, youths smoke to show off, smoking relaxes nerves, makes you look tough, feel mature, gives you confidence, smoking is a waste of money and smoking can reduce weight (answers showing no positive attitudes to all 8 items were coded as zero; others as one);
7. opinions of whether or not a smoker tends to perform less well in sports and studies, respectively ("yes" answers to the 2 questions were coded as zero; others as one);
8. self-confidence in academic and sports performance, in relationship with friends, and in general, respectively (answers of confident or fairly confident to all 4 items were coded as zero; others as one);
9. family smoking (father, mother, sibling, and others) (4 items: answers of no one smoking were coded as zero; answers of one or more smokers as one);
10. cigarette promotion and advertisements: participation in tobacco promotion activities (the students were asked 4 questions of whether or not they (1) had used empty cigarette packs to exchange for tickets to concerts, movies, sports, or other entertainments; (2) had used empty cigarette packs to exchange for free gifts or discounted commodities; (3) had participated in tobacco company–sponsored concerts, sports, or other activities; (4) had received free cigarettes for promotional purposes. Answers of "no" to all 4 items were coded as zero; others as one); recent exposure to tobacco advertisements in mass media and for a range of well-known goods (the students were asked whether they had seen or heard about tobacco advertisements on 17 sources in the mass media including billboards, newspapers, television, radio, public transport, posters, and 12 items of goods, including T-shirts, hats, jeans, watches, music discs, lighters, and ashtrays. Answers of exposure to 0–4 items were coded as zero, 5–8 as one, and 9 or more as two); and perception of tobacco advertisements as attractive (the students were asked whether or not the advertisements of each of 8 items of common cigarette brands, including Marlboro and Salem, which were the most advertised in the territory, were attractive to them. Answers showing none was attractive were coded as zero; others as one).

The odds ratio (OR) was used to measure the degree of association between a risk factor and ever-smoking. Backward stepwise logistic regression was used in multivariate analysis to derive a final model and to calculate adjusted OR. All analysis was carried out using the SPSS-PC packages and 95% confidence intervals (95% CI) were calculated for prevalence and for OR.

Results

Of the 6,304 students, 51% (95% CI 50%–52%) were boys and 49% (48%–51%) were girls, 94% (94%–95%) were from 12 to 15 years old, 90% (89%–91%) were born in Hong Kong, and the proportion by year of study was similar, i.e., about one-third for each form.

The smoking status was as follows: (1) never smoker, 71.1% (70.0%–72.2%), (2) tried only, 15.5% (14.6%–16.4%), (3) used to smoke but not now, 4.2% (3.7%–4.7%), (4) smoked < 1 per week, 2.9% (2.5%–3.4%), (5) smoked 1–6 per week, 1.7% (1.4%–2.0%), and (6) smoked > 6 per week, 4.5% (4.0%–5.0%). More boys smoked than girls and the smoking prevalence increased with age (Table 1). Of those who had smoked, about 20% (18%–23%) first smoked at the age of 8 years or younger, 17% (15%–19%) at 9–10 years, 35% (32%–37%) at 11–12 years, 25% (22%–27%) at 13–14 years, and 4% (3%–5%) at 15 years or older. When asked about their recent smoking experience, 8.6% (8.0%–9.3%) had smoked in the past 30 days; the mean (standard deviation, SD) number of cigarettes smoked per day was 6.04 (0.37) and the median was 3. In the past 7 days, 6.1% (7.3) had smoked; the mean (SD) was 6.20 (0.38) and the median was 4.

Further analysis on the risk factors associated with smoking was based on ever-smoking experience (ever-smoking versus never-smoking). Table 2 first shows the percentage distribution of the presence or absence of each of the 17 factors including age, which was in-

Table 1. Prevalence of smoking by age and by gender[a]

Age (years)	Gender	Never smoker (%)	Tried only (%)	Used to, not now (%)	Smoked <1/week (%)	Smoked 1–6/week (%)	Smoked >6/week (%)
12 or below	Boys (n = 372)	82	14	0.8	1.1	0.8	0.8
	Girls (n = 390)	84	12	1.3	1.8	0.8	0.5
13	Boys (n = 915)	75	14	4.0	2.3	1.6	3.2
	Girls (n = 962)	82	12	1.4	1.9	1.4	1.0
14	Boys (n = 996)	66	17	4.5	3.8	2.1	6.5
	Girls (n = 952)	76	14	3.7	2.9	1.1	3.3
15	Boys (n = 703)	56	18	6.8	4.8	3.0	10.7
	Girls (n = 628)	68	18	5.7	3.0	2.2	3.7
16	Boys (n = 163)	42	26	12.3	3.7	0.6	16.0
	Girls (n = 132)	53	23	9.8	4.5	2.3	7.6
17 or above	Boys (n = 39)	26	33	15.4	7.7	2.6	15.4
	Girls (n = 25)	44	36	4.0	4.0	4.0	8.0
Total	Boys (n = 3,195)	67	17	5.0	3.3	2.0	6.4
	(95% CI)	(65–78)	(16–18)	(4.3–5.8)	(2.7–4.0)	(1.5–2.5)	(5.6–7.3)
	Girls (n = 2,098)	76	14	3.3	2.5	1.4	2.5
	(95% CI)	(74–77)	(13–16)	(2.7–4.0)	(2.0–3.2)	(1.0–1.9)	(2.0–3.2)
Total	71	16	4.2	2.9	1.7	4.5	
(n = 6,302)	(95% CI)	(70–72)	(15–16)	(3.7–4.7)	(2.5–3.4)	(1.4–2.0)	(4.0–5.0)

[a]Missing data were excluded. Only one decimal point is shown for the 4 columns to the right. Because of rounding, the percentages do not always add up to 100. 95% CI = 95% confidence interval.

cluded in the logistic regression model as a categorical variable. The crude ORs of all the 17 variables were significantly associated with ever-smoking. The strongest association was for approval of classmates smoking, (crude OR 4.85 [4.27–5.51]), followed by perception of cigarette advertisements as attractive (crude OR 4.73 [4.20–5.32]).

Stepwise logistic regression resulted in a final model in which 13 of the 17 factors were statistically significant. The result suggested that after adjustment for each other simultaneously, each factor had some independent effect on smoking. Apart from age (those who were 16 years or above had an adjusted OR of 2.70 [1.92–3.80], the strongest association was for perception of cigarette advertisements as attractive, (adjusted OR 2.68 [2.33–3.07]). The other strong risk factors were seeing classmates smoking (adjusted OR 2.60 [2.26–2.90]), positive attitudes to smoking, and smoking in family members. It is interesting to note that when the three factors of (1) smoking family members, (2) seeing classmates smoking, and (3) seeing teachers smoking were combined into one variable (labelled as "having people smoking around you"), the stepwise regression model showed that this new variable had an adjusted OR of 3.24 (2.61–4.03) followed by perception of cigarette advertisements as attractive (adjusted OR 2.79 [2.44–3.19]) (data not shown). Such analysis showed that a smoking environment (as defined by including the home and school together) could be the strongest risk factor. Nevertheless, after adjusting for this composite variable, perception of tobacco advertisements as attractive still had strong independent effects on children smoking: those who found any cigarette advertisements attractive were more than two times as likely to be "ever-smokers."

All three tobacco advertising variables were significant in the crude analysis. Perception of tobacco advertisements as attractive had the highest OR, followed by participation in cigarette promotion or sponsored activities. There was a dose response relationship for the exposure to cigarette advertisements (test for trend χ^2 = 48.6, df = 1, $P < 0.0001$). However, the latter became nonsignificant in the final regression model. This did not imply that exposures to tobacco advertisements were not important but suggested that attractiveness of tobacco advertisements and participation in sponsored activities had stronger effects than exposures *per se*.

When the analysis was repeated for boys and girls separately, the results were essentially similar. From the final backward stepwise logistic regression models, the adjusted ORs for perception of tobacco advertisements as attractive were similar in boys (adjusted OR 2.62 [2.18–3.15]) and girls (adjusted OR 2.71 [2.21–3.32]) (data not shown).

Discussion

Hong Kong has only a partial ban on tobacco advertisements, on television, radio, and cinema, which has been in force since 1992. Our results show that ever-smoking experience among junior secondary school students is high and is associated with many factors including the effects of tobacco advertisements, sponsorship and other promotional activities, family, school and peer influence, the perception of interference

Table 2. Prevalence of ever-smoker and odds ratios (OR) by risk factors[a]

Factors	Characteristics	No.	% of ever-smokers[b]	OR (95% CI)	Adjusted OR (95% CI)[c]
Gender	Girls	3,099	24.1	1	
	Boys	3,196	33.5	1.59 (1.42–1.77)	1.22 (1.06–1.39)
Age (years)	12 or below	130	17.1	1	
	13	400	21.3	1.31 (1.05–1.65)	1.02 (0.79–1.31)
	14	572	29.3	2.02 (1.62–2.51)	1.11 (0.87–1.43)
	15	510	38.3	3.01 (2.41–3.77)	1.42 (1.10–1.84)
	16	201	55.8	6.15 (4.60–8.22)*	2.70 (1.92–3.80)*
Place of birth	Hong Kong	5,622	27.3	1	
	Elsewhere	619	42.6	1.98 (1.67–2.36)	1.94 (1.56–2.41)
Living districts	Urban (Hong Kong Island/Kowloon)	2,991	25.8	1	
	Satellite towns or rural (New Territories)	3,288	31.6	1.32 (1.18–1.48)	1.22 (1.07–1.40)
Perception of interference if they smoked	Parents/teachers would interfere	3,591	26.0	1	—
	Would not interfere	2,713	32.7	1.38 (1.24–1.55)	—
Thought it all right for teachers to smoke	No or "don't know"	3,694	21.0	1	
	Yes	2,610	40.2	2.53 (2.26–2.83)	1.25 (1.08–1.44)
Thought it all right for classmates to smoke	No or "don't know"	4,857	20.8	1	
	Yes	1,447	56.0	4.85 (4.27–5.51)	2.01 (1.71–2.36)
Had seen teachers smoking	No	4,419	25.7	1	—
	Yes	1,847	36.5	1.66 (1.48–1.87)	—
Had seen classmates smoking	No	3,219	14.7	1	
	Yes	3,050	44.0	4.56 (4.03–5.16)	2.60 (2.26–2.90)
Knowledge about health hazards of smoking	Correct answers to all 8 items	1,245	21.6	1	
	"Don't know" in 1 or more items	3,274	22.3	1.04 (0.88–1.22)	1.08 (0.90–1.31)
	Wrong answer to 1 or more items	1,785	46.2	3.11 (2.63–3.68)*	1.91 (1.56–2.31)*
Attitudes toward smoking	No positive attitude to all 8 items	3,788	18.1	1	
	Positive to one or more items	2,516	45.2	3.75 (3.37–4.21)	2.08 (1.82–2.39)
Opinion that smoking students perform worse in studies or sports	Agreed or "don't know"	4,499	21.1	1	
	Disagreed	1,805	48.4	1.69 (1.46–1.95)	1.36 (1.14–1.62)
Self-confidence	Confident in all 4 aspects	4,431	27.7	1	—
	Lack of confidence in one or more aspects	1,873	31.7	1.21 (1.08–1.36)	—
Smoking in family members	No smoking family member	2,959	20.1	1	
	One or more smoking members	3,345	36.7	2.29 (2.04–2.58)	1.74 (1.52–2.00)
Participated in cig. promotion or sponsored activities	No	2,577	22.7	1	
	Yes	3,727	33.2	1.69 (1.50–1.89)	1.24 (1.08–1.42)
No. of media and goods on which cig. ads were seen	0–4 items	2,190	25.0	1	—
	5–8 items	1,918	27.0	1.11 (0.96–1.28)	—
	9 or more items	2,196	34.5	1.58 (1.39–1.81)*	—
Perception of cig. ads.	Felt none of the 8 ads. attractive	4,088	17.5	1	
	Felt one or more of the 8 ads. attractive	2,216	50.0	4.73 (4.20–5.32)	2.68 (2.33–3.07)

[a]cig. = cigarettes; ads. = advertisements.
[b]Percentage of children who had ever smoked in that category.
[c]Adjusted for the other factors in the final backward stepwise regression model which included 13 factors with OR shown below. Four factors were dropped in the stepwise procedure and do not have OR here. Number of cases included in the model was 6132 (i.e. 2.7% of the cases with one or more missing values in these factors were excluded).
*Test for trend: $P < 0.0001$.

from parents and teachers, knowledge and attitudes about smoking, as well as individual characteristics such as self-confidence. Each of these factors has been shown to have a significant and independent effect on the youth although they are often strongly associated. These findings are consistent with previous epidemiological research, which has demonstrated the association between smoking uptake and a number of different factors (including age,[9] gender,[10,11] socioeconomic status,[12] peer pressure,[13,14] smoking by peers,[15] and family[16]) but emphasise the importance in this region of the effect of exposure to cigarette advertisements[17–21] and participation in cigarette promotional activities.[22–25] Market research also found that cigarette advertising appeared to influence smoking behaviour of adolescents.[26]

Studies reporting on the prevalence of adolescent smoking in developed countries have found smoking among girls and boys to be either approximately the same[9,17,27] or greater for girls.[10,11] However, in Hong Kong, as in Beijing,[2] boys are significantly more likely to have smoked than girls. One possible explanation for this might be the influence of traditional Chinese values, which consider smoking to be socially unacceptable for women. But the effects of tobacco advertisements are likely to be the same, as indicated by the similar odds ratios in boys and girls in this study. It is, therefore, likely that Asian girls are as vulnerable to tobacco advertisements as the boys and there are signs that traditional values are losing ground.

Smoking prevalence was found to be high in Asian female airline cabin crews[28] and Taiwan has seen an 8% rise in the rates of women smoking in just 1 year. (John Tung Foundation, 1995 Report on Taiwan Area Adult Smoking Status Survey Summary, Personal Communication, David D. Yan, 18 March 1996). In the present study, the prevalence of "daily" smoking (defined as smoking more than 6 cigarettes per week) in the older girls (about 8% [4%–12%], in those aged 16 or above), was higher than the current estimates for young adult females in Hong Kong. The prevalence rates for daily smoking in Hong Kong females aged 20–29, 30–39, 40–49, 50–59, are 2.2%, 1.8%, 1.0%, 3.1%, respectively.[3] Our data provide alarming early indicators of a rising prevalence of smoking in young Hong Kong women.

After adjusting for family smoking, we found that youth who had been born in other places (predominantly in mainland China) were much more likely to have smoked. This strong association between place of birth and ever-smoking, mainly in boys, suggests the close relationship between Hong Kong and mainland China and the likely trend after 1997, when Hong Kong will be returned to the People's Republic. This supports the view that an environment that maintains the social acceptability of smoking, including the lifestyles portrayed by advertisements, has an important effect on a youth's decision to smoke. Over 67% of men in China are current smokers.[1] As more children born in mainland China are emigrating to Hong Kong, their smoking behaviour will increase the pressure to smoke in their peers who were born in Hong Kong.

The limitations of using a cross-sectional design with regard to the time-sequence of the presumed risk factors and the outcomes mean that this study, like other cross-sectional surveys, cannot provide definitive evidence of causality. However, this study design provides the most practicable approach within the constraints of developing countries in Asia. Findings from cross-sectional surveys can provide insight into the relative importance of the contributing factors linked to children smoking. The value of the cross-sectional design in a descriptive study is to provide data about the magnitude of an important public health problem[1] and to identify the groups most at risk. Viewed from this perspective, our study has shown that youth in Hong Kong start experimenting with smoking at a very young age. It also clearly indicates that those who are influenced by tobacco advertisements and promotions exhibit the following behavior: have friends that smoke, have poor knowledge about the health risks of smoking, have positive attitudes about smoking, are living in a smoking environment, and are more likely to have smoked.

Despite the arguments presented by the tobacco industry that they do not target youth, several other studies[22,23,25,26,29] show that children are heavily exposed to and influenced by advertisement and promotions. Studies of the tobacco industry used simple and direct questions to ask the children to state their reasons for starting to smoke and they reported very low smoking prevalence and that advertising had no effects.[7] Such methodology of direct questioning could not elicit the real effects of tobacco advertisements and failed to address the issues of cigarette brand choices and greater advertisement sensitivity among adolescent.[26] Our data shows that perception of tobacco advertisements as attractive by Chinese youth is one of the strongest risk factors for smoking, after adjusting for the other major risk factors. The tobacco industry argues that perception of tobacco advertisements as attractive is an epiphenomenon or follows the initiation of smoking and that the association therefore does not satisfy the temporal sequence required for causal inferences. However, we argue that there is no reason why youth, whether or not they have smoked, should be exposed to the risk of attraction by these advertisements. Studies of this kind are urgently needed in China, and other parts of Asia, as well as in other developing countries, to provide evidence that will support government bans on all tobacco advertisements and sponsorship. This is an essential step in

protecting children from exposure to the positive images of smoking that tobacco advertising promotes and in reversing the undesirable social norm resulting from the industry's projection of smoking as an acceptable behavior.

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Ledwith (1984)

SMOKING

Does tobacco sports sponsorship on television act as advertising to children?

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A REPRESENTATIVE survey of 880 children in first, third, and fifth years was carried out in five secondary schools in one education authority using an anonymous questionnaire. It was found that children were most aware of the cigarette brands which are most frequently associated with sponsored sporting events on TV. Children's TV viewing of a recent snooker championship sponsored by one cigarette manufacturer was positively correlated with the proportion of children associating that brand, and other brands used in TV sponsorship, with sport. Following a snooker championship sponsored by another cigarette manufacturer, a second survey was carried out on a new sample showing that awareness of this brand, and the proportion of children associating it with sport, had increased from the first survey. This demonstrates that the TV sports sponsorship by tobacco manufacturers acts as cigarette advertising to children and therefore circumvents the law banning cigarette advertisments on TV.

THE LAW banning the TV advertising of cigarettes was implemented in Britain in 1965 following the failure of the tobacco companies to honour a voluntary agreement aimed at protecting children by not advertising before 9pm. However there has been, in recent years, a rapid growth in TV sports sponsorship by cigarette manufacturers which might have an influence on children. There is evidence from Australia[1] that childrens' cigarette brand preferences are more heavily concentrated than adults' preferences on the brand which is most frequently promoted by sponsorship on TV.

There is a need for details of the effects of sports sponsorship, bearing in mind the views quoted by the advertising industry's own press that: "the Embassy (snooker championship on TV) . . . . must rank as the media buy of the century (which) coupled with the high cost of airtime and the growing restrictions on advertising of tobacco . . . . is forcing more and more companies to consider sponsorship as a serious part of their marketing plans"[2]. Any evidence that such tobacco sports sponsorship acts as advertising would indicate that it circumvents the above mentioned law. For such a case to be made it is not necessary (nor was this intended here) to demonstrate any link between sponsorship and childrens' smoking behaviour. As indicated below this is a wider issue which requires further study. The present investigation was intended to be the first step in such a process.

The aim of the present study was to investigate in children whether exposure to two tobacco-sponsored sports events on BBC TV appeared to act as advertising. This was defined as activities which increase the level of awareness of certain brands and the associaton in childrens' minds of these brands with an attractive activity, in this case sport.

There were problems in the design of the study since it is impossible to establish a baseline of knowledge in children not exposed to tobacco sponsorship since such promotion is all-pervasive. Therefore two surveys of cigarette brand awareness in children were carried out: the first after the televising of a snooker championship sponsored by *Benson and Hedges (B&H)*, and the second after the televising of a snooker championship sponsored by *Embassy*. Different children were used in the surveys to avoid the contaminating effect of sensitising children to the information sought.

The first survey

Method

A two-stage sampling method was used. The sampling frame consisted of all state-funded secondary schools in one education authority in the Greater Manchester area. A random sample of five schools was drawn and, at the second stage, a random sample was drawn of 11 classes from the complete list of classes for the first, third and fifth years separately. The survey was carried out from 13-24 February 1984, that is between two and three weeks after the end of the *Benson & Hedges* Masters Snooker Championship which received 28 hours of coverage on BBC TV. All the children in the sample were tested as intact classes by their form teacher using an anonymous questionnaire sealed into one envelope for the whole class on completion. No attempt was made to follow up the 46 (five per cent) absentees. The children were asked to list the cigarette brands they knew, their smoking habits, intentions and attitudes, and the amount of their viewing of the recent snooker championship. Differences in the number of cigarette brands recalled were analysed by analysis of variance and differences in proportions recalling particular brands by Chi square test.

Results

There were 880 children tested with year and sex break-down as shown in **Table 1.** There was an over-representation of boys but the proportions admitting smoking (at least occasionally) were not significantly different (X^2=6.52, 3df) from national estimates: the numbers were 9 (three per cent), 68 (23%) and 101 (36%) at first, third and fifth

Table 1

The sample: by school year and sex

Year	1st year 11-12 years	3rd year 13-14 years	5th year 15-16 years	Total
n	301	295	281	880
(%)	(34)	(34)	(32)	

Year not recorded=3

Sex	Boys	Girls	
n	494	381	880
(%)	(56)	(44)	

Sex not recorded=5

per cent, 15 per cent and 36 per cent found in a nationally representative survey with follow-up of absentees[3]

Only 13 (1.5%) of the children failed to list any cigarette brand. The mean number of brands recalled was 5.5 and was higher in older children ($p<.001$), in regular smokers ($p<.001$) and in those who intended to smoke in the future ($p<.005$), whether they were current smokers or not.

Table 2 shows that one brand, *B&H* was predominant amongst the first brand listed. Of the brands listed at all, the three best known were *B&H*, *John Player Special (JPS)* and *Embassy*. To the question: "If you smoke, write down the brand or brands you prefer to smoke", 181 pupils replied and the choice of the great majority of these was B&H. The question was asked: "Are there any sports you connect with particular brands of cigarette? If so write down the name of the cigarette brand and next to it the sport or sports you link it with". There were only four cigarette brands frequently associated with sport, with two, *B&H* and *JPS*, being most prominent.

Table 2

References to individual cigarette brands

	BH	JPS	EM	P6	PD	SC	MAR	PS	WB	Base
Brand listed first	497 (57)	98 (11)	82 (9)	19 (2)	28 (3)	45 (5)	30 (3)	5 (1)	4 (—)	880 (%)
Brand listed at all	780 (89)	632 (72)	535 (61)	187 (21)	238 (27)	429 (49)	226 (26)	136 (16)	63 (7)	880 (%)
Preferred brand among smokers	138 (76)	10 (6)	16 (9)	3 (2)	— (—)	8 (4)	5 (3)	1 (—)	— (—)	181 (%)
Brands associated with sport	337 (38)	347 (39)	240 (27)	2 (—)	2 (—)	7 (—)	121 (14)	3 (—)	0 (—)	880 (%)
Brand named as sponsor of snooker	275 (31)	20 (2)	221 (25)	0 (—)	0 (—)	2 (—)	0 (—)	0 (—)	0 (—)	880 (%)
Hours of TV sponsored sport source (1983) (a)	73	43	132	—	—	11.0	8.0	2.0	—	
Market % brand share 1982 (b)	16	13	21.8	4.3	2.0	7.0	2.25	3.0	1.5	
Advertising Expenditure (1983) (£M) (c)	7.3	5.2	5.2	.76	nk	5.4	.25	1.0	nk	

Key BH=Benson & Hedges, EM=Embassy, PD=Park Drive, MAR=Marlboro, WB=Woodbine, JPS=John Player Special, P6=Players No. 6, SC=Silk Cut, PS=Peter Stuyvesant

Sources
a) Sports Sponsorship Computer Analysis Ltd.
b) Tobacco, September, 1983
c) MEAL Quarterly Digest, 4th Quarter, 1983

Conversely there were only four sports linked with any substantial frequency with cigarette brands: snooker (435 children, 49%), motor racing (342, 39%), cricket (98, 11%) and darts (52, 6%). The table shows that two brands were thought to be sponsored by recent snooker: *B&H*, the actual sponsors and *Embassy*, which has more hours of sponsored snooker taking the year as a whole. For comparison the last three rows show respectively the hours of sports sponsorship exposure, the share of adult sales of the tobacco brands listed and the total advertising revenue.

Children were asked "On how many days did you watch the Masters Championship snooker on TV recently". Only 232 children (26%) did not watch at all, 314 (36%) watched one day, 198 (23%) watched two to seven days and 125 (14%) watched 8 days or more. As **Table 3** shows, children who watched more snooker were more likely to associate various cigarette brands with sport, particularly *B&H*, *JPS* and *Embassy*, the three brands with the greatest exposure in terms of TV sports sponsorship.

Table 3

Number and percentage of references to cigarette brands linked with sport and amount of snooker watched

Cigarette brand linked with sport	Amount of Snooker Watched: Not at all	1-2 days	3-7 days	8 days or more	[illegible] (3dp)
B&H	52(22)	116(37)	94(48)	74(59)	54.9*
JPS	56(24)	126(40)	103(52)	60(48)	39.6*
Embassy	20 (9)	77(25)	77(39)	65(52)	93.4*
Marlboro	26(11)	45(14)	30(15)	19(15)	1.9
Base:	232	314	198	125	

Snooker watching not recorded: 11
*$p<.001$

Discussion

The data showed that the majority of the children had seen the sponsored snooker and that the cigarette brands which were best known to the children and most associated by them with sports, were those which are most heavily promoted by TV sports sponsorship. There was thus some evidence to support the suggestion that such sponsorship acts as advertising in informing about tobacco brands and linking these with sport. The supplementary evidence that children who watched more snooker on TV were more likely to link *B&H* and several other brands with sport suggests that there may be a general "sports-linkage" effect of watching tobacco sponsored sport on TV, in addition to the specific effects of any one event.

However, the evidence was only correlational – children who watch a great deal of sport on TV may not be typical – and thus the evidence should only be used with caution to suggest a causal link between TV sponsored sports viewing and an advertising effect. In addition there was the possible confounding effect that the brands best known to the children were also those most widely sold and advertised. However, the *Embassy* brand name was relatively less known and less associated with sport than would be expected on the basis of brand market share and exposure in TV sports sponsorship.

It was hypothesised that *Embassy* was less familiar and less associated with sport since it had not had *recent* exposure through sports sponsorship on TV. A second survey was therefore carried out in the week following the end of the *Embassy* World Snooker Championship, which had over 100 hours of TV coverage from 21 April to May 7 1984. The aim of this second survey was to examine the extent of any differences from the first survey in awareness of the *Embassy* brand and in its association with sport.

The second survey

Of the five schools in the original survey only three were available for re-testing due to problems of industrial action. In addition the fifth year pupils were no longer in school on a regular basis. Therefore the same number of classes were selected at random from each of the three schools in each of the first and third years as had been tested in the first survey, with the restriction that no class was tested a second time. The questionnaire contained the same questions as in the first survey, with the addition of three extra questions, which were placed last so that most of the questionnaire was the same as in the first survey. Conditions of testing were the same as in the first survey, with the whole class of children completing the anonymous questionnaire in one session, supervised by the class teacher, the answers being sealed into an envelope on completion.

Results

There were no significant differences between the two surveys as to break down by age-group, school or smoking habits, but there was an increased proportion of girls in the second survey as **Table 4** shows. There were more absentees in the second survey - 71 children (21%), with the proportion varying from 2/30 to 10/26 in different classes. In the second survey 188 children (69%) reported having watched the snooker, with 57 (21%) reporting viewing on 8 days or more. Some 119 children (44%) correctly identified *Embassy* as the sponsored brand with a further 31 (11%) naming *B&H*.

Table 5 shows that the second survey found no increase in the proportion of children recalling B&H but there was an increase in the recall of *Embassy*. Amongst girls there was a statistically significantly greater increase ($p<.001$) in the change proportion recalling *Embassy* - 16.9 percentage points in girls as compared with 7.9 percentage points in boys. There was also an increase in the proportion listing *Marlboro* and, to a lesser extent, *JPS*.

The proportion of children linking *Embassy* with sport more than doubled - as **Table 6** shows. The change in boys was 28.1 percentage points compared with 21.9 percentage points in girls. The results on brand awareness and linkage of particular brands with sports were not statistically significantly different for classes above and below the median level of absenteeism, suggesting that this later factor had not influenced the observed differences in brand awareness and association with sport between the first and second surveys. It should be noted that with both sexes combined there was a very greatly increased association of both *JPS* and *Marlboro* with sports.

Discussion

There seems to be no reasonable doubt that the increase for the *Embassy* brand in knowledge and association with sport between the two surveys could be attributed, at least in part, to exposure to sponsored snooker on TV immediately prior to the second survey. The two samples were drawn from the same schools and age groups and there were no significant changes in awareness of the *B&H* brand which, in a sense, acted as the control brand.

Insofar as there were any differences, there were somewhat fewer smokers in the second survey. Since smokers tend to know more brands it would have been expected that awareness of *Embassy* and other brands would have been lower in the second survey. Differences in the proportions by sex and the higher rate of absenteeism in the second survey would not appear to have determined the results since the

Table 4

Sample profiles from the first and second surveys by school year, school, sex and smoking status

		School Year		School No.			Sex		Smoking Status		
		1	3	1	2	4	M	F	never	experi	regular
First Survey	n (%)	163 (50.2)	162 (49.8)	88 (27.1)	56 (17.2)	181 (55.7)	144 (44.4)	180 (55.6)	150 (47.2)	118 (37.1)	50 (15.7)
Second Survey	n (%)	145 (53.3)	127 (46.7)	73 (26.8)	48 (17.6)	151 (55.5)	88 (33.9)	171 (66.0)	132 (49.1)	111 (41.3)	26 (9.7)
X^2			<1		<1		6.58 (1DF)		4.88 (2DF)		
P							<.02		NS		

Base		Not recorded	
First survey	325	Smoking:7	Sex:1
Second Survey	272	Smoking:3	Sex:13

Table 5

Frequency (percentage) of brands mentioned in the first and second surveys

	Brand							
	BH	JPS	EM	P6	PD	SC	MAR	PS
1st survey	283 (87.1)	209 (64.3)	179 (55.1)	77 (23.7)	95 (29.2)	144 (44.3)	47 (14.5)	38 (11.7)
2nd survey	243 (89.3)	193 (70.9)	186 (68.4)	61 (22.4)	91 (33.5)	133 (48.9)	76 (27.9)	29 (10.7)
Change (% points)	+2.2	+6.6	+13.3	−1.5	+4.3	+4.6	+13.4	−1.0
X^2 (1DF)	<1	2.98	11.0	<1	1.23	1.25	16.5	<1
p		NS	<.001		NS	NS	<.001	

Base: 1st Survey 325; 2nd Survey 272.

Table 6

Frequency (percentage) of cigarette brands associated with sports: comparison of first and second surveys

	BH	JPS	EM	P6	PD	SC	MAR	PS
First survey	88 (27.1)	86 (26.5)	58 (17.8)	0 (–)	0 (–)	1 (0.3)	18 (5.5)	0
Second survey	92 (33.8)	123 (45.2)	111 (40.8)	3 (1.1)	0 (–)	5 (1.8)	45 (16.5)	0
Change	+6.7	+18.7	+23.0	+1.1	–	+1.5	+11.0	–
X^2	3.20	22.9	38.47	<1	–	<1	19.0	
p	NS	<.001	<.001	<.001			<.001	

Base First Survey 325. Second Survey 272

differences in brand awareness were shown (though not to the same degree) in boys and girls and the level of absenteeism had no effect on brand awareness and linkage with sport.

The increased knowledge of *Marlboro* and its linkage, together with *JPS*, with sport, are noteworthy and indicate the problems of carrying out before and after studies outside the laboratory when all other factors cannot necessarily be held constant. In the interval between the two surveys, there were two Grand Prix motor racing events shown on BBC TV and several *Grandstand* TV programmes featured motor racing. The *Marlboro* and *JPS* racing cars figured prominently in these events and their pictures were widely used to publicise the events, even in *Radio Times*, which does not accept paid cigarette advertising. The increase in awareness of the sponsored brands suggests that even fairly brief exposure to tobacco-sponsored sports on TV, if linked to well-publicised images, may produce a considerable increase in levels of brand awareness and association with sport.

Given the definition of advertising suggested above - activities which familiarise the audience with the name of a brand and associate it with positive images or ideas - it must be concluded that the sponsorship on TV by the manufacturers of *Embassy* acted as advertising to children. Thus the sponsorship appeared to circumvent both the law banning cigarette advertising on TV, and the BBC Licence and Agreement which (in Clause 12) states that: the BBC "shall not send or emit . . . . any sponsored programme" and (in Clause 13) forbids "the transmission of television images of very brief duration which 'might convey a message to in . . . . the minds of an audience without them being aware, or fully aware, of what has been done'"[4].

There is a need for further investigation to determine whether tobacco sports sponsorship not only acts as advertising as defined earlier, but also persuades children to smoke. The studies (which are equivocal) as to whether tobacco promotion does encourage people to smoke, are not directly relevant to the question of the effects on children. Such studies are based on econometric analyses[5,6] and deal with aggregate demand (of which childrens' smoking accounts for no more than 1 or 2 billion[7] of the total of 102 billion per year[8]). A large change in the prevalence of smoking in children would have a negligible impact on aggregate demand but might have a major influence on future smoking prevalence since most regular smokers adopt the habit before the age of 18[9]. Moreover it should be noted that econometric studies only examine advertising expenditure and ignore sponsorship which is small in terms of money but the present evidence suggests may be disproportionately effective in its impact on children.

What is needed are more detailed longitudinal studies of the impact of various types of tobacco promotion on the behaviour of representative samples of children, although it should be born in mind that longitudinal studies are likely to breach anonymity and thus lead to problems in the under-reporting of smoking. Recently announced government-commissioned research using small group discussions, which it is thought "could even disclose that sports sponsorship . . . . may have no effect in persuading young people to smoke"[10], have little of substance to offer. Few people would admit that advertising affects their behaviour, yet there is no doubt of the aggregate effect of advertising on sales.

For the present it is contended that the case rests that sports sponsorship on BBC TV has been shown to act as cigarette advertising to children. There would thus appear to be good grounds for calling for the cessation of tobacco sports sponsorship on TV so as to prevent further circumvention of the law banning the TV advertising of cigarettes.

Acknowledgements

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MASTER SETTLEMENT AGREEMENT

This Master Settlement Agreement is made by the undersigned Settling State officials (on behalf of their respective Settling States) and the undersigned Participating Manufacturers to settle and resolve with finality all Released Claims against the Participating Manufacturers and related entities as set forth herein. This Agreement constitutes the documentation effecting this settlement with respect to each Settling State, and is intended to and shall be binding upon each Settling State and each Participating Manufacturer in accordance with the terms hereof.

I. RECITALS

WHEREAS, more than 40 States have commenced litigation asserting various claims for monetary, equitable and injunctive relief against certain tobacco product manufacturers and others as defendants, and the States that have not filed suit can potentially assert similar claims;

WHEREAS, the Settling States that have commenced litigation have sought to obtain equitable relief and damages under state laws, including consumer protection and/or antitrust laws, in order to further the Settling States' policies regarding public health, including policies adopted to achieve a significant reduction in smoking by Youth;

WHEREAS, defendants have denied each and every one of the Settling States' allegations of unlawful conduct or wrongdoing and have asserted a number of defenses to the Settling States' claims, which defenses have been contested by the Settling States;

WHEREAS, the Settling States and the Participating Manufacturers are committed to reducing underage tobacco use by discouraging such use and by preventing Youth access to Tobacco Products;

WHEREAS, the Participating Manufacturers recognize the concern of the tobacco grower community that it may be adversely affected by the potential reduction in tobacco consumption resulting from this settlement, reaffirm their commitment to work cooperatively to address concerns about the potential adverse economic impact on such community, and will, within 30 days after the MSA Execution Date, meet with the political leadership of States with grower communities to address these economic concerns;

WHEREAS, the undersigned Settling State officials believe that entry into this Agreement and uniform consent decrees with the tobacco industry is necessary in order to further the Settling States' policies designed to reduce Youth smoking, to promote the public health and to secure monetary payments to the Settling States; and

WHEREAS, the Settling States and the Participating Manufacturers wish to avoid the further expense, delay, inconvenience, burden and uncertainty of continued litigation (including appeals from any verdicts), and, therefore, have agreed to settle their respective lawsuits and potential claims pursuant to terms which will achieve for the Settling States and their citizens significant funding for the advancement of public health, the implementation of important tobacco-related public health measures, including the enforcement of the mandates and restrictions related to such measures, as well as funding for a national Foundation dedicated to significantly reducing the use of Tobacco Products by Youth;

NOW, THEREFORE, BE IT KNOWN THAT, in consideration of the implementation of tobacco-related health measures and the payments to be made by the Participating Manufacturers, the release and discharge of all claims by the Settling States, and such other consideration as described herein, the sufficiency of which is hereby acknowledged, the Settling States and the Participating Manufacturers, acting by and through their authorized agents, memorialize and agree as follows:

II. DEFINITIONS

(a) "Account" has the meaning given in the Escrow Agreement.

(b) "Adult" means any person or persons who are not Underage.

(c) "Adult-Only Facility" means a facility or restricted area (whether open-air or enclosed) where the operator ensures or has a reasonable basis to believe (such as by checking identification as required under state law, or by checking the identification of any person appearing to be under the age of 27) that no Underage person is present. A facility or restricted area need not be permanently restricted to Adults in order to constitute an Adult-Only Facility, provided that the operator ensures or has a reasonable basis to believe that no Underage person is present during the event or time period in question.

(d) "Affiliate" means a person who directly or indirectly owns or controls, is owned or controlled by, or is under common ownership or control with, another person. Solely for purposes of this definition, the terms "owns," "is owned" and "ownership" mean ownership of an equity interest, or the equivalent thereof, of 10 percent or more, and the term "person" means an individual, partnership, committee, association, corporation or any other organization or group of persons.

(e) "Agreement" means this Master Settlement Agreement, together with the exhibits hereto, as it may be amended pursuant to subsection XVIII(j).

(f) "Allocable Share" means the percentage set forth for the State in question as listed in Exhibit A hereto, without regard to any subsequent alteration or modification of such State's percentage share agreed to by or among any States; or, solely for the purpose of calculating payments under subsection IX(c)(2) (and corresponding payments under subsection IX(i)), the percentage disclosed for the State in question pursuant to subsection IX(c)(2)(A) prior to June 30, 1999, without regard to any subsequent alteration or modification of such State's percentage share agreed to by or among any States.

(g) "Allocated Payment" means a particular Settling State's Allocable Share of the sum of all of the payments to be made by the Original Participating Manufacturers in the year in question pursuant to subsections IX(c)(1) and IX(c)(2), as such payments have been adjusted, reduced and allocated pursuant to clause "First" through the first sentence of clause "Fifth" of subsection IX(j), but before application of the other offsets and adjustments described in clauses "Sixth" through "Thirteenth" of subsection IX(j).

(h) "Bankruptcy" means, with respect to any entity, the commencement of a case or other proceeding (whether voluntary or involuntary) seeking any of (1) liquidation, reorganization, rehabilitation, receivership, conservatorship, or other relief with respect to such entity or its debts under any bankruptcy, insolvency or similar law now or hereafter in effect; (2) the appointment of a trustee,

receiver, liquidator, custodian or similar official of such entity or any substantial part of its business or property; (3) the consent of such entity to any of the relief described in (1) above or to the appointment of any official described in (2) above in any such case or other proceeding involuntarily commenced against such entity; or (4) the entry of an order for relief as to such entity under the federal bankruptcy laws as now or hereafter in effect. Provided, however, that an involuntary case or proceeding otherwise within the foregoing definition shall not be a "Bankruptcy" if it is or was dismissed within 60 days of its commencement.

(i) "Brand Name" means a brand name (alone or in conjunction with any other word), trademark, logo, symbol, motto, selling message, recognizable pattern of colors, or any other indicia of product identification identical or similar to, or identifiable with, those used for any domestic brand of Tobacco Products. Provided, however, that the term "Brand Name" shall not include the corporate name of any Tobacco Product Manufacturer that does not after the MSA Execution Date sell a brand of Tobacco Products in the States that includes such corporate name.

(j) "Brand Name Sponsorship" means an athletic, musical, artistic, or other social or cultural event as to which payment is made (or other consideration is provided) in exchange for use of a Brand Name or Names (1) as part of the name of the event or (2) to identify, advertise, or promote such event or an entrant, participant or team in such event in any other way. Sponsorship of a single national or multi-state series or tour (for example, NASCAR (including any number of NASCAR races)), or of one or more events within a single national or multi-state series or tour, or of an entrant, participant, or team taking part in events sanctioned by a single approving organization (e.g., NASCAR or CART), constitutes one Brand Name Sponsorship. Sponsorship of an entrant, participant, or team by a Participating Manufacturer using a Brand Name or Names in an event that is part of a series or tour that is sponsored by such Participating Manufacturer or that is part of a series or tour in which any one or more events are sponsored by such Participating Manufacturer does not constitute a separate Brand Name Sponsorship. Sponsorship of an entrant, participant, or team by a Participating Manufacturer using a Brand Name or Names in any event (or series of events) not sponsored by such Participating Manufacturer constitutes a Brand Name Sponsorship. The term "Brand Name Sponsorship" shall not include an event in an Adult-Only Facility.

(k) "Business Day" means a day which is not a Saturday or Sunday or legal holiday on which banks are authorized or required to close in New York, New York.

(l) "Cartoon" means any drawing or other depiction of an object, person, animal, creature or any similar caricature that satisfies any of the following criteria:

(1) the use of comically exaggerated features;

(2) the attribution of human characteristics to animals, plants or other objects, or the similar use of anthropomorphic technique; or

(3) the attribution of unnatural or extrahuman abilities, such as imperviousness to pain or injury, X-ray vision, tunneling at very high speeds or transformation.

The term "Cartoon" includes "Joe Camel," but does not include any drawing or other depiction that on July 1, 1998, was in use in any State in any Participating Manufacturer's corporate logo or in any Participating Manufacturer's Tobacco Product packaging.

(m) "Cigarette" means any product that contains nicotine, is intended to be burned or heated under ordinary conditions of use, and consists of or contains (1) any roll of tobacco wrapped in paper or in any substance not containing tobacco; or (2) tobacco, in any form, that is functional in the product, which, because of its appearance, the type of tobacco used in the filler, or its packaging and labeling, is likely to be offered to, or purchased by, consumers as a cigarette; or (3) any roll of tobacco wrapped in any substance containing tobacco which, because of its appearance, the type of tobacco used in the filler, or its packaging and labeling, is likely to be offered to, or purchased by, consumers as a cigarette described in clause (1) of this definition. The term "Cigarette" includes "roll-your-own" (i.e., any tobacco which, because of its appearance, type, packaging, or labeling is suitable for use and likely to be offered to, or purchased by, consumers as tobacco for making cigarettes). Except as provided in subsections II(z) and II(mm), 0.0325 ounces of "roll-your-own" tobacco shall constitute one individual "Cigarette."

(n) "Claims" means any and all manner of civil (i.e., non-criminal): claims, demands, actions, suits, causes of action, damages (whenever incurred), liabilities of any nature including civil penalties and punitive damages, as well as costs, expenses and attorneys' fees (except as to the Original Participating Manufacturers' obligations under section XVII), known or unknown, suspected or unsuspected, accrued or unaccrued, whether legal, equitable, or statutory.

(o) "Consent Decree" means a state-specific consent decree as described in subsection XIII(b)(1)(B) of this Agreement.

(p) "Court" means the respective court in each Settling State to which this Agreement and the Consent Decree are presented for approval and/or entry as to that Settling State.

(q) "Escrow" has the meaning given in the Escrow Agreement.

(r) "Escrow Agent" means the escrow agent under the Escrow Agreement.

(s) "Escrow Agreement" means an escrow agreement substantially in the form of Exhibit B.

(t) "Federal Tobacco Legislation Offset" means the offset described in section X.

(u) "Final Approval" means the earlier of:

(1) the date by which State-Specific Finality in a sufficient number of Settling States has occurred; or

(2) June 30, 2000.

For the purposes of this subsection (u), "State-Specific Finality in a sufficient number of Settling States" means that State-Specific Finality has occurred in both:

(A) a number of Settling States equal to at least 80% of the total number of Settling States; and

(B) Settling States having aggregate Allocable Shares equal to at least 80% of the total aggregate Allocable Shares assigned to all Settling States.

Notwithstanding the foregoing, the Original Participating Manufacturers may, by unanimous written agreement, waive any requirement for Final Approval set forth in subsections (A) or (B) hereof.

(v) "Foundation" means the foundation described in section VI.

(w) "Independent Auditor" means the firm described in subsection XI(b).

(x) "Inflation Adjustment" means an adjustment in accordance with the formulas for inflation adjustments set forth in Exhibit C.

(y) "Litigating Releasing Parties Offset" means the offset described in subsection XII(b).

(z) "Market Share" means a Tobacco Product Manufacturer's respective share (expressed as a percentage) of the total number of individual Cigarettes sold in the fifty United States, the District of Columbia and Puerto Rico during the applicable calendar year, as measured by excise taxes collected by the federal government and, in the case of sales in Puerto Rico, arbitrios de cigarillos collected by the Puerto Rico taxing authority. For purposes of the definition and determination of "Market Share" with respect to calculations under subsection IX(i), 0.09 ounces of "roll your own" tobacco shall constitute one individual Cigarette; for purposes of the definition and determination of "Market Share" with respect to all other calculations, 0.0325 ounces of "roll your own" tobacco shall constitute one individual Cigarette.

(aa) "MSA Execution Date" means November 23, 1998.

(bb) "NAAG" means the National Association of Attorneys General, or its successor organization that is directed by the Attorneys General to perform certain functions under this Agreement.

(cc) "Non-Participating Manufacturer" means any Tobacco Product Manufacturer that is not a Participating Manufacturer.

(dd) "Non-Settling States Reduction" means a reduction determined by multiplying the amount to which such reduction applies by the aggregate Allocable Shares of those States that are not Settling States on the date 15 days before such payment is due.

(ee) "Notice Parties" means each Participating Manufacturer, each Settling State, the Escrow Agent, the Independent Auditor and NAAG.

(ff) "NPM Adjustment" means the adjustment specified in subsection IX(d).

(gg) "NPM Adjustment Percentage" means the percentage determined pursuant to subsection IX(d).

(hh) "Original Participating Manufacturers" means the following: Brown & Williamson Tobacco Corporation, Lorillard Tobacco Company, Philip Morris Incorporated and R.J. Reynolds Tobacco Company, and the respective successors of each of the foregoing. Except as expressly provided in this Agreement, once an entity becomes an Original Participating Manufacturer, such entity shall permanently retain the status of Original Participating Manufacturer.

(ii) "Outdoor Advertising" means (1) billboards, (2) signs and placards in arenas, stadiums, shopping

malls and Video Game Arcades (whether any of the foregoing are open air or enclosed) (but not including any such sign or placard located in an Adult-Only Facility), and (3) any other advertisements placed (A) outdoors, or (B) on the inside surface of a window facing outward. Provided, however, that the term "Outdoor Advertising" does not mean (1) an advertisement on the outside of a Tobacco Product manufacturing facility; (2) an individual advertisement that does not occupy an area larger than 14 square feet (and that neither is placed in such proximity to any other such advertisement so as to create a single "mosaic"-type advertisement larger than 14 square feet, nor functions solely as a segment of a larger advertising unit or series), and that is placed (A) on the outside of any retail establishment that sells Tobacco Products (other than solely through a vending machine), (B) outside (but on the property of) any such establishment, or (C) on the inside surface of a window facing outward in any such establishment; (3) an advertisement inside a retail establishment that sells Tobacco Products (other than solely through a vending machine) that is not placed on the inside surface of a window facing outward; or (4) an outdoor advertisement at the site of an event to be held at an Adult-Only Facility that is placed at such site during the period the facility or enclosed area constitutes an Adult-Only Facility, but in no event more than 14 days before the event, and that does not advertise any Tobacco Product (other than by using a Brand Name to identify the event).

(jj) "Participating Manufacturer" means a Tobacco Product Manufacturer that is or becomes a signatory to this Agreement, provided that (1) in the case of a Tobacco Product Manufacturer that is not an Original Participating Manufacturer, such Tobacco Product Manufacturer is bound by this Agreement and the Consent Decree (or, in any Settling State that does not permit amendment of the Consent Decree, a consent decree containing terms identical to those set forth in the Consent Decree) in all Settling States in which this Agreement and the Consent Decree binds Original Participating Manufacturers (provided, however, that such Tobacco Product Manufacturer need only become bound by the Consent Decree in those Settling States in which the Settling State has filed a Released Claim against it), and (2) in the case of a Tobacco Product Manufacturer that signs this Agreement after the MSA Execution Date, such Tobacco Product Manufacturer, within a reasonable period of time after signing this Agreement, makes any payments (including interest thereon at the Prime Rate) that it would have been obligated to make in the intervening period had it been a signatory as of the MSA Execution Date. "Participating Manufacturer" shall also include the successor of a Participating Manufacturer. Except as expressly provided in this Agreement, once an entity becomes a Participating Manufacturer such entity shall permanently retain the status of Participating Manufacturer. Each Participating Manufacturer shall regularly report its shipments of Cigarettes in or to the fifty United States, the District of Columbia and Puerto Rico to Management Science Associates, Inc. (or a successor entity as set forth in subsection (mm)). Solely for purposes of calculations pursuant to subsection IX(d), a Tobacco Product Manufacturer that is not a signatory to this Agreement shall be deemed to be a "Participating Manufacturer" if the Original Participating Manufacturers unanimously consent in writing.

(kk) "Previously Settled States Reduction" means a reduction determined by multiplying the amount to which such reduction applies by 12.4500000%, in the case of payments due in or prior to 2007; 12.2373756%, in the case of payments due after 2007 but before 2018; and 11.0666667%, in the case of payments due in or after 2018.

(ll) "Prime Rate" shall mean the prime rate as published from time to time by the Wall Street Journal or, in the event the Wall Street Journal is no longer published or no longer publishes such rate, an equivalent successor reference rate determined by the Independent Auditor.

(mm) "Relative Market Share" means an Original Participating Manufacturer's respective share

(expressed as a percentage) of the total number of individual Cigarettes shipped in or to the fifty United States, the District of Columbia and Puerto Rico by all the Original Participating Manufacturers during the calendar year immediately preceding the year in which the payment at issue is due (regardless of when such payment is made), as measured by the Original Participating Manufacturers' reports of shipments of Cigarettes to Management Science Associates, Inc. (or a successor entity acceptable to both the Original Participating Manufacturers and a majority of those Attorneys General who are both the Attorney General of a Settling State and a member of the NAAG executive committee at the time in question). A Cigarette shipped by more than one Participating Manufacturer shall be deemed to have been shipped solely by the first Participating Manufacturer to do so. For purposes of the definition and determination of "Relative Market Share," 0.09 ounces of "roll your own" tobacco shall constitute one individual Cigarette.

(nn) "Released Claims" means:

> (1) for past conduct, acts or omissions (including any damages incurred in the future arising from such past conduct, acts or omissions), those Claims directly or indirectly based on, arising out of or in any way related, in whole or in part, to (A) the use, sale, distribution, manufacture, development, advertising, marketing or health effects of, (B) the exposure to, or (C) research, statements, or warnings regarding, Tobacco Products (including, but not limited to, the Claims asserted in the actions identified in Exhibit D, or any comparable Claims that were, could be or could have been asserted now or in the future in those actions or in any comparable action in federal, state or local court brought by a Settling State or a Releasing Party (whether or not such Settling State or Releasing Party has brought such action)), except for claims not asserted in the actions identified in Exhibit D for outstanding liability under existing licensing (or similar) fee laws or existing tax laws (but not excepting claims for any tax liability of the Tobacco-Related Organizations or of any Released Party with respect to such Tobacco-Related Organizations, which claims are covered by the release and covenants set forth in this Agreement);
>
> (2) for future conduct, acts or omissions, only those monetary Claims directly or indirectly based on, arising out of or in any way related to, in whole or in part, the use of or exposure to Tobacco Products manufactured in the ordinary course of business, including without limitation any future Claims for reimbursement of health care costs allegedly associated with the use of or exposure to Tobacco Products.

(oo) "Released Parties" means all Participating Manufacturers and their past, present and future Affiliates, divisions, officers, directors, employees, representatives, insurers, lenders, underwriters, Tobacco-Related Organizations, trade associations, suppliers, agents, auditors, advertising agencies, public relations entities, attorneys, retailers and distributors (and the predecessors, heirs, executors, administrators, successors and assigns of each of the foregoing). Provided, however, that "Released Parties" does not include any person or entity (including, but not limited to, an Affiliate) that is itself a Non-Participating Manufacturer at any time after the MSA Execution Date, unless such person or entity becomes a Participating Manufacturer.

(pp) "Releasing Parties" means each Settling State and any of its past, present and future agents, officials acting in their official capacities, legal representatives, agencies, departments, commissions and divisions; and also means, to the full extent of the power of the signatories hereto to release past, present and future claims, the following: (1) any Settling State's subdivisions (political or otherwise,

including, but not limited to, municipalities, counties, parishes, villages, unincorporated districts and hospital districts), public entities, public instrumentalities and public educational institutions; and (2) persons or entities acting in a parens patriae, sovereign, quasi-sovereign, private attorney general, qui tam, taxpayer, or any other capacity, whether or not any of them participate in this settlement, (A) to the extent that any such person or entity is seeking relief on behalf of or generally applicable to the general public in such Settling State or the people of the State, as opposed solely to private or individual relief for separate and distinct injuries, or (B) to the extent that any such entity (as opposed to an individual) is seeking recovery of health-care expenses (other than premium or capitation payments for the benefit of present or retired state employees) paid or reimbursed, directly or indirectly, by a Settling State.

(qq) "Settling State" means any State that signs this Agreement on or before the MSA Execution Date. Provided, however, that the term "Settling State" shall not include (1) the States of Mississippi, Florida, Texas and Minnesota; and (2) any State as to which this Agreement has been terminated.

(rr) "State" means any state of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Virgin Islands, American Samoa, and the Northern Marianas.

(ss) "State-Specific Finality" means, with respect to the Settling State in question:

(1) this Agreement and the Consent Decree have been approved and entered by the Court as to all Original Participating Manufacturers, or, in the event of an appeal from or review of a decision of the Court to withhold its approval and entry of this Agreement and the Consent Decree, by the court hearing such appeal or conducting such review;

(2) entry by the Court has been made of an order dismissing with prejudice all claims against Released Parties in the action as provided herein; and

(3) the time for appeal or to seek review of or permission to appeal ("Appeal") from the approval and entry as described in subsection (1)(A) hereof and entry of such order described in subsection (1)(B) hereof has expired; or, in the event of an Appeal from such approval and entry, the Appeal has been dismissed, or the approval and entry described in (1)(A) hereof and the order described in subsection (1)(B) hereof have been affirmed in all material respects by the court of last resort to which such Appeal has been taken and such dismissal or affirmance has become no longer subject to further Appeal (including, without limitation, review by the United States Supreme Court).

(tt) "Subsequent Participating Manufacturer" means a Tobacco Product Manufacturer (other than an Original Participating Manufacturer) that: (1) is a Participating Manufacturer, and (2) is a signatory to this Agreement, regardless of when such Tobacco Product Manufacturer became a signatory to this Agreement. "Subsequent Participating Manufacturer" shall also include the successors of a Subsequent Participating Manufacturer. Except as expressly provided in this Agreement, once an entity becomes a Subsequent Participating Manufacturer such entity shall permanently retain the status of Subsequent Participating Manufacturer, unless it agrees to assume the obligations of an Original Participating Manufacturer as provided in subsection XVIII(c).

(uu) "Tobacco Product Manufacturer" means an entity that after the MSA Execution Date directly (and not exclusively through any Affiliate):

(1) manufactures Cigarettes anywhere that such manufacturer intends to be sold in the States, including Cigarettes intended to be sold in the States through an importer (except where such importer is an Original Participating Manufacturer that will be responsible for the payments under this Agreement with respect to such Cigarettes as a result of the provisions of subsections II(mm) and that pays the taxes specified in subsection II(z) on such Cigarettes, and provided that the manufacturer of such Cigarettes does not market or advertise such Cigarettes in the States);

(2) is the first purchaser anywhere for resale in the States of Cigarettes manufactured anywhere that the manufacturer does not intend to be sold in the States; or

(3) becomes a successor of an entity described in subsection (1) or (2) above.

The term "Tobacco Product Manufacturer" shall not include an Affiliate of a Tobacco Product Manufacturer unless such Affiliate itself falls within any of subsections (1) - (3) above.

(vv) "Tobacco Products" means Cigarettes and smokeless tobacco products.

(ww) "Tobacco-Related Organizations" means the Council for Tobacco Research-U.S.A., Inc., The Tobacco Institute, Inc. ("TI"), and the Center for Indoor Air Research, Inc. ("CIAR") and the successors, if any, of TI or CIAR.

(xx) "Transit Advertisements" means advertising on or within private or public vehicles and all advertisements placed at, on or within any bus stop, taxi stand, transportation waiting area, train station, airport or any similar location. Notwithstanding the foregoing, the term "Transit Advertisements" does not include (1) any advertisement placed in, on or outside the premises of any retail establishment that sells Tobacco Products (other than solely through a vending machine) (except if such individual advertisement (A) occupies an area larger than 14 square feet; (B) is placed in such proximity to any other such advertisement so as to create a single "mosaic"-type advertisement larger than 14 square feet; or (C) functions solely as a segment of a larger advertising unit or series); or (2) advertising at the site of an event to be held at an Adult-Only Facility that is placed at such site during the period the facility or enclosed area constitutes an Adult-Only Facility, but in no event more than 14 days before the event, and that does not advertise any Tobacco Product (other than by using a Brand Name to identify the event).

(yy) "Underage" means younger than the minimum age at which it is legal to purchase or possess (whichever minimum age is older) Cigarettes in the applicable Settling State.

(zz) "Video Game Arcade" means an entertainment establishment primarily consisting of video games (other than video games intended primarily for use by persons 18 years of age or older) and/or pinball machines.

(aaa) "Volume Adjustment" means an upward or downward adjustment in accordance with the formula for volume adjustments set forth in Exhibit E.

(bbb) "Youth" means any person or persons under 18 years of age.

III. PERMANENT RELIEF

(a) Prohibition on Youth Targeting. No Participating Manufacturer may take any action, directly or indirectly, to target Youth within any Settling State in the advertising, promotion or marketing of Tobacco Products, or take any action the primary purpose of which is to initiate, maintain or increase the incidence of Youth smoking within any Settling State.

(b) Ban on Use of Cartoons. Beginning 180 days after the MSA Execution Date, no Participating Manufacturer may use or cause to be used any Cartoon in the advertising, promoting, packaging or labeling of Tobacco Products.

(c) Limitation of Tobacco Brand Name Sponsorships.

(1) Prohibited Sponsorships. After the MSA Execution Date, no Participating Manufacturer may engage in any Brand Name Sponsorship in any State consisting of:

(A) concerts; or

(B) events in which the intended audience is comprised of a significant percentage of Youth; or

(C) events in which any paid participants or contestants are Youth; or

(D) any athletic event between opposing teams in any football, basketball, baseball, soccer or hockey league.

(2) Limited Sponsorships.

(A) No Participating Manufacturer may engage in more than one Brand Name Sponsorship in the States in any twelve-month period (such period measured from the date of the initial sponsored event).

(B) Provided, however, that

(i) nothing contained in subsection (2)(A) above shall require a Participating Manufacturer to breach or terminate any sponsorship contract in existence as of August 1, 1998 (until the earlier of (x) the current term of any existing contract, without regard to any renewal or option that may be exercised by such Participating Manufacturer or (y) three years after the MSA Execution Date); and

(ii) notwithstanding subsection (1)(A) above, Brown & Williamson Tobacco Corporation may sponsor either the GPC country music festival or the Kool jazz festival as its one annual Brand Name Sponsorship permitted pursuant to subsection (2)(A) as well as one Brand Name Sponsorship permitted pursuant to subsection (2)(B)(i).

(3) Related Sponsorship Restrictions. With respect to any Brand Name Sponsorship

permitted under this subsection (c):

(A) advertising of the Brand Name Sponsorship event shall not advertise any Tobacco Product (other than by using the Brand Name to identify such Brand Name Sponsorship event);

(B) no Participating Manufacturer may refer to a Brand Name Sponsorship event or to a celebrity or other person in such an event in its advertising of a Tobacco Product;

(C) nothing contained in the provisions of subsection III(e) of this Agreement shall apply to actions taken by any Participating Manufacturer in connection with a Brand Name Sponsorship permitted pursuant to the provisions of subsections (2)(A) and (2)(B)(i); the Brand Name Sponsorship permitted by subsection (2)(B)(ii) shall be subject to the restrictions of subsection III(e) except that such restrictions shall not prohibit use of the Brand Name to identify the Brand Name Sponsorship;

A. nothing contained in the provisions of subsections III(f) and III (i) shall apply to apparel or other merchandise: (i) marketed, distributed, offered, sold, or licensed at the site of a Brand Name Sponsorship permitted pursuant to subsections (2)(A) or (2)(B) (i) by the person to which the relevant Participating Manufacturer has provided payment in exchange for the use of the relevant Brand Name in the Brand Name Sponsorship or a third-party that does not receive payment from the relevant Participating Manufacturer (or any Affiliate of such Participating Manufacturer) in connection with the marketing, distribution, offer, sale or license of such apparel or other merchandise; or (ii) used at the site of a Brand Name Sponsorship permitted pursuant to subsection (2)(A) or (2)(B)(i) (during such event) that are not distributed (by sale or otherwise) to any member of the general public; and

(E) nothing contained in the provisions of subsection III(d) shall: (i) apply to the use of a Brand Name on a vehicle used in a Brand Name Sponsorship; or (ii) apply to Outdoor Advertising advertising the Brand Name Sponsorship, to the extent that such Outdoor Advertising is placed at the site of a Brand Name Sponsorship no more than 90 days before the start of the initial sponsored event, is removed within 10 days after the end of the last sponsored event, and is not prohibited by subsection (3)(A) above.

(4) Corporate Name Sponsorships. Nothing in this subsection (c) shall prevent a Participating Manufacturer from sponsoring or causing to be sponsored any athletic, musical, artistic, or other social or cultural event, or any entrant, participant or team in such event (or series of events) in the name of the corporation which manufactures Tobacco Products, provided that the corporate name does not include any Brand Name of domestic Tobacco Products.

(5) Naming Rights Prohibition. No Participating Manufacturer may enter into any agreement for the naming rights of any stadium or arena located within a Settling State using a Brand Name, and shall not otherwise cause a stadium or arena located within a Settling State to be named with a Brand Name.

(6) Prohibition on Sponsoring Teams and Leagues. No Participating Manufacturer may enter into any agreement pursuant to which payment is made (or other consideration is provided) by such Participating Manufacturer to any football, basketball, baseball, soccer or hockey league (or any team involved in any such league) in exchange for use of a Brand Name.

(d) Elimination of Outdoor Advertising and Transit Advertisements. Each Participating Manufacturer shall discontinue Outdoor Advertising and Transit Advertisements advertising Tobacco Products within the Settling States as set forth herein.

(1) Removal. Except as otherwise provided in this section, each Participating Manufacturer shall remove from within the Settling States within 150 days after the MSA Execution Date all of its (A) billboards (to the extent that such billboards constitute Outdoor Advertising) advertising Tobacco Products; (B) signs and placards (to the extent that such signs and placards constitute Outdoor Advertising) advertising Tobacco Products in arenas, stadiums, shopping malls and Video Game Arcades; and (C) Transit Advertisements advertising Tobacco Products.

(2) Prohibition on New Outdoor Advertising and Transit Advertisements. No Participating Manufacturer may, after the MSA Execution Date, place or cause to be placed any new Outdoor Advertising advertising Tobacco Products or new Transit Advertisements advertising Tobacco Products within any Settling State.

(3) Alternative Advertising. With respect to those billboards required to be removed under subsection (1) that are leased (as opposed to owned) by any Participating Manufacturer, the Participating Manufacturer will allow the Attorney General of the Settling State within which such billboards are located to substitute, at the Settling State's option, alternative advertising intended to discourage the use of Tobacco Products by Youth and their exposure to second-hand smoke for the remaining term of the applicable contract (without regard to any renewal or option term that may be exercised by such Participating Manufacturer). The Participating Manufacturer will bear the cost of the lease through the end of such remaining term. Any other costs associated with such alternative advertising will be borne by the Settling State.

(4) Ban on Agreements Inhibiting Anti-Tobacco Advertising. Each Participating Manufacturer agrees that it will not enter into any agreement that prohibits a third party from selling, purchasing or displaying advertising discouraging the use of Tobacco Products or exposure to second-hand smoke. In the event and to the extent that any Participating Manufacturer has entered into an agreement containing any such prohibition, such Participating Manufacturer agrees to waive such prohibition in such agreement.

(5) Designation of Contact Person. Each Participating Manufacturer that has Outdoor Advertising or Transit Advertisements advertising Tobacco Products within a Settling

State shall, within 10 days after the MSA Execution Date, provide the Attorney General of such Settling State with the name of a contact person to whom the Settling State may direct inquiries during the time such Outdoor Advertising and Transit Advertisements are being eliminated, and from whom the Settling State may obtain periodic reports as to the progress of their elimination.

(6) Adult-Only Facilities. To the extent that any advertisement advertising Tobacco Products located within an Adult-Only Facility constitutes Outdoor Advertising or a Transit Advertisement, this subsection (d) shall not apply to such advertisement, provided such advertisement is not visible to persons outside such Adult-Only Facility.

(e) Prohibition on Payments Related to Tobacco Products and Media. No Participating Manufacturer may, beginning 30 days after the MSA Execution Date, make, or cause to be made, any payment or other consideration to any other person or entity to use, display, make reference to or use as a prop any Tobacco Product, Tobacco Product package, advertisement for a Tobacco Product, or any other item bearing a Brand Name in any motion picture, television show, theatrical production or other live performance, live or recorded performance of music, commercial film or video, or video game ("Media"); provided, however, that the foregoing prohibition shall not apply to (1) Media where the audience or viewers are within an Adult-Only Facility (provided such Media are not visible to persons outside such Adult-Only Facility); (2) Media not intended for distribution or display to the public; or (3) instructional Media concerning non-conventional cigarettes viewed only by or provided only to smokers who are Adults.

(f) Ban on Tobacco Brand Name Merchandise. Beginning July 1, 1999, no Participating Manufacturer may, within any Settling State, market, distribute, offer, sell, license or cause to be marketed, distributed, offered, sold or licensed (including, without limitation, by catalogue or direct mail), any apparel or other merchandise (other than Tobacco Products, items the sole function of which is to advertise Tobacco Products, or written or electronic publications) which bears a Brand Name. Provided, however, that nothing in this subsection shall (1) require any Participating Manufacturer to breach or terminate any licensing agreement or other contract in existence as of June 20, 1997 (this exception shall not apply beyond the current term of any existing contract, without regard to any renewal or option term that may be exercised by such Participating Manufacturer); (2) prohibit the distribution to any Participating Manufacturer's employee who is not Underage of any item described above that is intended for the personal use of such an employee; (3) require any Participating Manufacturer to retrieve, collect or otherwise recover any item that prior to the MSA Execution Date was marketed, distributed, offered, sold, licensed, or caused to be marketed, distributed, offered, sold or licensed by such Participating Manufacturer; (4) apply to coupons or other items used by Adults solely in connection with the purchase of Tobacco Products; or (5) apply to apparel or other merchandise used within an Adult-Only Facility that is not distributed (by sale or otherwise) to any member of the general public.

(g) Ban on Youth Access to Free Samples. After the MSA Execution Date, no Participating Manufacturer may, within any Settling State, distribute or cause to be distributed any free samples of Tobacco Products except in an Adult-Only Facility. For purposes of this Agreement, a "free sample" does not include a Tobacco Product that is provided to an Adult in connection with (1) the purchase, exchange or redemption for proof of purchase of any Tobacco Products (including, but not limited to, a free offer in connection with the purchase of Tobacco Products, such as a "two-for-one" offer), or (2) the conducting of consumer testing or evaluation of Tobacco Products with persons who certify that they are Adults.

(h) Ban on Gifts to Underage Persons Based on Proofs of Purchase. Beginning one year after the MSA Execution Date, no Participating Manufacturer may provide or cause to be provided to any person without sufficient proof that such person is an Adult any item in exchange for the purchase of Tobacco Products, or the furnishing of credits, proofs-of-purchase, or coupons with respect to such a purchase. For purposes of the preceding sentence only, (1) a driver's license or other government-issued identification (or legible photocopy thereof), the validity of which is certified by the person to whom the item is provided, shall by itself be deemed to be a sufficient form of proof of age; and (2) in the case of items provided (or to be redeemed) at retail establishments, a Participating Manufacturer shall be entitled to rely on verification of proof of age by the retailer, where such retailer is required to obtain verification under applicable federal, state or local law.

(i) Limitation on Third-Party Use of Brand Names. After the MSA Execution Date, no Participating Manufacturer may license or otherwise expressly authorize any third party to use or advertise within any Settling State any Brand Name in a manner prohibited by this Agreement if done by such Participating Manufacturer itself. Each Participating Manufacturer shall, within 10 days after the MSA Execution Date, designate a person (and provide written notice to NAAG of such designation) to whom the Attorney General of any Settling State may provide written notice of any such third-party activity that would be prohibited by this Agreement if done by such Participating Manufacturer itself. Following such written notice, the Participating Manufacturer will promptly take commercially reasonable steps against any such non-de minimis third-party activity. Provided, however, that nothing in this subsection shall require any Participating Manufacturer to (1) breach or terminate any licensing agreement or other contract in existence as of July 1, 1998 (this exception shall not apply beyond the current term of any existing contract, without regard to any renewal or option term that may be exercised by such Participating Manufacturer); or (2) retrieve, collect or otherwise recover any item that prior to the MSA Execution Date was marketed, distributed, offered, sold, licensed or caused to be marketed, distributed, offered, sold or licensed by such Participating Manufacturer.

(j) Ban on Non-Tobacco Brand Names. No Participating Manufacturer may, pursuant to any agreement requiring the payment of money or other valuable consideration, use or cause to be used as a brand name of any Tobacco Product any nationally recognized or nationally established brand name or trade name of any non-tobacco item or service or any nationally recognized or nationally established sports team, entertainment group or individual celebrity. Provided, however, that the preceding sentence shall not apply to any Tobacco Product brand name in existence as of July 1, 1998. For the purposes of this subsection, the term "other valuable consideration" shall not include an agreement between two entities who enter into such agreement for the sole purpose of avoiding infringement claims.

(k) Minimum Pack Size of Twenty Cigarettes. No Participating Manufacturer may, beginning 60 days after the MSA Execution Date and through and including December 31, 2001, manufacture or cause to be manufactured for sale in any Settling State any pack or other container of Cigarettes containing fewer than 20 Cigarettes (or, in the case of roll-your-own tobacco, any package of roll-your-own tobacco containing less than 0.60 ounces of tobacco). No Participating Manufacturer may, beginning 150 days after the MSA Execution Date and through and including December 31, 2001, sell or distribute in any Settling State any pack or other container of Cigarettes containing fewer than 20 Cigarettes (or, in the case of roll-your-own tobacco, any package of roll-your-own tobacco containing less than 0.60 ounces of tobacco). Each Participating Manufacturer further agrees that following the MSA Execution Date it shall not oppose, or cause to be opposed (including through any third party or Affiliate), the passage by any Settling State of any legislative proposal or administrative rule applicable

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Effects of Smoke-Free Environments, Advertising Bans and Price Increases

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Introduction

'Industrial epidemics' [1] are the premature deaths (between the ages of 15 and 65 years) and diseases related to the lawful or unlawful marketing of life- or health-threatening products by powerful and organized industries employing coherent, long-term international strategies that the developed societies have to cope with. Tobacco is one of these products. The eminent Oxford epidemiologist Richard Peto [2] holds to the theory that the industry has done more to aggravate cancer than medical science has been able to cure it. Lung cancer could be compared with stomach cancer: their frequencies have changed dramatically in opposite directions since 1930. Tobacco is the only consumer product that can kill if used exactly as intended by the manufacturers. From that point of view, tobacco use should not only be considered as a medical issue but also as a socio-economic issue.

Pro-health activists, governments and international organizations such as the World Health Organization (WHO) have logically promoted a comprehensive package of policies, necessary to tackle this major health problem [3]. In May 1996, the 49th General Assembly of the WHO adopted a resolution for an international convention on tobacco control. Over 100 countries around the world have now adpoted legislation to control the use of tobacco and their number is increasing. Many of these countries are strengthening their existing legislation and arming themselves to apply it more effectively.

The WHO, which has thrown its moral weight behind the effort to control this epidemic, calls for the adoption of a series of five measures: banning tobacco advertising, increasing tobacco prices, clean indoor air policy, health education, and helping smokers to quit. But some countries have enacted measures which are not mentioned in that list. For instance, the USA have recently decided to adopt a federal ban on tobacco sales to minors; in European countries, cigarette makers are obliged to print health warnings on cigarette packs; the Swedish government allows only the sales of 20 cigarette packs.

As governments have faced the persistence of the tobacco epidemic and their youth begin smoking year after year, more and more have banned all advertising and promotion of tobacco, substantially raised taxes on, and prices of, tobacco products, and have placed restrictions on smoking in public places, work sites, and public transport [4].

The purpose of this chapter is not to present a comprehensive review of world regulations on tobacco control, but to examine the effectiveness of three of the most frequently cited types of measures to prevent smoking: smoke-free environments, advertising bans, and price increases. The challenge remains to achieve better health in the most efficient way.

Smoke-Free Environments

The purpose of this section is to examine whether clean indoor air policies reduce smokers' demand for tobacco.

Second-Hand Smoke and the Smoking Bans

In 1972, involuntary smoking was identified as a health risk. After publication in the *British Medical Journal* in 1981 of the study by Hirayama [5] describing the increased incidence of lung cancer among nonsmoking wives of Japanese men who smoked, publicity on this issue rose markedly in world media. In 1986 the US Surgeon General's report focused exclusively on its health consequences. It concluded that environmental tobacco smoke (ETS) was a cause of disease, including lung cancer, and that the children of parents who smoke, compared with those whose parents are nonsmokers, have an increased frequency of respiratory and upper airways infections and smaller rates of increase in lung function as the lung matures. It also stated that simple separation of smokers and nonsmokers within the same air-space may reduce, but does not eliminate, exposure of nonsmokers to passive smoking. In 1992, the Environmental Protection Agency (EPA) declared involuntary smoking a Class A carcinogen [6] and stressed on other ETS-related diseases: COLD, vascular diseases, sudden infant death ... Following that, the Occupational Health and Safety Administration (OSHA) proposed, in March 1994, a complete ban on smoking in over 6 million worksites in the USA. As people become aware of the dangers of ETS, more and more work-

Table 1. Estimated sales of cigarettes forgone annually if 90% of Australian indoor workplaces became smoke-free

1.	Approximative number of indoor paid workers in Australia	4.6 million workers
2.	Estimated percent smokers: 24.7%	1.1362 million smokers
3.	Mean daily reduction in daily smoking after workplaces become smoke-free: 5.18%	5.885 million cigarettes per day
4.	Multiplied by 230 working days/year	1,353.7 million cigarettes per day
5.	Assuming 90% of indoor workplaces go smoke-free	1,218.3 million cigarettes per day
6a.	Multiplied by 16.7 cents per cigarette (if all budget brands)	USD 203,456,100 less sales
6b.	Multiplied by 22.6 cents per cigarette (if all premium brands)	USD 275,335,800 less sales

Source: National Health and Medical Research Council, The Health Effects of Passive Smoking. The Draft Report of the NHMRC Working Party, Nov. 1995, Canberra, p 190.

places, cinemas, restaurants, schools, sport centres, shops, buses, trains, airplains and hospitals are being designed as 'smoke-free' zones.

The Indirect Effect of Clean Indoor Air Policy on Smokers' Behaviour (table 1)

The great majority of research and debate on policy that has surrounded the topic of second-hand smoke has proceeded from a concern about the harmfulness of ETS to nonsmokers. But the protection of nonsmoker's rights and health, with the establishment by law of a clean indoor air policy, also affects smokers' behaviour. In terms of public health, restrictions on smoking introduced in the ostensible interests of preventing ETS may well prove to have a very significant impact on the prevalence and frequency of smoking, and therefore on smokers' own health. We have reviewed the little available evidence on the 'indirect effects' of smoke-free policies in workplaces on cessation rates and frequency of smoking among continuing smokers.

Of all the occasions when smoking is not permitted, the longest smoke-free duration for the greatest number of people occurs in fact in those workplaces where restrictions on smoking operate. So, it is a matter of fact that workplace smoking restrictions are likely to have a greater impact on the prevalence of smoking and/or the level of cigarette consumption than restrictions in public areas. Evidence is accumulating which shows that smoke-free policies in workplaces are associated with a significant reduction in consumption of cigarettes and increased

attempts at cessation among continuing smokers. A total of 14 reports have now been published describing reductions in consumption of cigarettes in smokers who were not permitted to smoke at work [7–21]. The evidence on whether smoke-free policies in workplaces promote cessation of smoking appears to be less consistent than that on the effects of smoke-free policies on frequency and quantity of smoking. Several studies have found an increase in cessation of smoking [10, 14, 15, 22], while others have found no change [8–10, 15, 23].

Smokers who are in the contemplation stage of the process of smoking cessation [19, 24] at the time smoke-free policies are introduced, or who take up a new job where smoking is not allowed, might well be 'triggered' to stop smoking. As work is a common setting for relapse during attemps to quit [23], smoke-free measures at work could be expected to assist quitting smokers to survive situations that might otherwise result in relapse.

The workplace is not the only context in which smoking has been restricted. A considerable amount of time is spent by smokers commuting and travelling on nonsmoking underground, buses and trains; patronizing cinemas, theatres and concert halls; visiting hospitals, museums, exhibitions and other enclosed public places. In many countries, nearly all of these places are now totally smoke-free. In Europe, most commercial flights are totally smoke-free. Most of the US, Canadian and Australian companies are smoke-free. The result is a considerable erosion of time available for smoking.

As the number of workplaces and other public spaces where smoking is restricted increases, the number of opportunities for smoking decreases, with the result that overall frequency of smoking among continuing smokers will also decrease. This will produce net benefits in public health terms, as well as providing smokers with a means of regulating their habit. When legislation, regulation or social pressure act to prevent or inhibit smoking in public places, this is likely to be followed by reductions in tobacco consumption.

A recent study by the National Bureau of Economic Research (NBER) of 18,000 US employees [21] has produced conclusive evidence that workplace smoking bans have reduced the amount of smoking by people at work. The proportion of employees working in establishments banning smoking in work sites has climbed from approximately 25% in 1985 to 70% in 1993. The study found that smoking rates had fallen more steeply among men who have worked than among those unemployed. The prevalence of tobacco use among men at work declined by almost 5% more than it did for those out of work between 1976 and 1993.

According to a study conducted by researchers from the University of Illinois [25], strong restrictions on smoking in public places would reduce the prevalence of smoking among youth, while limits on smoking in schools would reduce average cigarette consumption among young smokers.

The current emphasis of research on the potential harm of ETS for nonsmokers may mask that restrictions on smoking reduce opportunities for smoking and thus reduce total consumption of cigarettes. Smoke-free environments also protect young people in particular from social influences that lead them to start smoking.

The Costs and Benefits of the Enforcement of Clean Indoor Air Legislation

A number of authors have demonstrated that smokers impose costs on firms through increased absenteeism [26, 27] and higher care costs [28]. Smoking is also a major cause of lost productivity in the workplace. Policies to discourage smoking can reduce the cost to firms of providing health insurance to workers [21].

Restrictions on smoking introduce potential reductions of the costs of passive smoking (admissions to hospital, other medical services and pharmaceuticals, work absenteeism). In 1990, the manager of corporate health services at Nabisco Brands, a part of RJR Nabisco owner of Camel and Winston brands, declared that he planned to propose smoking cessation to Nabisco's employees in order to cut company costs. For management, restricting smoking in the workplace is also a means of reducing illness among employees, medical claims, absence from work, the risk of fire and the cost of fire insurance and damage to property.

A study of the effect of local ordinances (bylaws) requiring smoke-free restaurants on restaurant revenues was carried out in 15 cities in California [29]. Data were obtained on taxable restaurant sales from 1986 to 1993 for all 15 cities before they restricted smoking. The study found that the presence of smoke-free ordinances had no significant effect on total restaurant sales in any community. The presence of a 100% smoke-free ordinance was associated with a small, but statistically significant, increase in the fraction of total retail sales that went to smoke-free restaurants. The authors conclude that there is no evidence to support the common claim that smoke-free ordinances reduce business.

A congressionally mandated study of the costs and benefits of the enforcement of legislation to ban tobacco-smoke pollution from buildings generally accessible to the public concluded that the net financial benefits of such a measure would range from USD 39 billion to 72 billion per year in the USA [30].

The Impact of the ETS Issue on the Global Tobacco Health Debate

The ETS issue has two other consequences. On one hand, it allows a widening of the definition of smoking beyond its definition as a personal habit, legitimizing it as a social problem. On the other hand, successful cases of litigation against employers by workers with histories of exposure to tobacco smoke have created an industrial climate of concern leading to the proliferation of workplace smoking restrictions and bans.

The Impact of the Nonsmokers' Rights Movement on Total Smoking Prevalence

Finally, we understand why the tobacco industry has identified the passive smoking issue as the single most important problem confronting its economic future [31]. No doubt that the proliferation of smoking restrictions which reduces smoking opportunities and thus reduces total cigarette consumption, hence financial returns to the industry is one of the main reasons for the industry's concern. Workplace smoking restrictions in California cost the industry USD 203 million per year in lost sales, according to a University of California at San Francisco study [32]. In the USA, a nationwide ban could cost the industry as much as USD 4 billion.

Warner [33], at the University of Michigan, estimates that the decline in the incidence of cigarette smoking in the USA since 1973 is due to the nonsmokers' rights movement. Another prominent expert says that the decline in cigarette consumption in the USA since the early 1980s is 'probably related' to four factors, among them: 'smoking restrictions, and concerns about passive smoking' [34].

The fact that the literature on the effects of smoking bans is mostly American should not be surprising. It is in large part due to the specific US tobacco control story. In the USA, 'most of the actions to date have been at local level' [35].

Advertising Bans

Tobacco products are among the most advertised. In the USA, between 1970 (1 year before Federal law prohibited broadcast advertising) and 1993, cigarette advertising and promotional expenditures increased from USD 361 million to USD 6 billion, a 1,562% increase [36].

There has been much disagreement about the influence of tobacco advertising on tobacco consumption. The issue has recently been the subjet of official reviews in the USA [36, 37], New Zealand [38] and the UK [39]. Our purpose is to examine the evidence on the effect of advertising bans, including the impact of tobacco advertising on tobacco consumption.

The Impact of Tobacco Advertising on Tobacco Consumption

There are many kinds of tobacco advertising, including print and outdoor ads, and sports and arts sponsorships. More generally, there has been a tobacco industry shift in emphasis to promotional activities in many countries, including the USA and France. Industry documents indicate that cigarette companies have conducted extensive research on smoking behaviour and attitudes among young people and how advertisements should be made to appeal to them [36]. The fact that cigarettes have probably the highest brand loyalty among consumers of any

consumer product, coupled with the fact that most smokers began before the age of 20, may explain why tobacco manufacturers have focused advertising and promotional efforts on younger people.

Some experts believe that tobacco industries advertise to encourage new consumers to begin using these products, in order to avoid a significant market decline. With the disclosure of internal industry documents, the US Food and Drug Administration (FDA) has recently declared that acquiring a portion of the 'starter' market, overwhelmingly people in their teens, is regarded by the industry as essential to a company's continuing economic viability [36]. As there is ample evidence of the harmful effects of cigarette advertising on children's attitudes and behaviour, the first step is to ban all forms of tobacco advertising and sponsorship.

The Effects of Advertising Bans in Terms of Decreasing Smoking Prevalence

A necessary condition for analyzing the impact of the bans is that they have been enforced. In fact, tobacco companies are used to circumventing the bans because most of the time they do not fear being sued or harshly condemned. For instance, Italy introduced a partial ban in 1962. The ban had not been enforced because the fines for breaking the law were very low. So this measure had no impact on tobacco consumption. In 1983, the ban was strengthened and in 1995, the Italian Supreme Court decided to ban indirect tobacco advertising and sponsorship and to increase tremendously the fines. So the ban has been more efficient.

At the opposite is the French experience. In France, the enforcement of the advertising bans has been left almost entirely to a small nonprofit organization of dedicated pro-health activists, the Comité National Contre le Tabagisme (CNCT). In 1996, the CNCT received USD 322,581/year in damages. Tobacco advertisements dropped from FRF 540 million (Secodip, 1993) in 1992 (1 year before the total prohibition of tobacco advertising) to FRF 24 million in 1996 (Observatoire permanent des publicités et des promotions des produits du tabac, Rapport 1996).

The Econometric Evidence

There is an econometric literature on the effect on tobacco consumption of advertising bans. In 1992, the British Department of Health published for consultation a report from their Chief Economic Adviser [39]. Contrary to the self-interested claims of the tobacco industry, this disinterested review of the econometric literature confirms all common sense expectations about the effects of advertising in increasing tobacco consumption and of controls or bans on advertising in reducing it.

International Comparison of the Impact of Advertising Bans

Comparing the impact of the bans in various countries is also of interest. In New Zealand, the Smoke-Free Environment Act which bans tobacco advertising was enacted in 1990. Cigarette sales dropped by 15.4% the first quarter of 1991 compared to the first quarter of 1990, without any tobacco price increase. At the same time, the smoking prevalence in the general population decreased from 28.6 to 25.6% (New Zealand Excise and Health Departments).

In Canada, cigarette consumption has been declining since 1982, but this decrease doubled after an ad ban was enacted in January 1989. In 1990, the cigarette price increase was almost equivalent to that of 1983–1988 (Statistics Canada).

Norway introduced a Tobacco Act in 1975 banning all tobacco advertising, sponsorship and indirect tobacco advertising. It has been particularly efficient: regular smoking among 16- to 24-year-olds dropped dramatically from 43% in 1973 to 29% in 1996 (Norway's Council on Tobacco and Health). At the same time, the total cigarette consumption dropped by 12%. The rate for adult males who smoke regularly fell from 51 to 34% during this period. The biggest drop came in the early years after the ban was imposed in 1975.

In neighbouring Finland, the trend of increasing cigarette consumption was stopped after a partial advertising ban was introduced in 1978. The adult male smoking prevalence declined from 35% in 1979 to 27% in 1996 (*Wall Street Journal Europe*, 10 June 1997), and the rate of smokers among females stopped rising at 19%.

To avoid measuring the influence of any other kind of tobacco control measure, it is of importance to evaluate the impact of year-to-year variations in advertising expenditure within countries. In 1992, the tobacco industry spent FRF 540 million in direct and indirect advertisements; in 1993, 10 times less with not more than FRF 53 million. In 1992, cigarette sales decreased by 0.8%; in 1993, the year the law went into force, they dropped by 2.78%. In Iceland, where tobacco advertising was banned in 1971, the smoking prevalence among the 12- to 16-year-old teenagers dropped from 32% in 1974 to 13% in 1986 (ASH UK 1993).

In 1971, Singapore banned tobacco advertising. Today, only 9% of 15- to 19-year-old males smoke against 30% of the 50- to 59-year-olds (ASH UK 1993).

Thailand, which was forced by the US Administration to open its market to foreign cigarettes in 1989, enacted with tremendous public support a tobacco advertising ban in March 1992. In 1986, 26.4% of the population smoked; in 1991, the rate was still at 26.3%. But in 1992, the rate dropped to 23.4%. A quick and good result in light of the fact that Thailand's economy was booming (with 8–10% growth per year). Normally that means more use of 'luxury' consumer goods, like cigarettes.

However, in many countries, tobacco companies have circumvented the bans on advertising, countering the impact of such a measure. The fact that countries (France, Finland, Singapore, Norway, Thailand ...) which have banned advertising in order to protect health have seen significant falls in cigarette sales, suggests that advertising does encourage smoking. In other countries, such as Belgium or Spain, where there is no ban, tobacco consumption has increased.

A recent review of research data by the US FDA [36] indicates that there is enough evidence to conclude both that tobacco advertising affects total tobacco consumption and that banning tobacco advertising is linked to decreasing tobacco use.

Indirect Effects

According to a British survey, nearly half of all smokers agree that 'smoking can't really be dangerous or the Government would ban cigarette advertising' [40]. There is also evidence (from the USA) that magazines which rely on cigarette advertising restrict their coverage of the health hazards of smoking. The existence of advertising dilutes the impact of health education. On the contrary, there is evidence that, for instance, French magazines, especially women's magazines, have increased and improved their coverage of smoking issues. Publications will no longer have concerns about the possible loss of revenue if they publicized the health risks of smoking [41].

Economic Effects

The three main potential losers from an advertising ban, apart from the tobacco industry itself, are the advertising industry, the press, and the employees of the tobacco companies. However, the threat to jobs is certainly still greater from rapid automation than from the decline in the market that can be expected from any tobacco control policy. In France, direct tobacco employment fell by 50% in the 1980s, a drop almost entirely due to automation.

In many countries, such as the UK and France, tobacco advertising revenue is marginal for all but a tiny number of magazines. Tobacco products accounted for little more than 1% of the sums spent on advertising in the European Union (EU) in 1990 (*Financial Times,* 20 May 1991). The potential losses are tiny compared with the fall in advertising revenue due to the recession which occurred in the 1990s in these countries.

In the field of sponsorship of sporting and cultural events, the Australian experience shows it can be possible to survive bans. The 13-year Rothmans sponsor hip of the Rubgy League ended in 1995, when Rothmans spent AUD 5 million in cash [S. Shapman, pers. commun.]. In 1996, this was replaced with AUD 6 million from a telecommunications company with a promise of AUD 8 million per year. In addition, Qantas paid AUD 4 million for naming rights to the finals

series. Another airline company replaced Benson & Hedges sponsorship of the cricket season.

The TV, radio, cinema, billboard and publishing industries have all lived to survive tobacco advertising bans. Some examples show sports and arts can too.

Price Increases

The purpose of this section is to summarize the considerable evidence which demonstrates the effectiveness of tobacco price increases in reducing tobacco consumption.

The Basic Reasons for Raising Taxes on, and Prices of, Tobacco Products

The basic reasons for increasing tobacco taxes are: to discourage smoking in general and smoking by young people in particular; to maintain the real price of tobacco products; to ensure compatibility with tobacco prices in neighbouring jurisdictions and thus discourage smuggling; to finance education on tobacco and health, smoking cessation activities and research on smoking; and to accelerate achievement of a smoke-free society [4].

Tobacco Prices and Consumption: The Evidence

Price and Income Elasticities

Common sense, as well as economics, tells us that when the price of a product goes up, demand for it usually goes down. The opposite is also true: when the price goes down, demand generally increases. This link between price and demand is called 'elasticity' by the economists.

Partly because smoking appears to be an addiction, studies all over the world have shown that demand for tobacco is not quite as sensitive to price changes as some other products. Nonetheless, the research shows that, in general, for every 10% price increase, there will be a corresponding fall in tobacco consumption of between 3 and 6%. If a 4% fall in consumption led to a 4% drop in the number of deaths related to smoking, then 2,400 lives a year would be saved in France alone, and 20,520 in the EU.

Figure 1 demonstrates dramatically the close relationship between tobacco prices and consumption in the UK, the price and consumption trends over the last 20 years producing almost a mirror image of each other. The same message emerges from French studies [42] which indicate how tobacco consumption rises when real prices are allowed to fall. Research from Australia, Canada, Finland, Ireland, New Zealand and the USA have all produced similar results.

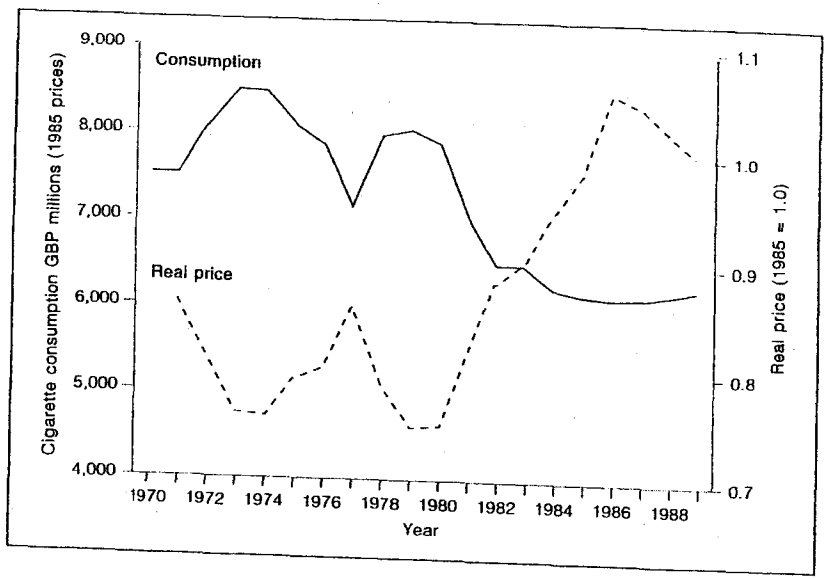


Fig. 1. Real price and consumption of cigarettes in the UK, 1970–1989 [from 50].

Whereas tobacco consumption is negatively price elastic, it is positively income elastic. In other words, if national income per head increases and prices do not then, other things being equal, tobacco becomes more affordable and consumption rises. It has been calculated, for instance, that every 1% increase in national income leads to a rise in tobacco consumption of between 0.3 and 0.6% [43]. This means that to keep tobacco consumption from rising, tobacco taxes must be used to make sure prices at least keep pace with increases in national income. It has been shown that when the 'real' cost of a packet of cigarettes goes up by 10%, sales go down by about 5%, but the government still gets an extra 5% in taxes [44]. The 'real' cost means after allowing for the effects of inflation.

In 1988, California voters enacted Proposition 99 which increased the state excise tax on cigarettes by 25 cents per pack. Researchers from the University of California at Berkeley [45] took into account both supply and demand models to test its effects on cigarette consumption. Higher taxes due to Proposition 99 reduced cigarette consumption in California by 8–9% in the short run and 10–13% in the long run.

In New Zealand, between 1984 and 1991, cigarette prices increased by 70% and consumption dropped by 36% (Tobacco Statistics 1991, Wellington, Department of Statistics and Department of Health, 1992).

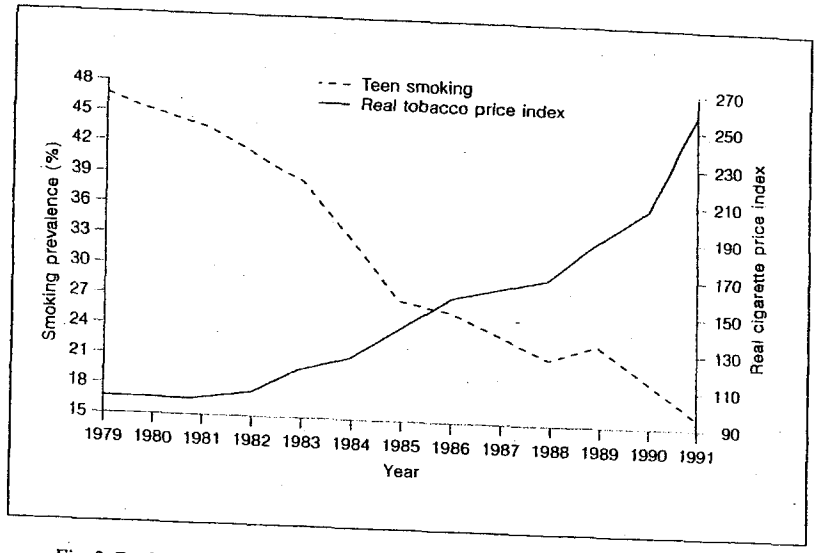


Fig. 2. Real cigarette prices and cigarette smoking prevalence among Canadians aged 15–19 years, 1979–1991. The price of cigarettes relative to the price of all goods and services in Canada, adjusted for inflation with 1979–1980 being the benchmark years [from Health and Welfare Canada, 1991].

A drop in sales will result in a reduction in the smoking disease causes, which is why health campaigners call for the price of tobacco products to go up.

Price and Teenage Smoking

Tobacco price increases do not have the same effect on all groups within the population. Some studies suggest that a rise in tobacco prices has a greater effect on teenage smoking than on the general population. Experience in Canada illustrates the point (fig. 2). This is quite plausible because teenagers' smoking habits are not yet firmly established and most adolescents probably face tight budget constraints. Surveys in Spain and in France have, for example, shown that the less pocket money they had, the less likely students were to experiment with tobacco and become regular users (R. Mendoza, CIDAPS, 1992; CFES, 1995). A study published by the US NBER in 1996 [25] estimates price elasticity of youth cigarette demand of 1.313, a figure which indicates that large increases in cigarette excise taxes would bring about sharp reductions in youth smoking.

Few would suggest restricting pocket money for young people. Far better to increase the price of tobacco by more than the rate of inflation and thereby ensure

it becomes less affordable. Since most smokers first start smoking before they reach the age of 20 [37], any strategy which prevents them starting will have health benefits long into the future. According to the US Surgeon General's 1986 Report, an increase of 10% a year on cigarette price decreases the consumption among adolescents by up to 14% or more [46].

Poor Smokers

Like teenagers, others on a low income could also be expected to react more markedly to changes in the price of tobacco. It seems to be indeed the case, with every 1% price increase leading to a drop in consumption of around 1% among poorer smokers, but having virtually no effect at all among the richest smokers [47].

As smoking is a nonmature behaviour only among the poorest communities in the wealthiest countries, many would argue that this is highly desirable. Smoking rates leave them with the highest rates of smoking-related diseases. Common sense can tell us that if tobacco price increases reduce poor smokers' tobacco consumption more than rich smokers', then this will help to reduce health inequalities between rich and poor. Also, it can be argued if poor people quit smoking as a result of price increases, they will have more money available to spend on other goods and services, any of which will be better for their health than tobacco.

It is sometimes suggested that tobacco taxes are regressive. This is important if quitting does not occur. For those in the bottom quartile, quitting seems to be far more problematic than for others. Indeed, smokers quit for optimistic reasons but poor people have less reason to value their future. They find it hard to give up what many say is their 'one luxury' [48].

It is a matter of fact that the large excess of smoking among the poor will be part of the mechanism of health disadvantage they suffer from. So countering their tobacco addiction will be more difficult than for the general population. To that extent relying on taxation policy alone will not bring it about [49]. The irony is that those who can least afford to smoke have responded least to the taxation policy.

While we can be sure that their tobacco consumption would rise if prices were held down, higher prices due to higher taxation seem to be highly effective in breaking the malignant spiral of poverty and smoking. And it has been suggested that a fraction of the sums paid to the Treasure by poor smokers should be devoted to serious programmes of intervention for them [49]. But every initiative concerning these communities should be supported from within, in order to help them to defend themselves against the millions spent by the tobacco industry in promoting sales. In the USA, smoking prevalence has fallen noticeably among African-American youth because they defended themselves.

Cutting Down or Giving Up?

The evidence is clear: increasing tobacco prices reduces consumption. But it is less clear whether this is due mainly to smokers cutting down on the amount of tobacco they smoke, or to smokers giving up the habit altogether. Quitting is, of course, the best option for health. One British study gives some cause for optimism, calculating that between 1980 and 1986 a 39% real price increase led to a 24% fall in cigarette consumption and a 15% decline in the number of smokers [50]. Of course, the balance between 'quitters' and 'cutters' is likely to vary between countries and between social groups, but a health gain is bound to result.

The 'Killing the Goose That Laid the Golden Egg' Argument

Some critics fear that if tobacco taxation is successful at reducing consumption, then there will be so little tobacco left to tax that the government will lose revenue. But this has logically to be true only in the very long term. In the short and medium term which are of such great importance for policy-makers, government tax revenue actually increases.

The Impact on Smuggling

It has also often been argued, especially by the tobacco industry, that, because tobacco prices can be very much higher in some countries than in others, people will be tempted to buy huge quantities of cheap cigarettes and resell them, illegaly, for profit. The European Confederation of Cigarette Retailers (CEDT) has recently given the best answer to this assertion [51]. For example, in France the contraband 'market share' is estimated by the CEDT at 2% compared to 15% in Spain. And yet cigarette prices are higher in France than in Spain. As the recent Canadian story showed, smuggling is more a problem of the organization of the tobacco products sales. In France, where there is a monopoly of sales under the strict control of Customs, smuggling is very difficult to implement, whereas the State control is not so harsh in Spain.

The Impact on Inflation

Since tobacco is included in the basket of products used to calculate the Consumer Price Index (CPI) which measures the rate of inflation, then an increase in tobacco taxes will raise the price index, something which all governments try to avoid. Since 1987 the Statistical Office of the EU (Eurostat) has been calculating a price index for each member state which excludes tobacco. Actually, for the EU as a whole, tobacco contributes only a very marginal amount. France and Luxembourg, in fact, have removed tobacco from their CPI.

The Impact on Jobs

The majority of job losses in the tobacco industry can be traced to increased mechanization. Cigarette manufacturing is therefore very capital-intensive and increasingly so. It is clear that raising taxes on tobacco, and hence the price, is a very effective policy to reduce tobacco consumption. No government wants to be unpopular, but several surveys show that tobacco taxes are probably the only taxes for which there is any degree of public support.

Generally, support increases for tobacco taxes if the tax revenue is earmarked for special programmes to promote health and to protect children. The Regional Office for Europe of WHO proposed in 1988 a goal of 1% of the tobacco taxes to fund tobacco prevention programmes [3].

Conclusion

As it is clear that smoke-free environments, advertising bans and price increases are very effective measures to achieve better health, health organizations should develop a set of proposals for the adoption of such policies. But they also need to put pressure on the relevant authorities to ensure that these rules are implemented. It is also important to remember that these are just three policies in what ought to be a comprehensive package of measures to tackle tobacco, including demand-side measures such as health education and mass media campaigns. As public health policies are not adopted and implemented in a socio-political vacuum [35], the pro-health campaigners and authorities will need to adopt pragmatic strategies to reach a tobacco-free society.

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REVIEW: DIRECT TOBACCO ADVERTISING AND ITS IMPACT ON CHILDREN

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Abstract
A major objective of all smoking cessation campaigns has been to prevent children starting the habit. This review highlights the difficulties involved in this. Cigarette advertising is a major factor in influencing children, it is readily available to them and some advertisements seem positively to be directed towards the young. The image which children perceive from the advertisement is very strong and affects non-smoking children equally as it does smokers. More attention clearly needs to be paid to the overwhelming evidence of the effect of advertising and pressure put on governments to ban, or at least limit, the advertising of cigarettes where children are likely to be influenced by them. Voluntary agreements seem not to be effective. Evidence from other countries where such measures have been initiated support the view that governmental action does reduce the numbers of young children smoking.

Key words: Children, cigarette advertising, legislation

Introduction

The tobacco industry is continually losing customers. In addition to the many who have stopped smoking (33 million in the USA from 1964–1988 [1], 11 million in the UK by 1991 [2]), there are also those who are killed by smoking (430,000 in the European Community [3] and 110,000 in the UK [4] each year). Having chosen to maximise sales rather than diversify into other products, the tobacco industry needs replacement customers. Worldwide, the principal new markets are Asia [5] and Africa [6,7], and an expert committee of the World Health Organisation has concluded that advertising technology has been a catalyst for increasing consumption there [8]. In industrialised countries, the new recruits are mostly children: 90% of recent adult smokers started smoking regularly by the age of 18 [9], 60% having started by the age of 13 years [10]. By the age of 16, 70% of children have tried smoking [11] while 28% of 9–15 year olds who had ever smoked had their first cigarette before they were 10 [12].

Factors influencing childhood smoking

Why children smoke is a complex issue [13]. Factors known to be predictive of childhood smoking include: smoking by parents, siblings or friends [12]; lack of parental disapproval of childhood smoking [14]; low self-esteem; dislike of school; low academic achievement [15]; ample pocket money; regular consumption of alcohol; and social mixing with older and mixed-sex peer groups [2]. Intentions to smoke when older and uncertainty about remaining a non-smoker are also important predictors of starting smoking [16].

Peer pressure and parental opinion, the main factors, are themselves affected by

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extrinsic considerations. Price is the single most important factor influencing smoking prevalence and consumption [17,18] with health education [19,20,21], and public attitudes [22,23] also important. Advertising is another major factor [24,25].

A study by Grube and colleagues of adolescents' value images of smokers and non-smokers found that smokers were perceived by both groups to be more imaginative, more independent, and more concerned with pleasure, an exciting life and freedom. The authors believed that the desire to attain these positive characteristics may, in part, motivate the initiation to or maintenance of smoking, pointing out that cigarette advertising is the most obvious way by which shared images of smokers are cultivated or reinforced [26]. Smokers among the children were more likely to believe that smoking is pleasurable and that it makes a person more attractive and popular; these themes are to be found repeatedly in tobacco advertisements [27].

The rest of this review will examine the evidence that tobacco advertising does influence children.

Children can and do see tobacco advertisements

Tobacco advertisements are displayed widely in the UK as posters on hoardings, on bus shelters, on shopfronts and in magazines. In 1990, a survey in Oxford found 145 separate tobacco advertisements along half a mile of one shopping street [28]. In Nottingham in 1991, a woman reported passing 55 and 72 cigarette advertisements with her children on different routes to and from school [29]. Despite some restrictions, many magazines seen by or aimed at teenagers carry cigarette advertisements [30].

These advertisements are not only plentiful, they are also highly visible. In 1988, only 17% of 848 Glasgow children aged 11 to 14 years could not recall seeing a cigarette advertisement [31].

The quantity of tobacco advertising swamps educational messages and undermines them. A large section of the smoking public dismiss facts on the harmful effects of smoking: 44% of smokers surveyed agreed: "Smoking can't really be dangerous or the Government would ban advertising" [32].

Children recognise and recall tobacco advertising

On average, the Glaswegian children could recognise five different advertisements [31]. More recently, American children were asked to match 22 logos from children's or adult products, including two popular cigarettes, with pictures of 12 products. The cartoon character Old Joe (promoting Camel cigarettes) was matched correctly with a picture of a cigarette by 30% of three-year-old children and 91% of six-year-olds [33].

Children recognise tobacco advertisements and can identify the brand even when the brand name and logo have been removed [34–36]. Aitken and co-workers found that despite the absence of smoking clues, 30% of six- and 54% of eight-year-olds correctly identified an advertisement as advertising cigarettes. Almost two-fifths of those aged ten (38%) correctly identified the brand as well [37].

Under-age smokers show evidence of paying more attention to cigarette advertisements

In a study of Sydney schoolchildren aged 11 to 14 years, smokers were almost twice as likely as non-smokers to identify edited cigarette advertisements [34]. Glaswegian children who smoked were also more adept than their non-smoking peers at recalling, recognising and identifying cigarette advertisements when the brand names had been obscured [31]. There was a significant dose-response relationship between the level of smoking among American high school students and the ability to identify brands and slogans from edited cigarette advertisements, with regular smokers correctly identifying almost twice as many advertisements as non-smokers (62% *vs.* 33%) [36].

Under-age smokers also had more positive attitudes towards cigarette advertising [38–40] and enjoyed the advertisements more

[41]. Both the number correctly identified, and general appreciation of cigarette advertising, were independent of other important predictors of under-age smoking, such as the smoking status of their friends, siblings or parents [38,39]; perceived parental attitudes to under-age smoking; and age, sex, social class and general attitudes towards smokers and smoking [31].

That under-age smokers are better than non-smoking children at recognising and identifying tobacco brands [35] implies they pay more attention to them. Independent of other important predictors of smoking status, child smokers also have more positive attitudes towards tobacco advertising. These facts indicate that cigarette advertising is reinforcing under-age smoking.

Advertising influences children's choice of cigarette brand

In general, children smoke almost only one brand [42]. Although there were 130 brands available, the study of Sydney schoolchildren showed that only four brands accounted for 79% of the market for 11- to 14-year-old smokers [34]. Goldstein and colleagues found that all light smokers (at least one cigarette but less than one pack each week) and 98% of regular smokers (one or more packs weekly) among US high school students in 9th to 12th grade, had a favourite brand. One brand was preferred by 76% of those expressing a preference [36].

Children are more likely than adults to smoke heavily advertised brands of cigarettes [43,44] and have heightened preferences for the heavily advertised brands most preferred by adults [36,45]. A longitudinal study of children's awareness of cigarette advertising and tobacco use in Louisiana showed that children aged 12 to 17 years had been influenced by advertising and promotional campaigns: changes in brand preference between 1976 and 1981 closely followed cigarette company advertising practices during that time [46]. Thus, children are highly sensitive to cigarette brand advertising.

Surveys of smoking habits in Australian schoolchildren in 1984 and 1987 demonstrated a marked change in brand preference, with the heavily advertised brand, Peter Jackson, more than doubling its market share [47]. This brand both introduced packs of 15 cigarettes, which are attractive to under-age smokers as they are cheaper and easier to hide, and was promoted by massive advertising linking it with sexual attractiveness [47]. Many believe this advertising campaign was particularly attractive to adolescents. The trend towards this brand was most marked among younger children, suggesting the advertising had the most effect on those beginning to smoke [48].

Camel cigarettes have been promoted through a new campaign featuring a cartoon camel (Old Joe) since February 1988. In America, between 1976 and 1988, less than 0.5% of under-age smokers in grades seven to 12 named Camel as their preferred brand. By 1990/1991, Camel was the preferred brand of 33% of smokers under 18 years, compared with 23% of 19- and 20-year-olds and 9% of those aged 21 or more in Massachusetts [27].

Pierce and colleagues compared 5,040 teenagers aged 12 to 17 years with over 24,000 adults. They showed that both Marlboro (the most heavily advertised brand in the US for many years and the market leader) and Camel are both perceived by minors to be heavily advertised and that the market share of minors and young adults for Camel cigarettes had increased disproportionately compared with Marlboro over the previous five years. Camel cigarettes were (falsely) thought to be the most heavily advertised brand by 12- and 13-year-olds, with a steadily declining percentage with increasing age. Unlike Marlboro, whose market share peaked in the 18 to 24 age group then declined gradually with age, there was a sharp fall in the popularity of Camel cigarettes, its market share falling from 25% among 12- to 17-year-old boys (22% in girls) to 13% in 18- to 24-year-old men (5.5% in women) [44]. Thus their findings mirror what one would expect if tobacco advertising differentially targets young people: the perception of advertising was inversely related to age; the pattern of market share reflected that pattern; and the recent increases in market share following

the new promotional campaign affected the youngest age group most.

Aitken and Eadie demonstrated that advertisements aimed at adults had an even greater influence on children. Kensitas Club, a brand heavily advertised in the Glasgow tabloid newspapers, was favoured by 53% of parents who smoked but by 95% of their under-age children, a highly significant difference [31].

It appears then that under-age smokers are obtaining some reward, pleasure or reassurance from cigarette advertising. In other words, such advertising reinforces under-age smoking, encouraging children who smoke to continue to do so [31,49]. This is in accordance with acknowledged advertising theory [50]. Barry Day, Vice-chairman of the international advertising company McCann-Erikson Worldwide, has said: "I BELIEVE that all advertising must in some way reassure . . . I BELIEVE an ad should be a reward" [51].

It has been suggested that the power of current cryptic cigarette advertisements in the UK works insidiously but effectively on children, offering them the reward of deciphering the hidden messages: if they understand them, they join an adult conspiracy or club [52].

Non-smoking children are influenced by tobacco advertising

Children absorb messages from tobacco advertisements. Aitken, Leathar and O'Hagan's study of Glasgow children, published in 1985 [37], showed a marked ability of young teenagers to form an image of the type of person who would smoke each brand by looking at the advertisements. Most of the six- to ten-year-olds' perceptions reflected the actual picture of the advertisements. However, some of the 12- and most 14- and 16-year-olds perceived cigarette advertisements in the same way as adults and many found attractive characteristics in the imagery. Comments elicited included: "More for females because it's called Kim and because of the colours" (boy, 14); "You'll have a relaxed time if you smoke this cigarette"; and, "Hard men smoke this cigarette . . . Not hard but tough, like John Wayne" (boys, 16); "If you smoke them, you're going to be a macho he-man" (boy, 14); and, "It must be cool to smoke . . . relaxed . . . nothing gets you going" (girl, 14). Other comments referred to dreaming, glamour and racing [37].

In a study of English children aged nine, ten, 12 and 13 years, one quarter of boys had a favourite advertisement. Whether they were ever- or never-smokers, those with a favourite advertisement were almost twice as likely to believe that smoking has positive benefits (such as looking tough or grown-up). Similar differences between the advertisement-conscious and the others regardless of smoking status implies this belief is not merely increased awareness among those who already smoke. The authors concluded that once children's attention is caught by a particular advertisement, they are also likely to receive subliminal messages about possible positive values of smoking [41].

Scottish primary schoolchildren who said they would smoke when older tended to be more positive about cigarette advertising than children who did not so intend [40]. Similarly, 11- to 14-year-olds who had tried cigarettes but considered themselves non-smokers were more appreciative of cigarette advertising than were never-smokers. Smokers were more appreciative still. Children who expressed an intention to start smoking in the future or who had just started experimenting with cigarettes knew and liked tobacco advertisements more than other children [31].

In 1979, O'Connell and colleagues studied 5,686 Australian children aged 10 to 12 years. They found that approval of cigarette advertising was second only to having a friend who smoked as the best predictor of a child's smoking status, independent of other factors [38]. The same children were interviewed one year later. The researchers found that changes occurred in attitudes when children started smoking in order to retain consistency between smoking status and beliefs. Their other findings led to the conclusion that cigarette advertising acted as both a predisposing factor and a reinforcing factor for smoking: those smokers who

disapproved of advertising were more likely to quit than those who approved (52% *vs.* 34%) and children who approved of cigarette advertising were more than twice as likely to become smokers as children who disapproved (27% *vs.* 12%) [39].

Another Australian study of 7th year pupils (modal age 12 years) looking at many variables, again highlighted the importance of advertising. Non-smokers who gave any positive response to the question: "How much do cigarette advertisements make you think you would like to smoke a cigarette?" were more likely to become smokers. This has been called selective attention and is not proof of a causal relationship: the association could merely be that of approving of advertisements for a product one had already decided to try. If that explanation were true, one would expect the effect to grow weaker with time, but in this study it increased: prevalence difference was 5% for boys and 8% for girls one year, and 15% for both sexes two years after baseline [48].

Pierce and co-workers in America found that recall of Camel advertisements was highest in those teenagers who were as yet non-smokers but were considering starting, the only group who believed (erroneously) Camel to be the most heavily advertised brand. The advertising campaign appeared to contribute to initiation of smoking [44].

The majority of the Glaswegian children interviewed by Aitken and Eadie [31] in 1988 were re-interviewed one year later (then aged 12 to 15 years). They showed that changes in awareness of tobacco advertising occurred at a different time from changes in appreciation of tobacco advertising. Independent of other variables, children whose declared intentions to smoke when older had become more positive had been more adept at identifying cigarette advertising at baseline. Their greater awareness of cigarette advertising, evidence they were paying more attention to the advertisements, preceded their change in intentions. Compared with children who remained anti-smoking, twice as many whose attitudes changed in favour of smoking could identify the imagery in five or more cigarette advertisements before that change occurred. These differences were independent of other factors known to influence smoking and can only be explained as showing that advertising is involved in the process of that change.

Conversely, children whose declared intentions to smoke became negative, had been less appreciative of cigarette advertisements at baseline, before their intentions changed. This was also independent of other variables. Thus, they obtained less pleasure or less reassurance from cigarette advertisements before their changes in intentions. These findings imply that such advertising is predisposing as well as reinforcing children's attitudes and behaviour regarding smoking, leading the authors to suggest that perceptions of cigarette advertising may play a part as precursors in the transition from smoker to non-smoker [53].

A recent booklet purports to demonstrate that cigarette advertising does not affect initiation into smoking [54]. The reason for doubting its findings is its flawed methodology, not its sponsorship by the international tobacco industry lobbying office, INFOTAB. Children were asked to identify their single most important reason for starting smoking from a list of 13 suggestions. Not surprisingly, "I had seen advertising" was singled out by only 2%. Not only were multiple answers, a more accurate reflection of factors affecting smoking, not allowed, but this approach assumed both that advertising has only overt effects and that, even if aware of its impact, children are likely to admit to having been greatly influenced by advertising. Similar cautions apply about accepting the evidence of Fisher and Magnus that children themselves believe advertising is a major reason why children smoke [43].

In their eye tracking study of adolescents, Fischer and colleagues point out that unassailable proof of a causal relationship between smoking and advertising can never be established. It would be unethical to perform an experimental study, while in an observational study there are multiple confounding factors. Nevertheless, they conclude that a strong case now exists that the advertising of tobacco products

contributes to the initiation and maintenance of tobacco habits [55].

The effect on children of banning tobacco advertising

Iceland banned tobacco advertising in 1971. Smoking prevalence among 12- to 16-year-olds fell from 32% in 1974 to 13% in 1986 in Reykjavik [56]. Sweden restricted tobacco advertising by a voluntary agreement in 1975 and, with minimal changes, by law in 1979. Smoking prevalence in 16-year-old boys fell from 32% in 1975 to 21% in 1979, and 18% in 1986 [57].

The prevalence of smoking in Norway, which had been steadily rising for two decades, was halted and then reversed following the introduction of an advertising ban in 1975. This cannot be explained by confounding factors since the provision of health education did not change significantly during the 1970s, while the real price of cigarettes showed a slight fall. The reduction in prevalence was most noticeable among younger people, dropping among 13- to 15-year-olds from 17% in 1975 to 14% in 1980, 11.5% in 1985 and 10% in 1990 [52].

Restrictions on tobacco advertising

Cigarette advertisements were banned from UK television in 1965 in order to protect children [58]. All tobacco advertising is now outlawed on television in the EC [59] yet indirect advertising remains exempt. Tobacco advertising is also not allowed in cinemas in Britain. The UK Government, in its recent Green Paper 'The Health of the Nation' [60], acknowledged the need for "continued recognition of the importance of controls on advertising of tobacco" but maintains its preference for partial measures. The inadequacies of the voluntary restrictions and of the monitoring performed by the Committee on Monitoring the Agreement on Tobacco Advertising and Sponsorship (COMATAS) have been identified repeatedly [61–64]. Even if there were no breaches, the agreement would still be unsatisfactory. Fynn, a director of the advertising agency Saatchi & Saatchi, wrote: "A way will always be found to manoeuvre around the restrictions of the Code so that appeals to luxury, glamour, prestige and even youth can be made" [65]. A recent example is the use by Benson & Hedges of a stylised puffin on poster hoardings and in magazines; Puffin Books are one of the main publishers of children's books in the UK. Despite the obvious linking of children and smoking, this advertisement was ruled not to contravene the advertising code [66]. Similarly, the American Cigarette Code is flouted so much that even 12- and 13-year-olds can spot the flaws [67].

Tobacco advertising and new markets

Philip Morris introduced its Virginia Slims brand in 1968 with a major promotional campaign aimed at young women. 'Feminine' products then emerged from other companies, also promoted to young women. These products were heavily advertised in young women's magazines [1,68]. In the six years following the first promotional campaign of Virginia Slims, the prevalence of smoking among teenage girls in the US increased by 82% [69].

Similar campaigns targeted at ethnic groups have also been successful in attracting new smokers. The rise in prevalence in smoking among young Mexican-Americans is greater than that in black or white youth following intensive advertising in Hispanic magazines and the introduction of brands with Spanish names, aimed at Hispanic populations [1]. Various cigarette brands, such as Kool, Winston and Salem have been promoted specifically to the black community in the USA. These cigarettes are heavily advertised in publications for blacks and on billboards in black communities [70].

In 1980, the highest advertising spend on a single brand in the USA was $37 million promoting Salem. In 1981, Salem was the leading choice of cigarette for 56% of male and 77% of female Black smokers aged eight to 17 years, a marked increase from 24% of Black under-age smokers in 1976 [46].

Targeting of children by the tobacco industry

It has long been suspected that tobacco companies have deliberately targeted children as the logical new recruits to replace those who die or quit smoking. Official denials are routine [71,72] but evidence of such policies is occasionally discovered. Imperial Tobacco Ltd submitted documents to the Canadian courts in connection with a recent case, appealing against the government's ban on advertising. In addition to a marketing strategy document from 1988 recognising that the major firms are those "which respond most effectively to the needs of younger smokers," there is a paper showing that three brands were aimed at young people aged 12 to 24 years [73].

Regardless of the intentions of the industry, what matters is the actual impact of tobacco advertising on children. Old Joe advertisements, created to advertise Camel cigarettes, have been more effective at communicating information to children than to adults. Children in 1990/91 were much more likely than adults to recognise the cartoon camel (98% *vs.* 72%); were more successful in identifying from masked advertisements both the product (98% *vs.* 67%) and the brand name (94% *vs.* 58%); and found the advertisements more appealing. The product and brand were identified significantly more often by children than adults even when those subjects who were unfamiliar with the cartoon character were excluded [27].

A recent promotion used toy money in every pack, which could be exchanged for items such as T-shirts and baseball caps emblazoned with Joe Camel's picture [74]. A similar approach, using a cartoon penguin, is being used by another US tobacco company to promote its Kool brand. The comany's senior vice president of marketing said: "We hope the spokes-symbol will help strengthen the appeal of the brand for young smokers" [75].

Health warnings

Significantly, recall of cigarette advertisements in magazines by children did not include recall of the health warning, not surprising as the average viewing time was only 8% of the total advertisement viewing time and the warning was not read at all by 63% of the adolescents studied [55]. In another American study, health warnings on hoardings were legible from inside vehicles on 46% and 5% of street and highway billboards respectively, although the content of the cigarette advertisement was recognisable on more than 95% of the billboards. Similarly, brand name was correctly identified for 100% and significant imagery for 95% of cigarette advertisements on the outside of taxicabs, but the health warning was illegible in all cases [76].

Conclusion

In 1989, the US Surgeon General, Dr Everett Koop, wrote: "The collective empirical, experimental and logical evidence makes it more likely than not that advertising and promotional activities do stimulate cigarette consumption" [77]. There is now so much evidence that children identify sports sponsorship [49,78] and brand-stretching [37,79] as cigarette advertisements, and that advertisements aimed at adults have an even greater effect on under-age children, that statements from the tobacco industry that it does not advertise to children are irrelevant. The British Government has recognised this. Stephen Dorrell, Parliamentary Under-Secretary of State for Health, recently spoke in the House of Commons about "restricting the extent to which advertising is directed – purposefully or otherwise – at young people" [80]. Paul Fischer and colleagues point out: "While cigarette companies claim that they do not intend to market to children, their intentions are irrelevant if advertising affects what children know. R.J. Reynolds Tobacco Company is as effective as The Disney Channel in reaching six-year-old children" [33].

Tobacco advertising reaches children; it reinforces smoking among them, encouraging them to continue and not stop; and it influences children to start smoking. The British Government have long endorsed the Cigarette Code, which states: "Advertisements should not seek to encourage people

. . . to smoke to excess" [81]. Smoking is a lethal habit and there is no safe level below which exposure is harmless [4]. Thus, tobacco advertisements which have any effects other than persuading smokers to quit are encouraging people to smoke to excess. All forms of tobacco promotion should be banned by any government which is serious about protecting the future health of children.

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BOOK REVIEWS

Environmental Tobacco Smoke and Mortality

Author: P.N. Lee
Publisher: S. Karger AG, Basel, Switzerland, 1992
Pages: xx + 224 pages
Price: £77.40 or $142.50 Hardback

This book reviews the epidemiological evidence concerning the possible risk of cancer, heart disease and other diseases in adults who never smoked but who were exposed to environmental tobacco smoke (ETS). The book underlines the fact that, in many studies, ETS has not been accurately measured and that most studies rely on questionnaire responses. The characteristics of 53 epidemiological studies are analysed. Other deficiencies in the studies are also considered; for example, lack of histological confirmation of the malignancy and interviews by a medical person who knew which subjects were controls and which were not. The author concludes that no adverse effect of ETS has been conclusively demonstrated.

This is a useful book which demonstrates that passive smoking, arguably one of the most relevant current issues in smoking legislation, is far from being clearly defined. More work, with better experimental design, is obviously required.

The author has been involved with work in this field. His views tend to run against the conclusions of others (for example, see Steenland K.; J. Am. Med. Assoc. 1992: 267; 94–99). However, his arguments are clearly laid out and deserve attention. This book is therefore essential for any department dealing with the design of epidemiological studies, whether they relate to smoking or not.

This book supports one of the basic principles of the Journal of Smoking-Related Disorders: to avoid publication bias. The Journal is dedicated to smoking cessation but the editors appreciate that this objective will only be achieved by the presentation of scientifically irrefutable evidence.

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Media release

The Hon Dr Michael Wooldridge - Minister for Health and Family Services

22 September 1998
ALL TOBACCO SPONSORSHIP TO GO BY 2006

Federal Minister for Health and Family Services, Dr Michael Wooldridge, today announced that all tobacco sponsorship for international sporting events held in Australia will be phased out by 2006.

Although tobacco advertising and sponsorship have been banned for domestic sporting competitions since 1992, the legislation allows exemptions for major events which are part of an international series or competition.

Section 18 of the Tobacco Advertising Prohibition Act permits the Minister for Health to grant an exemption for these major international events only if satisfied that the event would be lost to Australia if tobacco sponsorship was not allowed.

Only a handful of events continue to qualify for exemptions - among them the Australian Formula One Grand Prix held at Albert Park, the Australian Motorcycle Grand Prix held at Phillip Island, the Australian Indy Car Championship held at the Gold Coast, the Rally Australia event held in WA, and the Ladies' Masters Golf Tournament.

Dr Wooldridge said he was confident that these events would not be lost to Australia since the competition organisers would have sufficient advance warning to be able to secure alternative sponsorship. just as cricket and rugby league successfully managed the transition to non-tobacco sponsorship.

'Australians are great fans of motor sports and womens' golf and we'll enjoy these major international events even more once they are free of tobacco sponsorship," Dr Wooldridge said.

"While I have been able to toughen the restrictions in recent years on signage and other promotional activities, and reduce the number of events given exemption, I am uncomfortable with the very concept of exemption in the first place.

"Tobacco is the number one killer in Australia claiming some 18,000 lives every year. I am not comfortable giving any exemptions to sponsorships linked to the biggest cause of disease and death in our community.

'The Government believes that the time has come to set an end for all association of tobacco and sport in Australia, and give these remaining events time to find alternative sponsors for the overall event and for individual teams.

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(2)

'I have had very productive discussions and negotiations with Bernie Ecclestone and Max Mosley, President of the Federation Internationale d'Automobile, and they have assured me that automotive events will not be jeopardised by the phasing out of tobacco sponsorship.

"Most Australians will welcome this move to ensure a complete ban on tobacco sponsorship in this country, without exception.

"Australia will be a world leader in ending the unhealthy association between smoking and sport" he said.

Dr Wooldridge said the Government would amend Section 18 of the Tobacco Advertising Prohibition Act to remove scope for new events to seek exemption from 1 January 2002, but with a provision to 'grandfather' the right of current events to renew their exemptions each year to 1 October 2006. This date would be the latest possible for such events.

"It is my view that many events will choose to be tobacco free before this date as alternative sponsors become available," Dr Wooldridge said.

Dr Wooldridge said that he would work towards an end of tobacco sponsorship of individual events ahead of the 2006 deadline, and would continue to strengthen the restrictions applying to each event in the meantime.

RESTRICTING ADVERTISING AND PROMOTION OF TOBACCO PRODUCTS: AN OVERVIEW OF VOLUNTARY AGREEMENTS AS AN ALTERNATIVE TO LEGISLATION

Working Papers

RESTRICTING ADVERTISING AND PROMOTION OF TOBACCO PRODUCTS: AN OVERVIEW OF VOLUNTARY AGREEMENTS AS AN ALTERNATIVE TO LEGISLATION

Working Papers Series No. 34

Brenda Mitchell

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I. INTRODUCTION

The use of voluntary compliance programs has been promoted within the Canadian government as a cost-effective alternative to mandatory regulations. Following the repeal of parts of the *Tobacco Products Control Act* (Canada, 1989) the government considered its options in restricting advertising and promotion of tobacco products.

Tobacco product advertising in Canada has been subject to restrictions for over three decades. Industry voluntary codes have been in place since 1964; legislative restrictions were in place under the *Tobacco Products Control Act* (Canada 1988) from 1989 to 1995.

The government decision introduced new legislation, in the form of Bill C-71, which became the *Tobacco Act* (Canada, 1997). This legislation is now being challenged in the courts by the Canadian tobacco manufacturers.

This paper provides an overview of voluntary codes or voluntary agreements on tobacco advertising and promotion by the tobacco industry, and considers whether they have been a satisfactory alternative to legislation for the purposes of achieving health policy objectives.

Definitions

A "voluntary code" is an agreement among the members of an industry association that sets out the standards that the members are expected to adhere to in the conduct of their business. An example of a voluntary code is the 1996 *Tobacco Industry Voluntary Packaging and Advertising Code* of the Canadian Tobacco Manufacturers' Council (CTMC). In contrast, a "voluntary agreement" is a formal contract between the members of an industry association and a government body that sets out the standards that the members of the industry are expected to adhere to in the conduct of their business. An example of a voluntary agreement is the United Kingdom's *Voluntary Agreement on Tobacco Products' Advertising and Promotion, and Health Warnings.*

Source Documents

The sources used to document experiences with use of voluntary codes and agreements for tobacco product advertising and promotion included published books and journal articles,

records of government activity, and documents used as evidence in court cases.

The Line Drawn in the Sand

The general positions of the tobacco industry, and of the health community, on the subject of voluntary codes and agreements for tobacco product advertising and promotion are reflected in the following quotes.

British-American Tobacco communicated to its subsidiaries in 1970:

> *We believe...that legislation is worse for the industry than self-imposed restraint. Voluntary restrictions present the industry in a more favourable light than the imposition of legal controls or prohibitions and all the bad publicity for the industry which they engender... . We also believe that [we] may derive benefit from offering to accept voluntary restrictions at a significantly earlier stage than the moment when legislation is the only alternative...It might in certain circumstances not be harmful at all. For example, if one of the normal advertising media were to be replaced by effective merchandising aimed directly and solely at the consumer...this might be less likely than TV, Radio, Cinema and Press advertising to aggravate the opponents of smoking...The first step....is for the industry in each country...to agree to a voluntary advertising code which defines certain restrictions in the CONTENT of advertisement (e.g. no health claims, no appeals to the young, etc.)...* [1]

On the other hand, the World Health Organization has stated:

> *The record of the tobacco companies that have voluntarily undertaken to curb tobacco promotion is such that one cannot seriously consider self-regulation by the industry to be a serious option.*[2]

II. THE CANADIAN EXPERIENCE

The 1960's and 1970's

The Canadian Tobacco Manufacturers first released *A Cigarette Advertising Code in Canada* in 1964. This was the same year a Code was introduced in the United States, and the year following the introduction of a Code in the U.K.

The rules in the first Canadian voluntary Code were:

1. All advertising shall be in conformity with the existing "Canadian Code of Advertising Standards" prepared by the Canadian Advertising Advisory Board.
2. The purpose of cigarette advertising shall be the promotion by cigarette manufacturers of their own brands as such.
3. All cigarette advertising shall be directed to adults.
4. No cigarette advertising shall state that smoking the brand advertised promotes physical health, or that smoking a particular brand is better for health than smoking any other brand of cigarette.
5. All models used in cigarette advertising shall be at least 25 years of age.
6. No cigarette advertisement shall state or imply that cigarette smoking is essential to romance, prominence, success or personal advancement.
7. No cigarette advertisement shall use as endorsers athletes or celebrities in the entertainment world and other persons whose major appeal is to children or adolescents under the age of 18 years.
8. No cigarette advertisement shall be designed whose major appeal is to persons under the age of 18.
9. No cigarette advertising shall be scheduled for posters or bulletin locations immediately adjacent to primary or secondary schools.
10. No cigarette advertising commercial shall appear on television before the hour of 9 p.m.

The Canadian government discussed legislation to restrict tobacco advertising as early as 1967. In April of that year, Health Minister Allan MacEachen recommended to Cabinet that legislation be prepared with a provision to "prohibit false, misleading or deceptive labelling, packaging, selling or advertising of cigarettes and cigarette tobacco or advertisements likely to create an erroneous impression regarding character, merit or safety to cigarettes or cigarettes tobacco either generally or in relation to the nicotine and tar content in the tobacco smoke produced".[3] Although Cabinet accepted the Minister's recommendations[4], legislation was not introduced.

In 1969 the Standing Committee on Health, Welfare and Social Affairs, after having undertaken a study of smoking and health issues, recommended a ban on advertising and promotion. Health Minister John Munro subsequently recommended a prohibition on print and broadcast advertising.

In June 1970, the Cabinet Committee on Social Policy recommended prohibiting the promotion or advertising of cigarettes or their components, by electronic media and by mass circulation print media. They noted that consultation with the industry indicated that the only recommendation which would be contested would be the ban on newspapers and other printed and graphic materials. Cabinet directed that legislation be prepared. When Bill C248 was drafted, it included a complete prohibition on promotion and advertising.[5] Cabinet minutes reveal that discussions were held with the tobacco industry about voluntary restrictions during this period. During one Cabinet discussion, in May 1971, it was noted that one of the four major tobacco companies had changed its mind about agreeing to sign a voluntary agreement with regard to all forms of advertising, and this meant legislation would be necessary.[6] Cabinet directed that the Bill was to be introduced for first reading only.[7] Bill C-248 was never debated in Parliament.

In 1972, the industry's self-regulatory Code was revised to address the issues Cabinet had proposed be in the legislation: prescribing maximum tar and nicotine levels; providing health warnings and nicotine and tar levels on cigarette packages; prohibiting promotion through the free distribution of cigarettes, the distribution of prizes or premiums or other giveaways schemes; and restrictions on advertising. However, the 1972 Code was not as restrictive of advertising as recommended by Cabinet. In addition to the restrictions in the 1964 Code, the 1972 Code prohibited advertising on radio and television, prohibited direct mail advertising and set limits

on advertising expenditures. It did not address advertising in mass print media. (A comparative Table of Bill C-248 and the 1972 voluntary Code is provided in Appendix A.)

The Code was amended again in 1975 to address promotion of sponsorships, prohibit direct mail advertising, and require health warnings on print advertising. Minor revisions were made in 1976.

The 1980s

A number of events in the early and mid 1980's kept tobacco advertising as a current issue. Some of these events were:

- the voluntary decision by the Toronto Transit Commission and the Hamilton-Wentworth Transit Commission to refuse tobacco ads;
- the Fifth World Conference on Smoking and Health held in Winnipeg;
- government policy that organizations wishing to receive federal amateur sports funding could not accept any new tobacco sponsorships;
- the Kingston Whig-Standard and the Globe and Mail newspapers voluntarily deciding to refuse tobacco advertising.[8]

A new code was issued for January 1984 with minor wording changes. Footnote 1

In January 1986 the Non-Smokers' Rights Association made a submission to the Minister of Health, the Honourable Jake Epp, about industry non-compliance with the voluntary Code. *A Catalogue of Deception: The use and abuse of voluntary regulation of tobacco advertising in Canada* presented a case that most rules in the Code had been violated by the industry. The document was used by Mr. Epp in a brief to the Canadian Radio-Television and Telecommunications Commission (CRTC) in April 1986. The brief said:

> *... passing on the responsibility of regulation to vested interests is ineffective.*

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[1] There are two versions of the CTMC Code dated January 1, 1984. The second of these retained the ban on billboards advertising cigarettes located within the vicinity of a primary or secondary school, but removed the ban on posters in these locations.

With regard to the self-regulation of tobacco advertising, which is the purest form of self-regulation, a document ... entitled A Catalogue of Deception, demonstrates that the Tobacco Adverting and Promotion Code is not taken seriously by this industry. Experience with the voluntary advertising standards in the tobacco industry clearly shows that when sales are flat or decreasing, compliance decreases as well.

Proposals to the Department of Health

Over the next few months there were meetings and letters between the tobacco product manufacturing companies and Mr. Epp. The members of the CTMC made a submission to Mr. Epp on June 30. The submission included a statement that the CTMC was prepared to act as a coordinating body in assisting the Minister to apply an amended Code to all manufacturers and importers of all tobacco products. The submission also made a number of proposals that related to advertising and sponsorship. These included:

- prohibiting advertising through cinema and video cassettes;
- withdrawing advertising from publications oriented to, or with editorial content directed towards, young people (e.g. publications where the under-18 readership is more than 30%);
- not engaging in the sponsorship of amateur sport, either directly or indirectly, beyond existing agreements;
- requiring that characters and situation should not suggest that non-smokers, or those who smoke a particular brand, are less grown-up, less manly or less feminine, or lacking in daring or sophistication;
- advertisements should not appeal more to those under age 18 than to the public at large;
- limiting the maximum number of persons who can be represented as smokers in a given advertisement;
- prohibiting static outdoor advertising, (excluding signs on retail premises) within 200 metres of, or clearly readable from within, buildings or boundaries of schools, places of education or schoolyards predominantly used by young people under 18 years of age, nor adjacent to entrances and exits or the pavements forming the boundaries to such schools, places of education and schoolyards;
- increasing the visibility of the health warning by increasing significantly the size of the

lettering used on billboards, point of sale-material and print advertisements;

- creating a new Tobacco Advertising Compliance Board with six members appointed from: CTMC (3), advertisers (1), the professional advertising industry (1) and by the Minister of Health and Welfare (1).
- allowing "The Tobacco Advertising Compliance Board" to receive complaints from any individual;
- penalties imposed by the Board could include "cease and desist" orders, penalties of up to $25,000 for each proved first offence, and publication of violations in a newspaper.

In a subsequent series of letters and telexes CTMC made a second proposal to the Minister at the end of November. This included:

- eliminating people from all tobacco advertising;
- working with the wholesale and retail trade to develop programs to encourage tighter enforcement of existing laws governing the sale of tobacco to minors;
- giving the compliance board, whatever model is chosen, the power to impose meaningful financial penalties (fines of up to $10,000) [Footnote 2] for non-compliance.

Legislative Action

In November 1986 Jake Epp indicated to the CTMC that he was planning to take legislative action. Bill C-51 was tabled in the House of Commons April 30, 1987.

In his speech for second reading of Bill C-51, on November 23, 1987, Mr. Epp, Minister of National Health and Welfare stated: [9]

> *Currently the Canadian Tobacco Manufacturers Council has a code to regulate voluntarily the advertising and promotion practices of member companies. While the code is partially restrictive to tobacco advertising, the rules are weak and many of them have been violated.*

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[2] Note that the fines proposed as penalties in November 1986 are less than those proposed the previous June.

In response to concerns regarding tobacco advertising and promotion, I have on a number of occasions met with representatives of the Canadian Tobacco Manufacturers Council over the past few years. On the whole these discussions have failed to persuade me that a voluntary self-regulating approach to tobacco is workable.

The purpose of tobacco advertising is to encourage over-all tobacco use. The advertiser hopes that it will also encourage the use of his particular brand. Alternatively, it is the policy of the Government to discourage tobacco use. Since these objectives are mutually incompatible, the Government has concluded that legislation banning tobacco product advertising is the only acceptable option.....

Voluntary controls have been tried without success in Canada, and more than 15 years of experience with the Canadian Tobacco Manufacturers Council voluntary code, including well documented breaches of both the spirit and the letter of its provisions, have resulted in a loss of public confidence in this approach.

Violations of virtually every rule of the voluntary code have been reported... .

Bill C-51 was passed and became the *Tobacco Products Control Act.* It came into effect January 1, 1989. The *Act* was directed at the protection of the health of Canadians, particularly young Canadians, from inducements to use tobacco products. The *Act* included the following restrictions on advertising and promotion:

- prohibited the advertising of any tobacco product offered for sale in Canada;
- prohibited the use of a tobacco-trade-mark, in any form in which it appears on tobacco packages sold in Canada, on any article other than a tobacco product or a package or container in which a tobacco product is sold or shipped;
- prohibits the free distribution of tobacco products;
- allows the full name of a manufacturer or importer of tobacco products to be used in promoting a cultural or sporting activity/event or to acknowledge financial or other

contribution toward the activity/event. [10]

The 1990's

From 1989 to 1995, tobacco advertising in Canada was restricted under the *Tobacco Products Control Act* (TPCA). Within 10 weeks of passage of the TPCA, all three tobacco companies had filed challenges to the Act.[11] During the years the Act was in effect there were a number of complaints that tobacco manufacturers were responsible for violations of the Act, however, few charges were laid, and none of these charges had been to trial by the end of 1995.[12]

On September 21, 1995, the Supreme Court of Canada struck down key sections of the *Act.*

In December 1995, the Canadian Tobacco Manufacturer's Council (CTMC) announced a new voluntary code, the *Tobacco Industry Voluntary Packaging and Advertising Code* to take effect January 1, 1996. A chart comparing restrictions in the 1996 Code and the *Tobacco Products Control Act* is found in Appendix B.

Restrictions on Advertising and Promotion of Tobacco Products

The 1996 voluntary Code stated that tobacco product advertising would be directed only to adult consumers of tobacco products, with specific restrictions that there would be no tobacco product advertising:

- within 200 meters of the entrance of any institution known to be a primary or secondary school;
- in a publication with a readership known to be primarily non-adult;
- attempting to influence non-consumers to become consumers of tobacco products;
- portraying tobacco products in the context of or in relation to any activity attractive primarily to non-adults; or, as a necessity for the enjoyment of life or for social achievement;
- having any purpose other than that of increasing or maintaining brand share;
- containing lifestyle advertising (defined as any advertising which features or depicts any people in whole or in part);
- on radio or television or placed on cinema screens or on video tapes of cinema films.

These restrictions do not apply to sponsorship advertising. Sponsorship advertising may

not depict any tobacco product or any package commonly associated with a tobacco product, however, tobacco trade-marks may be used in sponsorship advertising where the principal purpose of the advertising is the promotion of the event, events, or activity, which must be identified by text.

Non-tobacco product and non-tobacco-related goods may bear a tobacco trade-mark:

- when related to a sponsored event or activity identified by text;
- if the design elements are different from those used on the tobacco product package;
- on in-store shelf-strips of less than 3" in width.

None of the restrictions on the use of trade marks prohibits their use on products that are used by children or teenagers.

Comparison Between the 1984 and 1996 Voluntary Codes

The 1996 Code is less strict than the 1984 Code in the following areas:

- the use of endorsements by athletes and media figures is allowed under the 1996 Code, whereas it was expressly prohibited under the 1984 Code;
- sponsorship advertising is much less restricted. The 1984 Code prohibited not only the advertising of cigarettes and cigarette tobacco on radio and television but also "the promotion of sponsorship or sports or other popular events through the use of brand or corporate name or logo." These restrictions no longer apply;
- direct mail advertising, which was prohibited in the 1984 Code is not mentioned in the 1996 Code and is therefore permitted;
- the 1984 Code prohibited advertising or corporate symbols on cigarette vending machines, except for package facsimiles. This is not part of the 1996 Code. However, cigarette vending machines are now restricted to bars and taverns under federal legislation, except for those provinces where vending machines are banned.

Comparison of 1996 Voluntary Code with 1986 Proposals

The 1996 Code does include some restrictions proposed by the CTMC to the Health Minister in 1986. These include:

- prohibiting tobacco product advertising on cinema screens and on video tapes of cinema films;
- prohibiting tobacco product advertisements in publications where the readership is known to be primarily non-adult.

Proposals made in 1986 which are not in the 1996 Code include those dealing with sponsorship of amateur sport, age and attire of models used, as well as specific penalty powers of a Board of Arbitration.

Parties to the Code

All three CTMC member companies, Imperial Tobacco Ltd., RJR Macdonald Inc., and Rothmans, Benson & Hedges Inc., agreed to comply with the 1996 Code.[13]

Compliance and Enforcement

The Code states that any person or agency may bring any suspected violation to the attention of an Independent Clearance Agency. [Footnote 3] The Agency then decides if it should inquire into the matter. If the Agency decides there is a violation it is unclear what action will be taken. There is no mention of penalties and the Agency has no power to enforce the Code. The 1996 Code states "The members of the Canadian Tobacco Manufacturers's Council will abide by the terms of this Code and use their best efforts to ensure compliance by other manufacturers, importers, distributors and retailers not members of the Council, and by the media in which tobacco product advertising is carried."

The Canadian Cancer Society has documented complaints made to the tobacco manufacturers about violations of the Code.[14] Responses to these complaints included removal of ads, changes to the Code, and notice that other parties, such as retailers are not covered by the Code.[15]

The Canadian Cancer Society filed a lengthy complaint in April 1996, including 31 examples of advertisements within 200 metres of schools. The report of findings by the Tobacco

[3] CTMC funded a Committee, with members from advertising associations, to enforce the Code. The Committee, known as the Tobacco Advertising Supervisory Committee, retained legal counsel to assist with adjudication.

Advertising Supervisory Committee (TASC - see Footnote 3) released June 4, 1996 stated "If it was the intention of the tobacco manufacturers to have the "200 metre" limit apply to only **outside** advertisements, such as billboards, it should have so specified in the Code." CTMC response was that it was not the manufacturers' intention to prohibit in-store product advertising. The Code was subsequently amended in June 1996 to clarify that it applied to outdoor advertising only. CTMC said it would request store owners to eliminate outward facing product advertising in store windows. These retailers, however, are not parties to the Code and are under no obligation to comply. The TASC investigation also found that RJR-Macdonald Inc. had internal guidelines which were not consistent with the Code.

In response to other complaints, there were further revisions to the code. In November 1996, CTMC clarified that sponsorship advertising tobacco trademarks are limited to not more than 25% of the ad, and that tobacco trademarks should not be larger than the name of the event or activity.

In at least two cases, complaints were for activities not covered by the Code. A complaint made by Physicians for a Smoke-free Canada that a health warning was not placed on a point of sale sign was dismissed as retailers are not covered by the Code. A complaint from the Canadian Cancer Society included examples from an American product. The TASC report stated that they have no jurisdiction over these products, as American tobacco product manufacturers are not parties to the Code.

In summary, while many of the restrictions in the Canadian voluntary codes address similar concerns as government legislation, these Codes have been less comprehensive in their restrictions, and the industry does not necessarily comply.

III. SELECTED INTERNATIONAL EXPERIENCE

This section of the paper reviews the experience in the United Kingdom with voluntary agreements and the United States with voluntary codes, and briefly touches on the situation in New Zealand and Australia.

The U.K. Experience

The British government has had voluntary agreements with the tobacco industry since

the 1970's. The revisions to these agreements, negotiated between the health ministers and the tobacco industry, often occurred at times when there were legislative proposals to strengthen control over tobacco advertising and promotion. Dr. David Owen, who participated in negotiations for the advertising agreement in the 1970's as a Health Minister in the U.K. has said:

> *Voluntary agreements are not worth the paper they're written on, unless the industry knows the Minister of Health has the power to legislate. A Minister needs to know before he goes into the negotiations, and the industry needs to know it too, that he has the power to legislate. Then you can have a serious discussion. Their experience tells them that all governments back off legislation. And the record is true. They do.* [16]

The following sections outline in greater detail the history and contents of the U.K. Agreements.

History of Agreements

In 1962 the British Royal College of Physicians of London released its first report *Smoking and Health.* This initiated actions by the Ministry of Health and by the tobacco industry. Within a month the industry had voluntarily agreed to a code to restrict the advertising and promotion of tobacco products. The code prohibited advertisements which over-emphasized the pleasures of smoking, featured conventional heroes of the young, and which appealed to manliness, romance and social success. The industry also agreed to protect young children by not showing television cigarette advertisements before 9 p.m..[17] Subsequent action by the Health Minister lead to the 1965 ban on cigarette advertising on television.

The first formal agreements were written in the 1970's. In 1971, a voluntary agreement was made which placed health warnings on packs and a reference to warnings placed on advertisements. The *Cigarette Code,* first introduced in 1975, was the outcome of discussions between the Department of Health and Social Security, the manufacturers and importers of cigarettes, and the Advertising Standards Authority. The agreements have since been revised on several occasions:

- in 1977, when the Health Minister announced his intention to schedule tobacco under the

Medicine Act (3 year agreement)[18] (Footnote 4);

- in 1980 (when the 3 year agreement ended);
- in 1982 following a number of Private Member's Bills introduced in 1981 and 1982 to control tobacco advertising and promotion[19]; this agreement stood until March 1986;
- in 1989, 1991, and twice in 1992. The revision in November 1992 followed a 1991 European Commission Directive proposing a total ban on all tobacco advertising throughout the European Community;
- in 1994 following a number of failed Private Member's Bills in the 1993/94 House session.[20]

Health groups, and others, have found the voluntary agreements approach to be lacking. When the European Commission (EC) published a draft directive proposing a total legislated ban on tobacco advertising, a public campaign in support of the ban included participation by the British Medical Association, the Health Education Authority, the major medical charities (Cancer Research Campaign, Imperial Cancer Research Fund, British Heart Foundation, etc.) and many others.

The government Health Committee held an inquiry into the EC proposed directive on the advertising of tobacco products. The UK government stated its belief that the voluntary agreement is the best way to regulate the tobacco industry.[21] The Tobacco Advisory Council was opposed to a ban on advertising, and supported the continuation of the Voluntary Agreements which are "well established and successful policy". A spokesperson for the British Medical Association stated that the voluntary agreement should be seen as a rearguard action:

> *The tobacco industry will move only as far as any government will push it, and that most reluctantly.*

In the Committee report of the *Proceedings of the Health Committee of the House of*

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[4]The Medicine Act can regulate, in addition to medicines, any substance that if used without proper safeguards is capable of causing danger to the health of the community. Scheduling tobacco under the Medicine Act would enable the government to control the tar, nicotine and carbon monoxide content of cigarettes, health warnings and the promotion and codes of practice for advertising and sponsorship.

Commons on the European Proposed Directive on the Advertising of Tobacco Products, January 1993, the Committee stated that, having reviewed all the evidence, it recommended that the Government adopt as its policy the total elimination of tobacco advertising other than at points of sale, and that the Government support the European Directive.[22]

In the most recent policy statement, the Throne Speech of May 14, 1997, the government stated that it would be publishing a White Paper "on measures to reduce tobacco consumption, including legislation to ban tobacco advertising." [23]

Restrictions on Advertising and Promotion of Tobacco Products

The Agreements outlined above are lengthy, and include both general rules as well as restrictions on specific activities. Examples of the general rules are:

- advertising should not seek to persuade people to start smoking;
- advertisements should not seek to encourage smokers to smoke more or to smoke to excess; or show a cigarette left in the mouth;
- advertising should not exaggerate the attractions of smoking.

Specific current restrictions on tobacco products' advertising and promotion address:

- the content of advertisements for cigarettes and cigarette tobacco (but not cigars or pipe tobacco);
- methods of sales promotion;
- the media used for advertising;
- the volume of advertising in some media;
- the warnings to be placed on advertisements (warnings on packs are now governed by legislation, as required by the European Union).

The preface to each agreement states that the companies will conduct their business in a manner which ensures that advertising does not "represent a greater attraction to young people than to the population as a whole".[24] One example of assessing the protection provided to young people from advertising is women's magazines. No advertising of cigarettes is to be placed in magazines or periodicals with young women aged 15-24 making up 25 per cent or more of the total readership. However, tobacco advertisers reach an estimated 7 million young women by

advertising in glossy magazines whose readers include both young and older women.[25] In practice, this means that advertising is permitted which appeals to persons under 18 years of age so long as it appeals equally to the public at large.

Parties to the Agreements

The U.K. voluntary agreements on tobacco product advertising and promotion are between The Tobacco Advisory Council, (the trade association for the companies that manufacture and/or distribute tobacco products in the United Kingdom), and the Health Ministers. The Committee for Monitoring Agreements on Tobacco and Sponsorship (COMATAS) has an equal number of representatives from the tobacco industry and the Department of Health, with an independent chairperson, appointed by the Secretary of State for Health, with agreement by the Health Ministers and the Tobacco Advisory Council.

Compliance and Enforcement

The Committee for Monitoring the Agreement on Tobacco Advertising and Sponsorship responds to complaints from the public. It does not do any proactive monitoring. Anyone may forward a complaint to COMATAS with a request to investigate. When a breach of the agreement is acknowledged by COMATAS, or the company concerned, it is rectified. There are no penalties. [26]

Reports of compliance surveys in London and Oxford reported violations of the provision that posters should not be placed where they are clearly visible from schools. [27] One of the posters had been put up despite the fact that COMATAS had ruled that the site could not be used for cigarette advertisements. [28]

The Experience in the United States

History of Self-Regulatory Codes and Legislation

In the 1960's, U.S. broadcasters, advertising professionals and politicians joined health advocates in calling for controls on tobacco industry promotional practices.[29] There was particular criticism of a 1963 Lucky Strike campaign with the slogan "Luckies separate the men from the boys, but not from the girls". Six major cigarette firms subsequently claimed to drop virtually all advertising in college football programmes, radio stations, magazines and

newspapers.[30] An analysis of the television schedule in 1963 however, indicated that almost all cigarette firms bought air time during a large number of shows that had audiences consisting of 30 percent or more youth (i.e. persons under the age of 21). Advertisements on teen radio stations during after-school hours also continued.[31]

In January 1964, the U.S. Public Health Service released the *Report of the Surgeon General's Advisory Committee on Smoking and Health*, and in the same year, the tobacco industry began creating self-regulatory cigarette advertising and promotional codes. The first code prohibited cigarette advertising in school and college publications, testimonials from athletes or other celebrities perceived to appeal to youth, the use of advertising through comic books or newspaper comics, and the distribution of samples at schools. Also prohibited were representations that smoking was essential to social success, or that healthiness of models was due to cigarette smoking, and the use of models who were participating in physical activity, or who were younger (or appeared younger) than 25 years of age.

One observer noted that:

> Four months after the code was formulated, Viceroy ads featured young tennis players lighting up after a hot game. Salem showed a young couple playing giggly games alongside a waterfall... A TV commercial producer admitted that it didn't matter how young the models *looked*, or how youthful were their actions, as long as they possessed "over twenty-five" birth certificates. In fact, his quest was for older models who 'looked young'.[32]

The National Association of Broadcasters Code Authority, which reviewed all advertisements under the self-regulatory process, noted that the volume and character of cigarette advertising were likely to influence the young and were therefore still problematic. [33]

The code's rules were revised several times over the next few years, sometimes for clarification, other times to relax the rules, such as those governing the use in advertisements of heavy exercise sports equipment, and at least once to pre-empt a total broadcast ban. [34]

A 1968 analysis by the Federal Trade Commission (FTC) found that the average teenager was exposed to 60 full-length cigarettes commercials a month. The Federal Trade Commission noted that both the media placement and the messages used in cigarette advertising seemed

destined to attract the young, regardless of intent, and as a result proposed regulations. Tobacco industry lobbying successfully defeated FTC efforts to regulate cigarette labelling and advertising. [35]

In 1967 an application was filed with the Federal Communications Commission (FCC) under the Fairness Doctrine arguing that views in opposition to cigarette advertising were necessary to protect the public interest. The application was granted in June 1967 and soon thereafter public health announcements about cancer began appearing on television. The *Public Health Cigarette Smoking Act* of 1969, which came into effect in 1971, required a health warning on cigarette packages, banned cigarette advertising on the broadcast media and called for an annual report on the health consequences of smoking.[36, Footnote5] When cigarette advertising was banned from electronic media the counter advertising also ceased.

Overviews of tobacco advertising in the United States written in the early 1990s do not discuss more recent events, suggesting that little has changed since then.

Restrictions on Advertising and Promotion of Tobacco Products

The Tobacco Institutes Code 1990 Cigarette Advertising and Promotion Code places the following restrictions on cigarette advertising. It prohibits:

- cigarette advertising in publications directed primarily to those under 21 years of age, including school, college or university media, comic books or comic supplements;
- cigarette advertising on billboards located within 500 feet of school and children's playgrounds;
- payments for placement of any cigarette, cigarette package or cigarette advertisement as a prop in any movie for the general public;
- depicting in cigarette advertising, anyone who is, or appears to be, under 25 years of age;
- cigarette advertising that suggests that smoking is essential to social prominence, distinction, success or sexual attraction;
- cigarette advertising that pictures a person smoking in an exaggerated fashion;

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[5] The Public Health Cigarette Smoking Act includes a preemption clause which prevents States from regulating or prohibiting cigarette advertising or promotion for health-related reasons. In spite of this, some municipalities and states have found ways to restrict tobacco product advertising.

- use of sports or celebrity testimonials of those who would have special appeal to persons under 21 years of age.

Cigarette advertising may picture attractive, healthy looking persons provided there is no suggestion that their attractiveness and good health are due to cigarette smoking. It also shall not depict as a smoker anyone who is, or has been, well known as an athlete, to show any smoker participating or just having participated in, a physical activity requiring stamina or athletic conditioning beyond that of normal recreation. Restrictions on promotional activities requires that clothing bearing cigarette brand names or logos shall be in adult sizes only.

Parties to the Code

The U.S. *Cigarette Advertising and Promotion Codes* are provided by The Tobacco Institute, an organization of the tobacco industry. The Code states that restrictions on cigarette advertising and promotion have been adopted by the industry. Compliance with the Code, however, is voluntary.

Compliance and Enforcement

It is reported that there have been continuing problems with the voluntary code for advertising. For example, the voluntary code stipulated that models used in advertisements should not appear to be younger than 25 years of age, but the Code lacks specific guidelines for estimating their age. One study of cigarettes advertisements found that 17% of models in advertisements were perceived, by persons 13 years and older, to be younger than 25 years.[37] The use of "models" has also been replaced with cartoon characters in the "Joe Camel" cartoon campaign, considered by many to be especially appealing to those under age 25. [38]

Cigarette manufacturers have also agreed to avoid advertisements that represented "cigarette smoking as essential to social prominence, distinction, success, or sexual attraction". A review of current magazines shows advertising that includes flirtations between members of the opposite sex, women on shopping sprees, and travel to desirable locations. Cigarette manufacturers are also supposed to avoid showing smokers engaged in activities "requiring stamina or athletic conditioning beyond that of normal recreation". However, advertisements routinely use imagery associated with athletics and physical activity, thereby linking smoking

and vitality; one example is Marlboro's Adventure Team of white water rafters, dirt bikers, and other adventure enthusiasts. [39]

While the code provides for fines up to $100,000, no record exists of their imposition.[40]

New Zealand

In 1989, the Toxic Substances Board of New Zealand released its report *Health or Tobacco: An end to tobacco advertising and promotion.* The report stated that although there had been successive agreements between tobacco manufacturers and the Government since 1973, the quantity of tobacco advertising was not effectively controlled. From 1987 to 1988, print advertising increased by 60 percent in terms of constant dollars, while the agreement banned tobacco advertising on television, radio, the cinema and billboards. The Board stated its belief that while the provisions in the voluntary agreement between government and manufacturers have been useful, real progress in promoting non-smoking will not occur until more comprehensive strategies are in place, including a complete ban on all tobacco advertising and sponsorship. A partial ban on advertising was introduced in New Zealand in 1990 prohibiting press advertising in locally produced publications, and banning point-of-sale advertising after the end of December 1991.[41]

Australia

A review of the situation in Australia with respect to voluntary codes was printed in the British Medical Journal in 1985.[42]

> *In Australia the tobacco industry repeatedly claims that its advertising is directed only towards adult smokers and is intended only to effect a change of brand of cigarettes smoked. A 10 point voluntary advertising code, administered by an advertising industry council, seems to regulate cigarette advertisements. The four major cigarette manufacturers are cosignatories to the agreement, which is registered with the Trade Practices Commission so that it does not contravene monopoly provisions in the Trade Practices Act...Complaints regarding breaches have usually been dismissed by the Advertising Standards Council, against whose decisions there is no appeal in the conventional legal*

system. Between 1981 and 1983 13 such complaints to the council were dismissed while only two were upheld. This result and the time taken by the council to process the complaints have greatly discouraged the filing of complaints by concerned individuals and groups. In addition, the procedures required for their presentation are inhibiting in their formality.

Legislation banned advertising on radio and television in 1976. In 1989, the Australian Senate passed the Smoking and Tobacco Products Advertisement Bill which banned all print advertising in the Australian media, with a one year delay to proclamation.[43] In 1992, the federal government decided that, as of April 1, no new contracts for tobacco sponsorship of sport would be permitted, and that from December 31, 1995, existing tobacco advertising through sponsorship would be banned.[44]

V. DISCUSSION

Criteria for Effective Codes and Agreements

As the author did not find existing criteria to assess whether voluntary codes or agreements for advertising and promotion by the tobacco industry are satisfactory alternatives to legislation for the purposes of achieving health policy objectives [Footnote 6], criteria were developed based on her experience with tobacco control policy and legislation.

The author proposes that voluntary arrangements, whether codes or agreements, will only be effective where:

- there is a common goal for the parties to the arrangement;
- the extent of the restrictions is the same under the voluntary arrangement as would be achieved with legislation;
- all, or substantially all, persons involved in the activity are parties to, or subject to, the arrangement;

[6] Although the federal government has some guidelines for voluntary codes, they address the provision of services or the control of manufactured products, and were not a good fit with the issue of voluntary codes and agreements for tobacco product advertising and promotion.

- the arrangement includes enforceable penalties.

Application of the Criteria

Common Goal -- *Do the tobacco industry, advertisers and government have a common goal that can be achieved through a voluntary arrangement?*

Each member company of the tobacco industry has a duty to its owners and shareholders to conduct its business for their benefit. Since their business is the sale of tobacco products, each company, and the industry collectively must continue, and if possible increase, sales of its branded products and be profitable.

The federal government's health policy objective with respect to tobacco is to reduce tobacco consumption and the resultant adverse health effects among Canadians. Unlike other legally available products, tobacco is inherently hazardous and addictive. [45.]
The health goal to reduce tobacco consumption and the goal of the tobacco industry to promote sales of tobacco products are in conflict.

Extent of Restrictions -- *Are the restrictions developed through voluntary arrangements equivalent to the restrictions achieved with legislation?*

The extent of restrictions is influenced by the wording of the restriction, the breadth of activity captured within a restriction, and the flexibility in altering the restriction.
The history of legislation has developed a certain level of rigor for how restrictions are stated. There is no similar standard for voluntary agreements. Guidelines for interpreting voluntary codes have frequently been less stringent than the rules would imply. For example, the 1996 Canadian Code states that no tobacco advertising shall contain lifestyle advertising and then narrowly defines "lifestyle advertising" as "any advertising which features or depicts any people in whole or in part". Also, consider the voluntary restriction that "A tobacco product advertisement will not be placed in a publication the readership of which is known to be primarily non-adult." The companion guidelines from the industry may or may not define what is meant by "primarily" or "non-adult" or the source by which this would be "known".

In order to maintain a good public image, the tobacco industry wants to appear to be a responsible advertiser, in particular on the issue of advertising to children. However, while the voluntary restriction cover similar areas as legislative efforts, the approach is not as inclusive.

The tobacco industry tends to focus on advertising content, or to restrict very specific content or activities, permitting any advertising and promotion of tobacco products not expressly prohibited. The industry is seen to have used this approach to allow for the development of other non-specified marketing activities. The legislative approach to restrictions on advertising is more likely to put in place a comprehensive restriction, for example "No person shall advertise any tobacco product offered for sale in Canada", and then identify any exemptions to that restriction. This approach allows for a clear understanding by all parties of what activities are permitted, and that all others are prohibited.

Voluntary arrangements can by changed more readily than legislation. Both the U.K. and Canada have seen repeated revisions to their voluntary agreements and codes, often every couple of years. The revision process in the U.K. means that the negotiators spend considerable time in meetings, with little accomplished in terms of revisions. In Canada, revisions are made to the Code as the tobacco industry chooses.

The process for making changes to legislation and regulations is defined. The legislative process is often lengthy, and health department or government intentions may be compromised during the process. Legislation also clearly identifies which parts are subject to regulations that may further define requirements.

The Parties -- *Are all, or substantially all, persons involved in the business of advertising and promotion of tobacco products parties to the arrangement?*

Unlike restrictions on tobacco products themselves, for which the tobacco producers can be held accountable, advertising and promotion involves a number of other parties. It includes tobacco distributors, retailers, advertising agencies, packaging companies and various media. Effective control of the advertising and promotion of tobacco products requires that all levels of the tobacco industry, and all its collateral industries, be bound by any code or agreement, including its enforcement provisions.

The voluntary codes for advertising and promotion in Canada have originated with the Canadian Tobacco Manufacturers' Council which has as members the major tobacco product manufacturers. The Code states that members of CTMC are intended to voluntarily comply. A CTMC member can exempt itself from the Code by withdrawing from CTMC, as happened in

1985 when Rothmans withdrew from CTMC.[46] [47, Footnote 7]

The failure to have parties other than members of CTMC bound to an arrangement has been used as an explanation for non-compliance with restrictions on advertising and promotion. For example, in a letter dated May 16, 1978, the Executive Secretary of CTMC wrote, concerning posters in retail windows near schools, "if the poster is placed in the window by the store owner, we can only **ask** him to remove it and trust that he will comply." Twelve years later, in 1996, CTMC said it would *request* stores near schools to eliminate outward facing advertising in store windows. However, there was no indication that any action would be taken if the retailers chose to not change their advertising displays.

Difficulties with reach of the Agreements have also been demonstrated in Britain, where the breaches of the voluntary agreement are reported to the Committee for Monitoring Agreements on Tobacco and Sponsorship (COMATAS). A number of complaints have been deemed as justifiable complaints but not breaches of the agreements because it was the tobacco retailer that was at fault. [48]

Legislation does not limit its application to voluntary signatories. For example, the *Tobacco Products Control Act (1989)* stated that "*No person* shall advertise". Therefore responsibility is placed on all parties to ensure there is no advertising. Other parts of the Act may identify specific persons who must comply with requirements, for example tobacco distributors, acknowledging that there are many different persons involved in tobacco advertising and promotion in addition to tobacco product manufacturers.

For a voluntary approach to be appropriate, it must be possible to readily bring many sectors together as parties to the agreement. Because there is no common association of manufacturers, distributors, advertising agencies and media firms this would be a complicated and large undertaking.

Enforcement --*Does the voluntary arrangement include enforceable penalties?*

The experience with voluntary arrangements in Canada and other jurisdictions outlined in this paper documents the lack of provisions for enforcement systems and penalties. These

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[7] It is not known if there is a relationships between subsequent violations of the Code by Rothmans [67] during the period when they had withdrawn from CTMC.

arrangements have depended almost completely upon voluntary compliance.

According to the 1996 Code of the CTMC, any person or agency may bring any suspected violation of the Code to the attention of the Agency. The Agency has the "sole and unfettered discretion whether to inquire into the matter".[49] If it is decided that any advertising violates the Code, it is unclear what, if any action will be taken. There is no mention of any penalties and the Agency has no power to enforce the Code.

In Britain, the agreements do not include enforcement and penalty provisions. Anyone may forward a complaint to COMATAS with a request to investigate. When a breach of the agreement is acknowledged by COMATAS, the monitoring committee, or the company concerned, it is to be rectified. There are no penalties, however long or flagrantly the agreement has been breached. Most of the complaints made to COMATAS have been dismissed.[50]

All of the arrangements examined in this paper include compliance with an advertising code from an advertising council or advertising authority. These are also voluntary organizations and have no legal obligation or ability to enforce compliance.

Restrictions on tobacco product advertising and promotion require enforceable penalties that apply where an arrangement has been breached. The existing voluntary codes and agreements do not have this authority. There is a need for an independent body to handle complaints and enforcement, and for a defined system of enforcement and penalties.

For legislation, the authority for enforcement and the system for complaints and inquiry is well established. However, enforcement can be influenced by the commitment of the enforcement authority to support enforcement. In addition, someone charged with non-compliance can take their case to court. Court decisions may alter interpretation of the law and its subsequent application.

VI. CONCLUSION

Experience with tobacco industry self-regulation of tobacco product advertising and promotion, whether through voluntary codes or voluntary agreements, has proved to be less restrictive then legislative approaches. While the threat of more stringent legislation has often moved the industry to voluntarily become more restrictive, the industry proposals seek the minimum restrictions it deems would be acceptable in the current context.

The possibility of increasing effective restrictions on tobacco product advertising and promotion in Canada through voluntary codes or agreements in the future is limited. The primary reasons for this are:

- there is not a common goal for the tobacco industry and government health policy. Indeed, the tobacco industry has objectives which are in conflict with the health objectives of governments;
- the voluntary code applies only to the members of the Canadian Tobacco Manufacturers Council and does not apply to other persons involved in tobacco product advertising and promotion, such as distributors, retailers and advertising agencies. There is no common association or agency to represent all the market players involved with tobacco advertising and promotion -- the tobacco product manufacturers, distributors, retailers, advertising and media sectors;
- the voluntary codes do not clearly set out parameters of the restricted behaviour. A thorough reading of companion guidelines is needed to understand the true restriction;
- voluntary codes can be written at the sole discretion of the Canadian Tobacco Manufacturer's Council;
- there appears to be no independent body to effectively enforce the agreement where voluntary compliance does not occur.

The case that voluntary codes or agreements are appropriate for tobacco product advertising and promotion cannot be made. It therefore must be concluded that governments should use carefully drafted and comprehensive legislation, which is then enforced, if they wish to seriously restrict advertising and promotion to achieve their health objectives.

APPENDIX A

Comparative Table of Bill C-248, the *Cigarette Products Act*, and the 1972 Cigarette & Cigarette Tobacco Advertising and Promotion Code of the Canadian Tobacco Manufacturers' Council

Bill C-248, the *Cigarette Products Act* received first reading June 10, 1971. It did not receive second reading.

	Bill C-248	1972 Code
Purpose and Intent		The purpose of this code is to establish and confirm uniform standards of cigarette advertising in Canada. The intent is that Canadian tobacco manufacturers voluntarily comply with the code.
Advertising Restrictions	3. (1) No person shall, directly or indirectly, by any means whatever promote the sale of any cigarette product except that (a) any person who sells any cigarette product in the ordinary course of business may, (i) for the purpose of selling the cigarette product, expose and identify it inside his place of business, (ii) where he sells the cigarette product by means of an automatic vending machine, display thereon such information as is necessary to identify the cigarette product sold by means of such machines, and (iii) with respect to his business premises, business vehicle or other property, publish his name thereon to the extent necessary to identify his ownership, tenancy or leasing thereof to comply with any law; (c) a manufacturer or wholesale distributor of cigarette products may make representations to wholesale distributors or retailers of cigarette products for the purpose of selling his products to such persons.	Rule 1 - There will be no cigarette advertising after December 31, 1971, on radio and television. Rule 6 - The industry will limit advertising expenditures in remaining media to 1971 levels. Rule 9 - All advertising, the purpose of which is solely to increase individual brand shares as such, shall be in conformity with the Canadian Code of Advertising standards as issues in 1963 by the Canadian Advertising Advisory Board. Rule 10 - Cigarette advertising shall be addressed to adults 18 years of age and over. Rule 12 - No advertising shall use as endorsers athletes or celebrities in the entertainment world and other persons whose major appeal is to children or adolescents under the age of 18 years. Rule 14 - No cigarette product shall be promoted on posters or bulletin boards located in the immediate vicinity of primary or secondary schools.

	Bill C-248	1972 Code
Distribution of free product	3.(1) (b) a manufacturer of cigarette products may distribute or make available free of charge or on a subsidized basis his cigarette products to his employees for their personal use;	Rule 8 - Distribution of cigarettes free of charge or on a subsidized basis to consumers will be limited to new brand introductions after December 31, 1971. The foregoing shall not preclude free distribution of cigarettes by manufacturers to their employees for their personal use, or to consumers in answer to complaints.
Incentives		Rule 7 - No cigarette brand shall be promoted by incentive programs offering to the consumer cash or other prizes. Effective January 1, 1972, coupons redeemable for gifts and related gift catalogues will not be advertised.
Nicotine and Tar Levels	(2) No person shall import or manufacture for sale (a) a cigarette product the smoke from which contains an amount of nicotine, tar or other constituent exceeding the maximum amount prescribed; or (b) cigarette tobacco that contains an amount of nicotine or other constituent exceeding the maximum amount prescribed. (3) No person shall sell (a) a cigarette product the smoke from which contains an amount of nicotine, tar or other constituent exceeding the maximum amount prescribed; (b) cigarette tobacco that contains an amount of nicotine or other constituent exceeding the maximum amount prescribed.	Rule 4 - Average tar and nicotine content of cigarette smoke from any brand of cigarettes shall not exceed 22 milligrams of tar, moisture free weight, per cigarette and 1.6 milligrams of nicotine per cigarette.
Health Warnings	3.(3) No person shall sell (c) a cigarette product unless there appears on the package thereof, clearly and prominently displayed, the words of warning set out in the Schedule, or such other words as may be prescribed, Schedule states: Words of Warning "WARNING: DANGER TO HEALTH INCREASES WITH AMOUNT SMOKED, AVOID INHALING".	Rule 2 - All cigarette packages produced after April 1, 1972 shall bear, clearly and prominently displayed on one side thereof, the following words: "Warning: the Department of Health and Welfare advises that danger to health increases with amount smoked." "Avis Le Ministère De La Santé Nationale et du Bien-être Social Considère que le danger pour la santé croît avec l'usage."

	Bill C-248	1972 Code
Labelling of Toxic Constituents	3.(3) No person shall sell (c) a cigarette product unless there appears on the package thereof... (i) in the case of cigarettes, a statement in English and French of the amount of nicotine, tar and other constituents contained in the smoke from any such cigarette, or (ii) in the case of cigarette tobacco a statement in English and French of the amount of nicotine and other constituents contained in the tobacco or the amount of nicotine, tar and other constituents contained in the smoke from such tobacco;	
Warnings on Vending Machines	3.(3) No person shall sell (e) cigarettes by means of an automatic vending machines unless there appears on such machine the words of warning required under paragraph (c) and a statement in English and in French, in respect of such cigarettes, required by subparagraph (i) of that paragraph.	Rule 3 - After April 1, 1972, labels carrying the warning noted in paragraph 2 shall be made available to operators of cigarette vending machines.
Misrepresent-ation	11. Nothing shall appear on or in any package of cigarette product or any wrapping or wrapper thereof or on any automatic vending machines to suggest, expressly or by implication, that the smoking of a cigarette product does not constitute a health hazard because the cigarette product complies with the requirements of this Act or otherwise.	Rule 11 - No advertising shall state or imply that smoking the brand advertised promotes physical health or that smoking a particular brand is better for health than smoking any other brand of cigarettes, or is essential to romance, prominence, success or personal advancement
Brand Stretching		Rule 5 - No cigarette brand names shall be used on future cigar or pipe tobacco products nor shall cigar or pipe tobacco brand names be used on future cigarette products.

APPENDIX B

Comparative Table of the *Tobacco Products Control Act* (1989) (TPCA) and the 1996 Advertising Code of the Canadian Tobacco Manufacturer's Council(CTMC)

	Tobacco Products Control Act (1989)	1996 Code
Purpose and Intent	3. The purpose of this Act is to provide a legislative response to a national public health problem of substantial and pressing concern and, in particular, (a) to protect the health of Canadians in the light of conclusive evidence implicating tobacco use in the incidence of numerous and debilitating diseases; (b) to protect young persons and others, to the extent that is reasonable in a free and democratic society, from inducements to use tobacco products and consequent dependence on them; and (c) enhance public awareness of the hazards of tobacco use by ensuring the effective communication of pertinent information to consumers of tobacco products.	This Code is meant to ensure that the marketing practices of Canadian tobacco manufacturers comply with the Supreme Court of Canada's views that commercial expression is legitimate if designed to assist consumers in their choices among brands of tobacco products, in a context respectful of : (a) the Court's position that some forms of advertising might reasonably be seen to influence the decision to smoke or to continue to smoke and might for that reason be prohibited particularly if the advertising appears to be directed to those below the legal age for the purchase of tobacco products, and (b) the Court's requirement that limitations on commercial expression are justified, at least by reason or logic, and that gratuitous infringements of the right to advertise be avoided. The members of the Canadian Tobacco Manufacturers's Council will abide by the terms of this Code and use their best efforts to ensure compliance by other manufacturers, importers, distributors and retailers not members of the Council, and by the media in which tobacco product advertising is carried.
Restrictions on Advertising Media	4. (1) No person shall advertise any tobacco product offered for sale in Canada. (2) No person shall, for consideration, publish, broadcast or otherwise disseminate, on behalf of another person, an advertisement for any tobacco product offered for sale in Canada. **These paragraphs of the TPCA were struck down by the Supreme Court Decision of September 21, 1995.**	3.5 No tobacco product advertising shall be transmitted by radio or television and none shall be placed on cinema screens or on video tapes of cinema films. 3.2 A tobacco product advertisement's content and placement may be considered in determining its intended audience; in particular, tobacco product advertisements: (b) shall not be placed in a publication the readership of which is known to be primarily non-adult;

	Tobacco Products Control Act (1989)	1996 Code
Limits on Advertising Expenditures	6. (2)Where, in any calendar year, a manufacturer or importer of tobacco products makes financial or other contributions toward cultural or sporting activities or events in respect of which brand names of those products are used, the value of such contributions, determined in accordance with the regulations, shall not exceed the value, so determined, of the contributions made by the manufacturer or importer toward cultural or sporting activities and events in 1987. **This paragraph was struck down by the Supreme Court Decision of September 21, 1995.**	
Advertising of Sponsored Events	6. (1) ... the full name of a manufacturer or importer of tobacco products...may be used, otherwise than in association with a tobacco products, in a representation to the public (a) that promotes a cultural or sporting activity or event, or that acknowledges financial or other contributions made by the manufacturer or importer of the tobacco product toward such an activity or event. **This paragraph was struck down by the Supreme Court Decision of September 21, 1995.**	4.1 No sponsorship advertising may depict any tobacco product or any package commonly associated with a tobacco product or any tobacco-related good. 4.2 Sponsorship advertising may contain the full corporate name of any manufacturer of tobacco products and may contain a tobacco trade-mark under the condition imposed by article. 4.3 A tobacco trade-mark may be used in sponsorship advertising as long as it is used in association with a sponsored event, events or activity where the principal purpose of the advertising is the promotion of the event, events, or activity which must be identified by text.
Incentive Programs	7. (2) No person shall offer any gift or cash rebate or the right to participate in any contest, lottery or game to the purchaser of a tobacco product in consideration of the purchase thereof, or to any person in consideration of the furnishing of evidence of such a purchase.	

	Tobacco Products Control Act (1989)	1996 Code
Advertising Standards		10.1 No tobacco product advertisement and no sponsorship advertisement produced for a manufacturer may be used unless it has received from the Agency or any body created by it to this end confirmation that it complies with this Code;
Restrictions on Advertising Content		3.1 No tobacco product advertising shall be directed to persons other than adult consumers of tobacco products; 3.2 A tobacco product advertisement's content and placement may be considered in determining its intended audience; in particular, tobacco product advertisements: (c) shall not attempt to influence non-consumers to become consumers of tobacco products; (d) shall not portray tobacco products in the context of or in relation to any activity attractive primarily to non-adults; 3.3 No tobacco product advertising shall have any purpose other than that of increasing or maintaining brand share;
Restrictions on Advertising Content		3.4 No tobacco advertising shall contain lifestyle advertising. [Definition: Lifestyle advertising means any advertising which features or depicts any people in whole or in part.] 3.2 A tobacco product advertisement's content and placement may be considered in determining its intended audience; in particular, tobacco product advertisements: (e) shall not portray any tobacco product as a necessity for the enjoyment of life or for social achievement.
Advertising in Proximity to Schools		3.2 (a) A tobacco product advertisement's content and placement may be considered in determining its intended audience; in particular, tobacco product advertisements: (a) shall not be placed within 200 meters of the entrance of any institution known to be a primary or secondary school.

	Tobacco Products Control Act (1989)	1996 Code
Health Warnings on Advertising		7.1 Tobacco product advertising shall contain, on each advertisement, a clearly legible health message, in English or in French, as follows. "Health Canada advises that smoking is addictive and causes lung cancer, emphysema and heart disease." "Santé Canada considère que l'usage du tabac crée une dépendence et cause le cancer du poumon, l'emphysème et la cardiopathies." In the case of smokeless tobacco products: ""Health Canada advises that this product can cause cancer" "Santé Canada considère que ce produit peut causer le cancer." 7.2 Such health messages shall, in the case of tobacco product advertisements appearing on outdoor billboards, take up the bottom 20% of the advertisement, in accordance with the Regulations. [Definition: Outdoor billboard means any outdoor stationary sign larger than six square meters.] 7.3 Such health messages shall, in the case of all tobacco product advertisements appearing elsewhere than on outdoor billboards, take up 15% of the advertisement, in accordance with the Regulations.
Vending Machines	5(2) Not withstanding section 4 [prohibiting advertising] a person who operates a vending machine that dispenses tobacco products may identify or depict those products and their prices on the exterior of the vending machine in the prescribed form and manner.	
Free Cigarettes	7. (1) No distributor shall distribute tobacco products in the absence of consideration therefor, or furnish tobacco products to any person for the purpose of their subsequent distribution without consideration.	

	Tobacco Products Control Act (1989)	1996 Code
Use of Trade-Marks on Non-Tobacco Goods	8. (1) No manufacturer or importer of tobacco products is entitled to use any trade mark in association with those products, and no person acting with the concurrence or acquiescence of such a manufacturer or importer, shall (a) apply the trade mark, in any form in which it appears on packages of the product that are sold in Canada, to any article other than a tobacco product or a package or container in which a tobacco product is sold or shipped, or (b) use the trade mark in any form for the purpose of advertising any article other than a tobacco product or any service, activity or event, notwithstanding that the manufacturer or importer, is, but for this Act, entitled to use the trade mark in association with that article, service, activity or event. (2) No person shall distribute, sell, offer for sale or expose for sale any article other than a tobacco product or a package or container in which a tobacco product is sold or shipped, that bears a trade mark of a tobacco product in any form in which it appears on packages of the tobacco product that are sold in Canada.	5.1 Subject to the Regulations and to article 5.2 of this Code, no tobacco trade-mark may be affixed to or associated with any product, ware or service offered at retail other than tobacco products or tobacco-related goods or service surrounding the manufacture, distribution or sale of such products or goods; 5.2 Non-tobacco product and non-tobacco-related goods may bear a tobacco trade-mark; (a) when used in association with a sponsored event or activity identified by text; (b) when used as a direct part of the sponsored event or activity; and (c) which is the name of a brand tobacco product provided the product or goods are not identified by trade dress or other design elements which are the same as those used on the tobacco product package. [The Regulations states that: The use of a tobacco trade mark on a tobacco-related good, on in-store shelf-strips of less than 3" in width, on sponsorship advertisements or sponsorhsip-related items shall not be considered tobacco advertising under this Code. The restrictions on the use of a tobacco trade mark on non tobacco goods do not apply in respect of a trade mark if in 1986 tobacco products and other articles bearing that trade mark were sold at retail in Canada and the retail value of those other articles was greater than one-quarter of the retail value of those tobacco products.]

	Tobacco Products Control Act (1989)	1996 Code
Board of Arbitration		10.2 Any suspected violation of this Code may be brought to the attention of the Agency by any person or agency and the Agency will have sole and unfettered discretion whether to inquire into the matter; 10.3 The Agency, in the event that it conclude, after affording all interested parties the right to be heard, that there has been a violation of this Code, may require the withdrawal of any advertisement found to offend this Code; the Agency, at its discretion, may allow a delay for this withdrawal longer the 48 hours but will allow a delay at least that long; should the corrective action required not be taken, the appropriate media will be notified that the advertising violates the Code; 10.4 In the event of the Agency's rejection of any advertisement submitted for pre-clearance on the determination by the Agency that any advertisement violates this Code or its Regulations, an appeal will lie to a separate independent appeal agency.

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The Ontario Tobacco Research Unit (OTRU) has established several series of publications aimed at the communication of new and up-to-date information in the tobacco control field. The target audience for these publications includes tobacco researchers, programmers, policy analysts and control advocates.

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FEDERAL TRADE COMMISSION

STAFF REPORT ON THE CIGARETTE ADVERTISING INVESTIGATION

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[Excerpt presented herein. Documents omitted herein.]

Thus, the dominant themes of cigarette advertising are that smoking is associated with youthful vigor, good health, good looks and personal, social and professional acceptance and success, and that it is compatible with a wide range of athletic and healthful activities. One theme is conspicuously absent from all cigarette ads. Although these ads contain the required general warning, they make no mention of the numerous and specific adverse health consequences of using the advertised product.[31]

31. To the best of our knowledge, cigarette companies never have provided health information, other than the required warning and "tar" and nicotine figures, in their advertisements.

IV. ADVERTISING THEMES AS DESCRIBED BY THE MANUFACTURERS' MARKETING PLANS

The cigarette companies' documents reinforce the findings of the staff about the themes of cigarette advertising. For example, R.J. Reynolds' 1977 marketing plan for Salem states explicitly that:

> Motivational research has identified the phenomenon of image projection as a highly motivating force. Therefore, through the association of Salem, and its brand styles with emulatable personalities and situational elements that are compatible with the aspirations and lifestyles of contemporary young adults, this important target segment will be attracted to the brand. Importantly, older smokers also relate favorably to this personality type; therefore, reinforcement of the current franchise is simultaneously achieved.[32]

The same marketing plan indicates that a primary theme for the promotion of Salem has been to associate the cigarette with the lifestyle of "young adult males" who are "masculine, contemporary, confident, self-assured, daring/adventurous, mature."[33] Marketing plans for other cigarettes are similar. A Doral campaign sought to project the image of "an independent, self-reliant, self-confident, take-charge kind of person."[34] A Winston man was projected as "a man's man who is strong, vigorous, confident, experienced, mature."[35]

Liggett & Myers' documents show that their Lark ads picturing a balloon high above land sought to give the consumer an association with "lightness and exhilaration."[36] L&M's campaign planned to position Lark as a "youthful, contemporary brand that satisfies the lifestyles of the modern smoking public." Its

32. Document A900022 - "Salem 1977 Annual Marketing Plan.

33. Id.

34. Document A900003 - "RJR Statement of Business 1977 - Doral Cigarettes."

35. Document A900001 - "Winston King 1978 Marketing Plan."

36. Document A900230 -"1974 Lark Annual Marketing Plan."

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ads emphasize "moments of post-tension and relaxation."[37] The Eve smoker has been portrayed as a "sophisticated, up-to-date, youthful and active woman who seems to have distinct ideas about what she wants."[38]

V. EFFORTS OF SOME CIGARETTE ADVERTISEMENTS TO DIVERT ATTENTION AWAY FROM THE HEALTH HAZARDS OF SMOKING

Many cigarette advertising techniques appear to denigrate or undercut the health warning. Information obtained from subpoenaed documents indicates that, at least in the case of several advertising campaigns, these techniques have been carefully planned. For example, documents from Brown & Williamson (B&W) and one of its advertising agencies, Ted Bates and Company, Inc., set forth the development of an advertising strategy for Viceroy cigarettes designed to suppress or minimize public concern about the health effects of smoking.

The documents show that, at the request of Ted Bates, a marketing and research firm conducted a number of focus group interviews on the subject of smoking in order to assist the ad agency in developing a marketable image for Viceroy cigarettes.[39] The final report summarizing the results of this research asserts that many smokers perceive the smoking habit as a "dirty" and dangerous one engaged in only by "very stupid people."[40] The report concludes:

> Thus, the smokers have to face the fact that they are illogical, irrational and stupid. People find it hard to go throughout life with such negative presentation and evaluation of self. The saviours are the *rationalization* and *repression* that end up and result in a defense mechanism that, as many of the defense mechanisms we use, has its own 'logic', its own rationale.

* * * * *

> Thus, smokers don't like to be reminded of the fact that they are illogical and irrational. They don't want to be reminded by either *direct* or *indirect* manner.[41]

The report proceeds to describe the elements of a good cigarette advertising campaing, in light of its findings, in a chapter entitled, "How To Reduce Objections To A Cigarette." The basic premise of the report's recommendations is that since there "are not any real, absolute, positive qualities and attributes in a cigarette," the most effective advertising is designed to "*reduce objections*"[42] to the product by presenting a picture or situation ambiguous enough to provide smokers with a rationale for their behavior and a means of repressing their health concerns about smoking. To provide a rationale for smoking, the ad must project the image that cigarettes provide the smoker with social acceptance, an acceptable means of rewarding himself or herself, a stimulant, a tranquilizer, a better self-image, etc. With regard to health issues, the report recommends: "Start out from the basic assumption that cigarette smoking is dangerous to your health - try to go around it in an elegant manner but don't try to fight it - it's a losing war."[43]

One chapter of the report describes how the company can introduce "starters" to the Viceroy brand, a discussion which focuses almost exclusively on how to presuade young people to smoke. The report asserts:

> For the young smoker, the cigarette is not yet an integral part of life, of day-to-day life, in spite of the fact that they try to project the image of a regular, run-of-the-mill smoker. For them, a cigarette, and the whole smoking process, is part of the illicit pleasure category.... In the young smoker's mind a cigarette falls into the same category with wine, beer, shaving, wearing a bra (or *purposely* not wearing one), declaration of independence and striving for self-identity. For the young starter, a cigarette is associated with introduction to sex life, with

37. Document A900251 - "1073 L&M Marketing Plan."

38. Document A900245 - "1974 Eve Portfolio Test."

39. Document A011345 - "An Action-Oriented Research Program For Discovering And Creating The Best Possible Image For Viceroy Cigarettes," prepared for Ted Bates Advertising in March 1975 by N. Kennan, Marketing and Research Counselors, Inc.

40. Document A901268 - May 26, 1975 "What Have We Learned From People? A Conceptual Summarization of 18 Focus Group Interviews On The Subject Of Smoking."

41. Id. at 2, 3 (emphasis in original).

42. Id. at 12 (emphasis in original).

43. Id. at 17.

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courtship, with smoking 'pot' and keeping late studying hours.[44]

The chapter then recommends a strategy for attracting young "starters" to cigarette smoking:

> Thus, an attempt to reach young smokers, starters, should be based, among others, on the following major parameters:
>
> -Present the cigarette as one of a few initiations into the adult world.
>
> -Present the cigarette as part of the illicit pleasure category of products and activities.
>
> * * * * *
>
> -In your ads create a situation taken from the day-to-day life of the young smoker but in an elegant manner have this situation touch on the basic symbols of the growing-up, maturity process.
>
> -To the best of your ability, (considering some legal constraints), relate the cigarette to 'pot', wine, beer, sex, etc.
>
> -Don't communicate health or health-related points.[45]

B&W adopted many of the ideas contained in this report in the development of a Viceroy advertising campaign. Thus, in a document entitled, "Viceroy Strategy," B&W notes repeatedly that its advertising campaign must provide consumers with a rationalization for smoking and a "means of *repressing* their health concerns about smoking a full flavor Viceroy."[46] The following excerpts from "Viceroy Strategy" are representative and indicate that in B&W's view, the other cigarette companies also have developed advertising strategies designed to cause repression of consumer health concerns about smoking:

> Full flavor smokers perceive cigarette smoking as dangerous to their health.... Given their awareness of the smoking and health situation, they are faced with the fact that they are behaving illogically. They respond to this inconsistency by providing themselves with either a rationalization for smoking, or, by repressing their perceptions of the possible dangers involved. *To date, major full flavor brands have either consciously or unconsciously 'coped' with the smoking and health issues in advertising by appealing to repression.* (emphasis added.)
>
> * * * * *
>
> The marketing efforts must cope with consumers' attitudes about smoking and health, either providing them a *rationale* for smoking a full flavor VICEROY or providing a means of *repressing* their concerns about smoking a full flavor VICEROY. (emphasis in original.)
>
> * * * * *
>
> Advertising Objective - To communicate effectively that VICEROY is a satisfying flavorful cigarette which young adult smokers enjoy, by providing them a rationalization for smoking, or, a repression of the health concern they appear to need.

B&W then describes its plan to accomplish its advertising objective. Three advertising strategies would be used:

> 1. The 'satisfaction' campaign provides a *rationalization*: VICEROY is so satisfying that smokers can smoke fewer cigarettes and still receive the satisfaction they want....
>
> 2. The 'tension release' campaign provides a *rationalization*: VICEROY'S satisfying flavor can help the smoker in a tense situation....
>
> 3. The 'feels good' campaign appeals to the smoker by *repressing the concerns* he may have about smoking *by justification*: If it feels good, do it; if it feels good, smoke it....[47]

44. Id. at 29-30 (emphasis in original).

45. Id. at 31.

46. Document A015538 - "Viceroy Strategy," March 3, 1976, V.C. Broach, Group Project Manager, B&W (emphasis in original).

47. These strategies were employed in a six-month media campaing conducted in three test cities in 1976. The advertising allotment for the campaign was approximately ten times the normal advertising dollar amount for a six-month period. (Document A015486 - Memorandum from M.M. Matteson to V.C. Broach, July 14, 1976, emphases added).

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B&W's documents also show that it translated the advice on how to attract young "starters" into an advertising campaign featuring young adults in situations that the vast majority of young people probably would experience and in situations demonstrating adherence to a "free and easy, hedonistic lifestyle."[48]

Other documents submitted by B&W show that the company has attempted to capitalize upon the erroneous consumer perception that there is a health benefit to smoking mentholated cigarettes. Documents pertaining to the marketing of Kool cigarettes demonstrate that the company is aware of the consumer misperception about the relative safety of menthol cigarettes and utilizes it in the development of advertising strategies for Kools.[49]

A third set of documents obtained from Brown & Williamson reveal that in 1976, Brown and Williamson introduced a new brand of cigarette named Fact. The Brown and Williamson documents indicate that the company believed that Fact cigarettes were a new product which reduced the amount of harmful gas in the cigarette smoke inhaled by the consumer. Therefore, Fact was initially advertised as a brand with the unique ability to filter certain gases.[50] However, initial sales of Fact were not considered satisfactory by Brown and Williamson, so in 1977 temporarily halted all advertising and promotion of the cigarette while it developed a new market strategy.[51]

In April 1977, Brown and Williamson's advertising agency, Post-Keyes-Gardner, Inc., presented Brown and Williamson with its marketing and strategy recommendations for the reintroduction of Fact cigarettes.[52] The ad agency proposed two possible strategies to distinguish Fact from other cigarettes: 1) "More complete health protection through selective gas filtration," 2) "More taste and satisfaction in a low tar cigarette."[53] About the proposed strategy focusing on better health protection as the result of inhaling lower levels of gas, Post-Keyes-Gardner, Inc. wrote:

> A secondary opportunity to distinguish Fact from the mass of tar number claims is by capitalizing on the products unique selective gas filtration. This would demand 'product image' advertising and would provide the brand with a real point of difference. It would mean expanding the cigarette health issue beyond tar to encompass gas. However, this would require extablishing 'gas' as a meaningful health hazard in cigarettes because currently there is very low consumer awareness or comprehension of the gas problem. The Agency believes one of the major problems with the introductory advertising for Fact was that it failed to educate health concerned consumers about the dangers of gas. This failure to establish the gas problem meant that Fact's selective filtration promise was meaningless to the majority of the target audience. However, if smokers are effectively educated regarding this problem, the selective gas filtration promise may still be powerful, particularly among the very health conscious.[54]

48. Document A080115 - "Viceroy Marketing/Advertising Strategy," January 26, 1976.

49. In 1976, B&W held four focus group discussions to gauge mentol smokers' responses to a new Kool 120mm cigarette. The majority of the participants were menthol cigarette smokers. In a number of cases, the participants told B&W that they switched to menthol either for health considerations or from a general feeling that menthol cigarettes are less dangerous. According to B&W, a "pseudo-health image" has accrued to mentholated cigarettes. (Document A080675 - "Low Tar Longs Project - Creative Agency Assignment," 1977.) By characterizing the health image of mentholated cigarettes "pseudo," B&W admits it sknowledge that menthol is of no health benefit to smokers. In a 1978 document discussion Kool cigarettes' strengths and weaknesses, B&W also admits that one of Kool's strengths "rides on the connotation that menthol has health overtones." (Document A006981 - Memorandum from R.L. Johnson to F.E. McGowan, B&W, March 13, 1978.) In addition, B&W states that one of the strengths of its Kool Super Longs is that "menthol and 'tar' delivery has synergistic therapeutic implications." (Id.) B&W intends to exploit this false belief. In its document describing Kool's objectives through 1981, B&W states that its strategy will be to provide product safety reassurances while enhancing the satisfaction and refreshment perception. (Document A035669 - "Kool Three-Year Objectives," August 15, 1978.)

In fact, mentholated cigarettes tend to have a high "tar" and nicotine content.

50. Document 7244 - "Fact 1976 Concept Description and Potential and Marketing Plan."

51. Document 35523 - "Fact 1977 Repositioning and 1978 Marketing Plan Summary."

52. Document 35524 - Brown & Williamson, "Marketing Advertising Strategy Recommendations for the Reintroduction of Fact Cigarettes," April 18, 1977. (The same document was also submitted by Post-Keyes & Gardner, Inc. - Document 714569).

53. Id.

54. Id., at 3.

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However, the agency also noted the weakness of this proposed strategy:

> This strategic option assumes gas will become a major health issue. To ensure it becomes an issue will require an educational approach in introductory advertising. It is questionable whether any cigarette manufacturer should be publicizing a new health hazard for cigarette smokers. The desire to avoid spelling out the gas hazard in advertising could severely weaken the effectiveness of this approach.[55]

Ultimately, Brown and Williamson documents indicate that it elected not to educate the public about the health hazards associated with the gases in cigarette smoke and not to focus the Fact ad campaign on the low gas issue. The reason for Brown and Williamson's decision is explained in a document entitled "Fact 1977 Repositioning and 1978 Marketing Summary":

> Until the problem of gas becomes *public knowledge through government investigation or media coverage*, a low gas benefit will remain of little strategic value. (emphasis added.)[56]

The rationale is restated in a memorandum from the representative of the Brwon and Williamson "Brand Group" which had overall responsibility for Fact:

> We do not support definition in advertising of the problem of gas in order to specifically communicate its consumer benefit and distinguish it from low "tar". To supply such definition would require overt references to the alleged ciliatoxic and cardiovascular ill effects of smoking. The possible ramifications of this in the Legal, Regulatory, and Policy areas are appalling... a likely result of such activity on our part would be escalation of quitting rates among smokers.[57]

Thus, despite the potential market advantage it might have obtained over its competitors by advertising the unique gas filtration system of Fact cigarettes, Brown and Williamson chose not to do so in order to avoid educating the public about the presence and hazardous nature of gases in cigarette smoke.

CHAPTER III. CONSUMER KNOWLEDGE OF THE HEALTH HAZARDS OF SMOKING

I. INTRODUCTION AND OVERVIEW

This chapter presents the existing empirical evidence concerning consumer knowledge about the health hazards of smoking. From this data it is possible to determine the extent to which consumers are aware of or lack knowledge about the health consequences of smoking.

A. Data Relied Upon

The following chapter includes the staff's analysis of: (1) the already existing survey data of the public's knowledge of the risks of smoking, (2) two nationally projectable surveys commissioned by the F.T.C. staff designed to measure consumer knowledge in this area, and (3) several studies commissioned by the staff not designed to directly measure consumer knowledge, but which nevertheless provide insight into it, such as the Walker Study and the Burke Focus Group, discussed below. In all, staff evaluated more than a dozen recent studies relevant to consumer knowledge. The most important studies are briefly described below:

Gallup Study

This 1978 nationally projectable face-to-face opinion poll of 1500 persons surveyed smoking attitides and behavior, and included questions concerning beliefs about the health hazards of smoking. The Gallup Opinion Index, Smoking in America, Public Attitudes and Behavior, Report No. 155, June 1978.

The Shor Study

The 1980 study assessed 307 college students' perceptions and beliefs about the effects of envoronmental smoke and the health hazards to smokers. Shor et al., "Beliefs of Smoking and Nonsmoking College Students About the Effects of Environmental Tobacco

55. Id., at 6.

56. Document 35523 - "Fact 1977 Repositioning and 1978 Marketing Plan Summary."

57. Document 11455 - Memorandum from G.T. Reid to F.E. McDeown dated March 22, 1978.

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Smoke and Related Issues," 10 *J. Drug Education* (1980).

1978 Roper Report

This nationally projectable survey of people's attitudes about smoking was conducted for the Tobacco Institute, and submitted to the FTC in response to a subpoena. The survey was conducted via face-to-face interviewing with 2,511 subjects. Part of the report, summarizing the results, was appended to the Commission's 1978 Report to Congress. The Roper Organization, Study of Public Attitudes Toward Cigarette Smoking and the Tobacco Industry in 1978.

Chilton Survey

This 1979 nationally projectable telephone survey, conducted for the FTC, questioned 1,211 teenagers aged 13-18 and 407 adults aged 29-31 about their beliefs concerning the health effects of smoking. Chilton Research Services, A Survey of Adolescent and Adult Attitudes, Values Behavior, Intentions and Knowledge Related to Cigarette Smoking, 1979.

Walker Study

This study of 805 persons, conducted for the FTC in 1980, was designed to test the ability of several new health warnings to make people think about the health hazards related to smoking. In addition, the warnings were tested for their understandability. The study provides insight into consumer knowledge through the relative ranking of proposed warnings, and more directly, through analysis of verbatim comments of subjects in the study explaining why they preferred some warnings over others. Walker Research, Health Warning Concepts Study, 1980.

Burke Study

A 1980 focus group interview study conducted for the FTC to assess responses and attitudes towards proposed health warnings formats, Burke also provides insight into consumer knowledge of health hazards. A focus group interview consists of small discussion groups moderated by trained professionals. Teh moderator then records her impressions of the discussion in an "analysis" which constitutes the results of the study. While no statistical inference may be drawn from a focus group study, it can often provide righer and more "human" insight concerning people's beliefs and attitudes than can survey data. Burke Exploratory Print Focus Group, 1980.

HEW Teenage Smoking Study

This study, conducted in 1979, interviewed by telephone 1,318 teens, ages 12-18, and included questions reflecting teen knowledge of the health hazards of smoking. "Teenage Smoking: Immediate and Long Term Patterns," National Institue of Education, 1979.

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SUMMARY B
KNOWLEDGE CHART[a]

AREA	Medical Fact Study Tested	# total population unaware[b]	# smokers unaware[c]	# adults unaware[d]	# smokers unaware[e]
OVERALL RISK	Smoking is hazardous to health - Gallup, 1978 Roper	9-10%	13-17%	15 million	5-10 million
	A thirty-year old man reduces his life expectancy by smoking a pack a day - 1980 Roper	30%	41%	50 million	20 million
	Light smoking is dangerous - 1978 Roper	31%	40%	50 million	20 million
CANCER	Smoking causes cancer - Yankelovich	22%	32%	35 million	15 million
	Smoking causes lung cancer - Gallup, Yankelovich	19-23%	27-38%	30-35 mil.	15-20 mil.
	Smoking causes most cases of lung cancer - 1980 Roper	43%	49%	70 million	25 million
	Smoking causes cancer of the mouth and esophagus - Gallup, Chilton [f]	15-21%	15-27%	25-35 mil.	10-15 mil.
LOW TAR/ NICOTINE	It has not been proven that low-tar and nicotine cigarettes do not significantly increase risk of disease. 1980 Roper	33%[h]	36%[h]	55 million	20 million
CARBON MONOXIDE	Cigarette smoke contains carbon monoxide - Chilton, 1980 Roper	45-53%	38-53%	70-85 mil.	20-30 mil.

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a For a description of the surveys upon which this chart is based, see Ch. III.

b Percent unaware includes those who say they do not believe true statements, believe false statements, underestimate on a multiple choice question, or answer "don't know" or "uncertain." When there are two or more studies, the results are presented as a range.

c Computed as described in Fn. b, *supra.*

d Based on 160 million adults 17 years of age and older. See, Surgeon General's 1979 Report, Appendix A-11.

e Based on 54 million smokers. See, Surgeon General's 1979 Report, A-11.

f All references to Chilton in this study are based on the adult sample. Chilton also tested teens, and gave separate results for their teen sample.

h Not including those who answered "Don't know if it's true."

(From FTC "Staff Report on the Cigarette Advertising Investigation," Myers, et al., May, 1981.)

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DEPARTMENT OF HEALTH AND HUMAN SERVICES
MEMORANDUM OF MEETING

DATE:
October 23, 1987

BETWEEN:
Peter B. Hutt, Attorney
RJR Nabisco, Inc./RJ Reynolds Tobacco Co., Inc.

AND:
Daniel L. Michels, Director
Office of Compliance (HFN-300)
Center for Drug Evaluation and Research

Sammie R. Young, Deputy Director
Office of Compliance (HFN-300)
Center for Drug Evaluation and Research

Rudolf Apodaca, Director
Division of Drug Labeling Compliance (HFN-310)
Office of Compliance
Center for Drug Evaluation and Research

Kevin M. Budich, Compliance Officer
OTC Compliance Branch (HFN-312)
Division of Drug Labeling Compliance
Office of Compliance
Center for Drug Evaluation and Research

SUBJECT:
RJR's "Smokeless" Cigarette

Note: Redacted material appears as a blank space within brackets.

Prior to this meeting (9/14/87) RJR Nabisco/RJ Reynolds Tobacco Co., Inc. (RJR) held a news conference in New York, N.Y. to announce the development of a new "smokeless" cigarette. The 9/15/87 edition of the *Washington Post* included an account of this news conference, and the FDA had been receiving inquiries concerning its position, if any, with respect to the new product.

Mr. Hutt had been invited by Mr. Michels to provide a briefing on the new "smokeless" cigarette. After learning of his association with the firm and of previous meetings between Mr. Hutt and various officials within the DHHS, this invitation was extended to Mr. Hutt following a previous internal FDA meeting involving Mr. Michels, the Office the Commissioner, ACRA, and GC.

At the onset of this meeting Mr. Hutt was advised that the information he provided would be used by the agency to more fully evaluate the product with respect to its status under the FD&C Act.

Mr. Hutt explained that he would not debate current safety issues associated with conventional cigarettes, commenting that the tobacco industry maintains that conventional cigarettes are not unsafe, and that it would never reverse this position. During this meeting, Mr. Hutt mentioned that the tobacco industry has not been pleased with the potential for detrimental effects on the industry that could result from the introduction of the new cigarette as the tobacco industry has speculated.

Mr. Hutt explained that his involvement with RJR began about 3-4 months preceding this meeting, and that in that time he had already met with the Commissioner and Deputy Commissioner for Food and Drugs, FDA's GC, the Assistant Secretary for Health (Dr. Windom), the PHS Surgeon General (Dr. Koop), the Director of the DHHS Office on Smoking and Health (Dr. Davis), and other DHHS officials (e.g., Mr. McGinnis and Mr. DeVita). On more than one occasion Mr. Hutt stated that Dr. Windom had been impressed with the idea, reportedly calling it "brilliant" and an idea whose time had come. He also commented that Dr. Koop offered no opinion, and that his (Hutt's) impression from previous meetings with FDA'ers was that the agency did not necessarily want to get involved.

Mr. Hutt began his presentation by providing a historical overview of cigarette manufacturing, which has included innovations in the paper wrapper to allow more sidestream smoke, the addition of filters and filter plugs, and the addition of tobacco extract and flavorings. He then credited the acquisition of Nabisco Brands by RJR for providing the stimulus for the development of the new cigarette. Mr. Hutt explained that, since the acquisition, an interest evolved in changing the marketing practices and philosophies of cigarette smoking to meet the evolving concerns of smokers. Mr. Hutt further credited the involvement of the food industry with the development of low-tar cigarettes.

Then, Mr. Hutt identified 3 primary public concerns associated with cigarette smoking,

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WHAT THE TOBACCO MANUFACTURERS DO NOT WANT YOU TO KNOW ABOUT TOBACCO SPONSORSHIP OF THE ARTS...

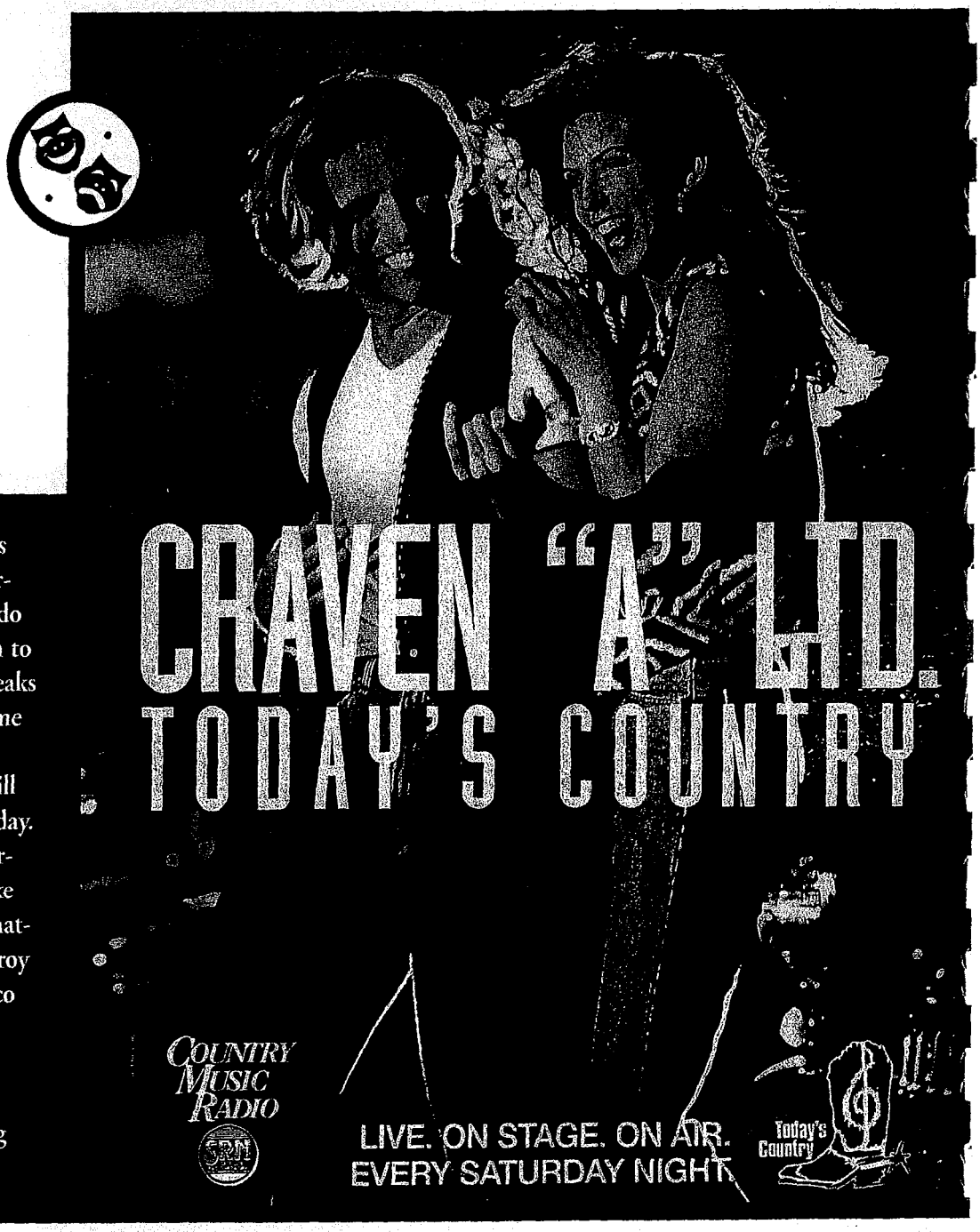
CORPORATE PHILANTHROPY?



OR SELLING ADDICTION?

"THE ARTS EXIST TO ENHANCE LIFE.
THERE IS A FUNDAMENTAL INCOMPATIBILITY
BETWEEN INVOLVEMENT WITH THE ARTS AND THE PROMOTION
OF ADDICTION AND DISEASE."

Norman Campbell, Emmy award-winning producer of the CBC TV specials, *Cinderella* and *The Sleeping Beauty*, and composer of the musical *Anne of Green Gables.*

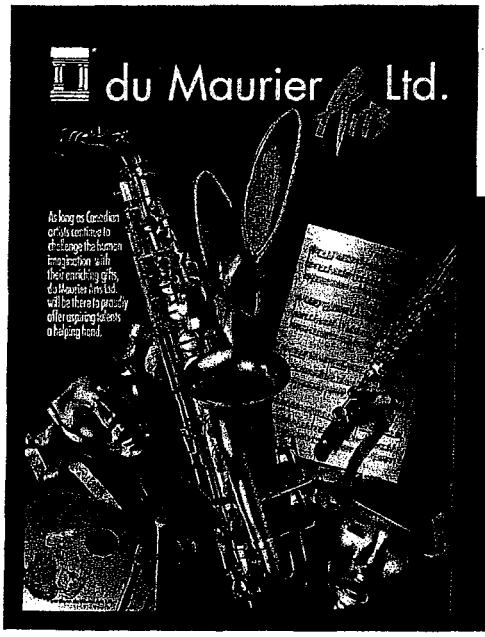


Tobacco manufacturers still claim that sponsorships have nothing to do with influencing youth to smoke. This poster speaks for itself. Do not assume that the sponsorship advertising problem will remain the size it is today. Unless tobacco sponsorships are ended, ads like this will multiply dramatically. This would destroy the benefits of a tobacco advertising ban and expose our children to the wide-open, U.S. style tobacco marketing environment.

THE INDUSTRY'S GIFT TO THE COMMUNITY

In December 1995, Health Canada announced its legislative plan to reduce the death and disease caused by tobacco industry products. Current tobacco product deaths are pegged at 45,000 annually. And climbing. More Canadians die every year from cigarettes than die from alcohol, traffic and other accidents, homicides, suicides and AIDS combined.

Health Canada predicts that unless extraordinary steps are taken to change the way society views tobacco industry products and to block tobacco industry access to the child and adolescent market, more than 3 million Canadians presently alive will die prematurely from a tobacco addiction death. They will die from du Maurier, Player's, Matinée and other brands which are presently being afforded legitimacy through tobacco industry sponsorship of popular events.



The critical steps needed to send a strong message to Canadian youth about the serious risks of tobacco products are outlined in the Health Canada consultation document *Tobacco Control: A Blueprint to Protect the Health of Canadians.* It says that "sponsorship or event marketing is a form of promotion that is a key component of the marketing strategies of tobacco companies."

The manufacturers are sometimes candid about these strategies:

"basically it (sponsorship) is part and parcel with the marketing of your product. It is one of a range of tools. No one hands over big cheques just to give themselves a warm fuzzy feeling."

Cynthia von Maerestetten
Vice President, Corporate Affairs
Rothmans Benson and Hedges

Publicly, cigarette manufacturers suggest that sponsorships are undertaken to enable them "to give back to the community," that public spiritedness drives their largesse. "Trust us," they plead. "We are not after your kids and sponsorships have nothing to do with selling more cigarettes."



A du Maurier sponsorship ad buys legitimacy for the product and "innocence by association". If death from tobacco products were proportional to market share, du Maurier would be responsible for about 9000 premature deaths in 1995.

THE DECEIT

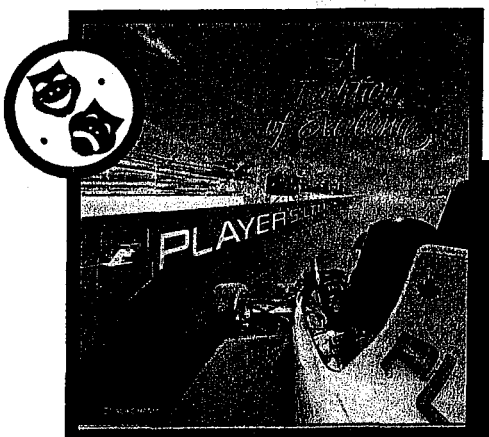
"SPONSORSHIPS ARE ONLY TO ENCOURAGE BRAND-SWITCHING"

The manufacturers insist that they use sponsorships to encourage existing smokers to switch brands. They are not interested in enlarging the total market. "Curious", said Emerson Foote, the ad industry legend and co-founder of ad agency Foote, Cone and Belding, "that sponsorship works to expand the market for every other product but, magically, fails to enlarge the cigarette market."

The manufacturers and their dependents dismiss concerns of the health community by creating a "straw man" argument. They imply that the health community believes that the only purpose of sponsorship is to cause someone to start to smoke. They suggest, mockingly, that no one would start to smoke simply by being exposed to a sponsored event.

The manufacturers play the public for fools. They suggest that exposure to sponsorship is not persuasive enough to cause someone to begin smoking but that the same exposure is powerful enough to cause a smoker to rush out and switch brands. Of course, a single exposure to any sponsorship will not cause someone to smoke or to switch brands. Sponsorships work for more complex marketing reasons.

The truth is that there is strong brand loyalty in the tobacco market and very little brand-switching. The industry knows that the real payback from sponsorship comes from creating a social and political environment which maximizes the potential to bring adolescent starters into the tobacco marketplace and to encourage existing smokers to remain in the market.



Sponsors of Atlantic Championship Racing

THE PURPOSE OF SPONSORSHIP

If the real purposes of tobacco sponsorship are not brand-switching, what specifically are they? Health Canada's *Blueprint* points out the main purpose:

1. Sponsorships shape consumer attitudes and suggest commitment to the social acceptability of tobacco use lifestyles. Virtually all of the tobacco industry's new "starters" come from the child and adolescent market. Every year, tens of thousands of Canadian youngsters make a decision about whether or not they will start to use tobacco industry products. Sponsorships create a comfort level for the decision to smoke, implicitly suggesting that significant organizations and influential role models are comfortable with their association with tobacco products and with the risks they entail.

The Player's racing sponsorship is advertised across Canada, far away from any event venue, long before and long after the expiry of the event. Research found that youth identified these Player's ads as a cigarette ad first and an auto racing ad second.

An example of the power of tobacco sponsorships is the Jacques Villeneuve / Player's Ltd. Formula One racing sponsorship. This sponsorship, ostensibly for a one week event, is advertised year round in markets far beyond the race venue. In fact, the Player's sponsorship played a key role in countering the positive effects of the tobacco advertising ban in the *Tobacco Products Control Act.*

2. Sponsorships also give the tobacco manufacturers access to radio and TV. Without tobacco sponsored events, the manufacturers would not be able to circumvent laws or voluntary guidelines which prohibit access to these critical media.

3. Sponsorships create goodwill for an unpopular and discredited industry.

4. Sponsorships buy silence. Some artists are strongly opposed to tobacco sponsorships but are reluctant to speak out. They do not wish to criticize colleagues working for tobacco-sponsored events. Freedom of expression in the arts sector has been subverted by the infusion of tobacco sponsorship money.

A leading international authority on sponsorship reviews the benefits of this form of promotion.

Spon sor ship

a cash and/or in-kind fee paid to a property (typically in sports, arts, entertainment or causes) in return for access to the exploitable commercial potential associated with that property.

Sponsorship should not be confused with philanthropy. Philanthropy is support of a cause without any commercial incentive. Sponsorship is undertaken for the purpose of achieving commercial objectives.

Sponsorship allies companies with community responsibility and improved quality of life.

Sponsorship is the fastest-growing marketing medium.

Sponsorship implies a degree of altruism absent from more commercial types of marketing.

IEG, Inc. *IEG's Complete Guide to Sponsorships*

THE INDUSTRY'S POSITION

• "The Supreme Court of Canada ruled against a ban on tobacco advertising and sponsorship."

First, the Supreme Court did not say that a ban on tobacco advertising or sponsorship would be unconstitutional. It did say in a narrow 5 to 4 decision that in 1989 the government failed to provide the court with evidence to justify such a ban. According to legal experts the government now clearly has sufficient evidence.

Second, Health Canada's *Blueprint* does not propose to block industry philanthropy related to the arts. Health Canada does propose to prevent the industry from trying to sell cigarettes using sponsorships. If the manufacturers are not trying to expand the market through sponsorship as they claim, they should have no objections to such plans.

• "If the industry withdraws its funding, the arts will be harmed."

The industry wants the arts sector and the public to believe that the sky will fall if the government passes the proposed legislation. This position is not credible.

The most recent data available suggests total revenue for the not-for-profit arts sector to be about $760 million a year. A Canadian Conference of the Arts (CCA) report estimates that this sector received $10 million in cash contributions from the tobacco industry in 1995, only 1.3% of the total.

The CCA study also estimates that tobacco companies spent an additional $17 million on "in-kind", advertising and promotional "support" for tobacco sponsored events. However, much of this "support" is used to advertise tobacco brands and products rather than assistance for arts groups. To be consistent, this "support" should not be included in the comparison because the total arts sector revenue figure also is limited to cash contributions and excludes "in-kind support."

Nonetheless, we acknowledge that in some specific applications, where an industry grant is substantial, there could be adverse impact. On any "balance of inconvenience test" however, such impact would be minor compared to the damage to public health which would be caused by the continuation of tobacco sponsorship.

In any case, there are alternatives to tobacco funding. When Imperial Tobacco ended its golf sponsorship, the sport did not collapse. Bell Canada picked up the sponsorship. If an event has marketing potential by any reasonable criteria, event marketers say it is marketable.

There are other solutions. Both Australia and New Zealand established health trusts, one based on a designated tax on cigarettes. These trusts provided funds to the arts and sports sectors which exceeded the amount previously available from tobacco sponsorships. This Association would support such a trust provided that the funds were made available to all arts and sports groups including groups which refused to take funds from this industry as well as to those whose funding might be diminished.

A tax of two pennies per pack on cigarettes similar to the Australian trust would generate $56

The ethical basis for prohibiting sponsorships and for the "de-normalization" of tobacco

In 1987, hundreds of Canadian artists supported the proposed ban on tobacco sponsorship in the *Tobacco Products Control Act*. There were good reasons for the planned special treatment of tobacco and the separation of tobacco products from other "legal" products.

Tobacco is the only product that kills when used exactly as the manufacturer intends. Unlike other legal products, tobacco products have no safe level of use.

Tobacco industry products kill on an unprecedented scale. They cause the premature death of one out of two of their long term users.

Virtually all users of this lethal product come from the child and adolescent market. Most are addicted before the age of responsibility.

To date, the tobacco industry has been exempted from virtually all laws which regulate toxic products or addictive drugs. Health Canada's proposed legislation would correct this industry's regulatory "free ride" for the first time.

5. Sponsorships give legitimacy to a product which is Canada's leading cause of preventable death. Sponsorships implicitly undermine the gravity of the health warnings. Youth conclude that the product cannot be as dangerous as the warnings suggest when logos for tobacco products appear all over town.

"These days, it's hard to walk a block downtown without being confronted by signs for the du Maurier Ltd. Montreal International Jazz Festival, the Player's Ltd. Formula One auto race, the Craven "A" Ltd. Just for Laughs comedy festival, the Benson & Hedges Ltd. International Fireworks Competition or a host of other lesser events on the leisure calendar."

Mary Lamey
The Montreal Gazette

6. Sponsorships buy insurance policies for the industry.

"Through sponsorship of sporting and cultural events . . . the industry attempts to create an aura of legitimacy and wholesomeness: 'They're gaining innocence by association.' . . . Further . . . sponsorship may serve to develop institutional dependencies on the tobacco industry."

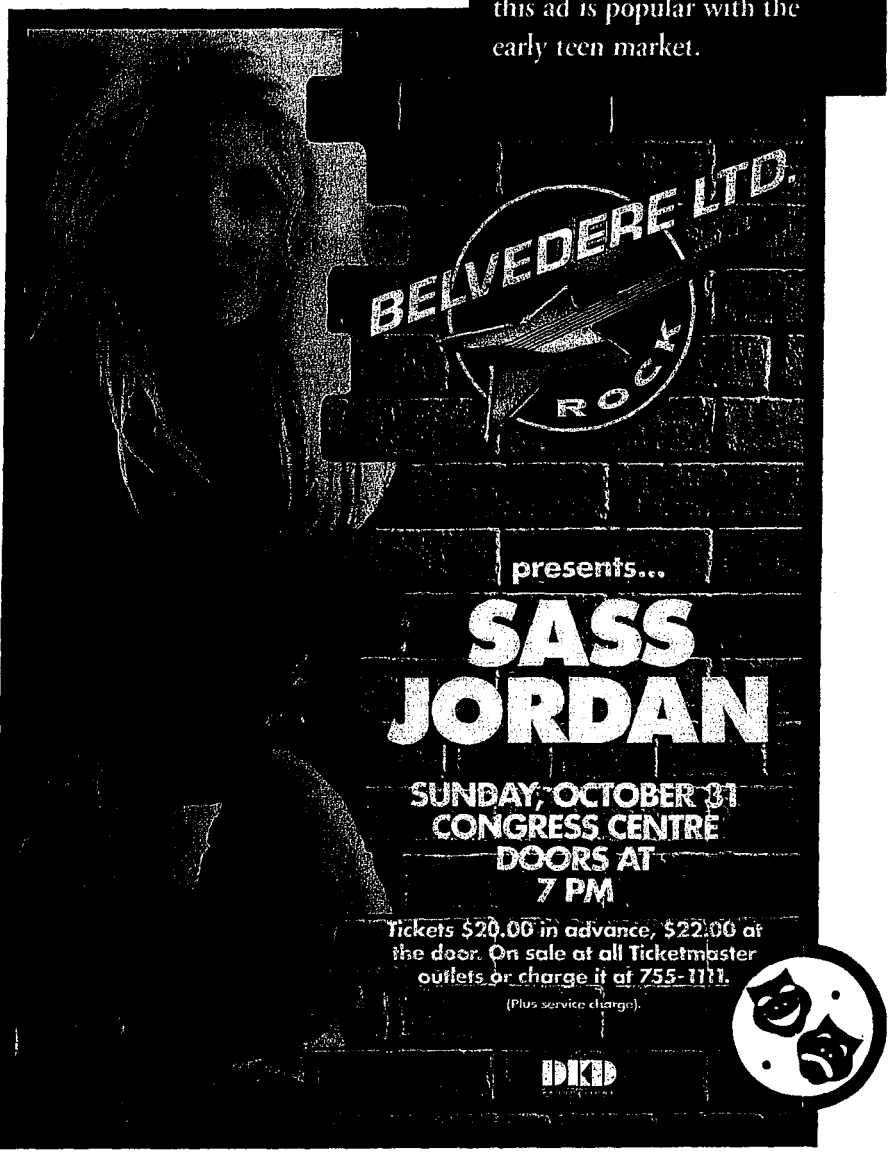
Journal of Health Politics, Policy and Law[1]

At a time when governments are beginning to move forcefully to denormalize tobacco products[2], sponsored organizations can be counted upon to defend manufacturers when the manufacturers themselves do not have sufficient credibility to carry on a public debate.

SUPPORT FOR HEALTH CANADA'S LEGISLATIVE PLAN

The Canadian Medical Association, Canadian Cancer Society, Non-Smokers' Rights Association, Canadian Council on Smoking and Health, Physicians for a Smoke-Free Canada, the Heart and Stroke Foundation of Canada, the Lung Association and editorial writers from coast-to-coast have all praised Health Canada's *Blueprint* for tobacco control legislation. They realize that this plan, if it becomes law, has the potential to prevent thousands of future tobacco deaths. Many Canadian artists take the position that it would be tragic if members of the arts community became partners with the tobacco manufacturers in their fight to defeat legislation of this importance. Here are some of the arguments offered by the industry and its friends as they attempt to derail the planned legislation.

Without blushing, the manufacturers claim no interest in targeting youth through sponsorships. The artist in this ad is popular with the early teen market.



In 1988, with all party support and only one dissenting vote, Parliament passed the *Tobacco Products Control Act*. It banned tobacco advertising and sponsorship. The law is an expression of the minimum standard of ethics of a community around which society agrees. So, in passing this law, Parliament indicated that the minimum ethical standard for Canadians, henceforth, would be the rejection of tobacco advertising and sponsorship in all of its forms.

At this point, tobacco manufacturers flouted the will of Parliament by setting up shell companies like Player's Ltd., Export "A" Inc., and du Maurier Ltd.. By placing brand names in corporate titles, the companies were able to circumvent the law, sponsor events, and reap the advertising benefits from event marketing.

Some in the arts sector knowingly joined the tobacco manufacturers in their efforts to do an end run around the law. We say knowingly because art groups had to be aware of the debates over sponsorship in the media. Second, we were also informed of significant debates which took place at the board level of several arts organizations. Many were well acquainted with the ethical issues involved.

Unfortunately, the loophole exploited by the manufacturers was so glaring that sponsorships almost destroyed the positive benefits of the federal advertising ban.

It is a limited number of Canadian arts organizations which decided to take tobacco industry funding in the wake of such publicity. They embraced tobacco industry sponsors aware of the fact that, sooner or later, this source of funding would be brought to a halt.

Do government cut-backs change the nature of the debate? Many artists believe that they do not. An ethical issue in good times does not cease to be an ethical issue in tough times.

Endnotes

1. Dr. Kenneth Warner, Chair, School of Public Health, University of Michigan, Michael Pertschuk, former Chair, U.S. Federal Trade Commission, Dr. Jesse Steinfeld, former U.S. Surgeon General, et al, Vol. II, No.3, Fall 1986.

2. The theme of a recent California State Campaign was "The tobacco industry is not your friend." The governments of California and Massachusetts have moved aggressively in their mass media campaigns to attack tobacco product normalcy and industry dishonesty.

OUR POSITION

1. The tobacco industry wants the public to believe that the arts community is solidly allied with the industry in opposition to Health Canada's *Blueprint* and its intention to prevent sponsorships from selling cigarettes. We believe this position is false.

2. We applaud those in the arts community who oppose the industry's attempt to use sponsorships to sell disease.

3. We urge members of the arts community to disassociate themselves and their organizations from the industry's efforts.

4. We urge Health Canada to begin the consultation process over the formation of a trust to provide alternative funding for the arts sector.

You can help. Let your Member of Parliament know your position. If you are an artist, contact ARTISTS FOR TOBACCO-FREE SPONSORSHIP at the NSRA (416) 967-7353. Obtain and add your name to the statement by artists in support of the proposed Health Canada legislation.

A word about the Non-Smokers' Rights Association (NSRA)

The NSRA is the non-profit health association which led the national campaign for the *Tobacco Products Control Act* and for Canada's landmark tobacco warnings. The NSRA is the recipient of the World Health Organization's gold medal for tobacco control and the Canadian Cancer Society's Award of Merit "for creative and forceful leadership in the cause of cancer prevention . . . ."

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NON-SMOKERS' RIGHTS ASSOCIATION

720 Spadina Avenue, Suite 221, Toronto, Ontario M5S 2T9
130 Albert Street, Suite 1903, Ottawa, Ontario K1P 5G4
4837 Boyer, Suite 235, Montreal, Quebec H2J 3E6

million for a Canadian trust. (The federal government increased tobacco taxes by 50¢ a pack in 1989 and 75¢ in 1991.)

• **"Tobacco is a legal product. The government takes industry money through taxes. The government is being hypocritical when it says arts groups cannot fundraise from the same source."**

This fallacious argument falls apart for two reasons. First, governments have used tobacco taxation to keep price high as a health promotion measure. Governments taking revenue from the tobacco industry has and will cut illness and death, especially by pricing youth out of the tobacco market. Moreover, tobacco taxes do not cover the costs of tobacco use to the economy.

To the contrary, arts groups taking money from the manufacturers have played a role in the promotion of tobacco sales and in giving legitimacy to this industry and its products. It is irresponsible to try to avoid the ethical issues involved in taking money from this source by equating tobacco taxation with sponsorship funding.

• **"We know of no studies that show that tobacco sponsorships promote sales."**

Although there are studies that address this issue, a check of major health organizations which are involved in tobacco control issues reveals that few, if any, of the organizations which receive tobacco funding have ever asked for such studies. Presumably, any such inquiry would make it more difficult to later claim "we know of no studies."

INNOCENT VICTIMS OF POLICIES TO CURB DISEASE OR AUTHORS OF THEIR OWN DILEMMA?

Because the debate over tobacco sponsorship is so critical to public health, it is important to put all of the cards on the table. Just because there may be some policy impact on the perennially under-funded arts sector does not mean that, *ipso facto*, its involvement in the development of the tobacco sponsorship problem should not be scrutinized. Some perspective is necessary.

In 1983 and 1984, a major debate took place about whether or not the Canadian Ski Association should be sponsored by Export "A". The issue was given a national airing when world champion skier Steve Podborski won a major race and refused to accept the Export "A" trophy on national TV. Additional publicity followed when the federal government withdrew funding from athletic interests which accept tobacco funding.

The issue surfaced again nationally when, from 1984 to 1987, *The Kingston Whig-Standard, The Globe and Mail, The Toronto Star, The Ottawa Citizen, The Montreal Gazette, The London Free Press* and other papers, rejected tobacco advertising voluntarily, before passage of the *Tobacco Products Control Act.* In editorials, these papers made it clear that it is unethical to take funds from the tobacco industry.

In 1987, the national debate over sponsorship escalated. Over 250 Canadian artists rejected tobacco industry sponsorships. Their statement in full page ads published in *The Globe and Mail, The Montreal Gazette, La Presse, Le Soleil* and other papers ensured that the arts sector knew the ramifications of taking funds from this industry.

Imperial Tobacco's views on setting up shell corporations to exploit the loophole on sponsorship in the law.

Question:

"Why not just set up a separate corporation for each brand, call it the du Maurier Inc. Classic Golf Tournament?"

Wilmat Tennyson:

"It is kind of sleazy. I would not want to be seen to do that. It merely takes one amended regulation passed by the government to prevent that from happening. It's sleazy. I don't want to do that."

Wilmat Tennyson, President Imperial Tobacco Limited
"Dateline Ontario," TV Ontario, July 12, 1987

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Cigarette Smoking and Drug Use in Schoolchildren. II Factors Associated with Smoking

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O'Connell DL [Faculty of Mathematics, University of Newcastle, New South Wales, 2308, Australia], Alexander HM, Dobson AJ, Lloyd DM, Hardes GR, Springthorpe HJ and Leeder SR. Cigarette smoking and drug use in schoolchildren. II Factors associated with smoking. *International Journal of Epidemiology* 1981, 10: 223–231.

In 1979 as the first stage in the evaluation of an educational strategy to discourage children from smoking, we surveyed over 6000 10–12 year old primary school children in the Hunter Health Region (New South Wales, Australia) to assess the prevalence of smoking and to identify some of the social and personal factors associated with this phenomenon. Logistic regression was used to determine the relative importance of the key factors in relation to the proportion of smokers in the 'recent' and 'regular' smoking categories. Friends' smoking behaviour was the best predictor of the child's smoking status followed in order by approval of advertising, siblings' smoking behaviour, amount of money available to spend weekly, sex, age and finally parents' smoking habits. Other factors such as size of family, position of the child in the family, country of birth of parents, father's occupation, having a single parent and urban or non-urban location of schools were all significantly associated with smoking prevalence in these children. Linear modelling techniques used in the analysis showed girls and non-smokers to have less favouring attitudes to smoking and tobacco advertising than boys and smokers. Significant differences in knowledge occurred between categories of smokers. Most children claiming not to smoke disapproved of advertising and did not intend to smoke in the future. Among current smokers, some with neutral or favouring attitudes were ambivalent about future smoking. Our data suggest that intervention in the field of cigarette advertising may be the most direct and effective means of reducing prevalence of smoking in children.

Evidence that cigarette smoking is a health hazard has made the prevention of smoking a major public health issue. Because of the addictive nature of smoking, it may be easier to persuade people not to take up the habit than to help them lose it.[1] Experimenting with cigarettes and the subsequent adoption of smoking often begins during childhood or early adolescence.[2–8] Therefore, it is important to know at what ages children begin smoking, which children are most likely to acquire the habit and what forms of intervention are likely to be effective. It is these 3 questions we have investigated.

As part of the evaluation of an antismoking educational strategy for use in primary schools we assessed the prevalence of smoking amongst children aged 10 to 12 years in the Hunter Region of New South Wales, Australia.[9,10] Confidential, self-administered questionnaires were given to the children, their parents and teachers. These asked about smoking habits, peer group and social environments in order to identify some of the social and personal factors associated with childhood smoking.

This paper describes the relation between these factors and the smoking prevalence of the children.

METHODS

The Hunter Health Region (1976 population 419 350) contains 34 State and 12 Catholic secondary schools. A sample of 20 of these was selected as representative of all schools in the Region with respect to geographical distribution, school system (State or Catholic), proportion of parents in unskilled occupations and numbers of students per

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school. The study sample consisted of children in the last 2 years of the primary schools which fed into the selected secondary schools so that the children could be followed up in the latter. The rationale and further details of the selection procedure have been reported elsewhere.[10]

A total of 88 primary schools with 6519 children, were suitable for inclusion in the study. Three schools refused to participate and at another school one class was withdrawn by the teacher before the study began. Parents withheld permission for a further 30 children. These withdrawals caused an estimated loss of 192 children.

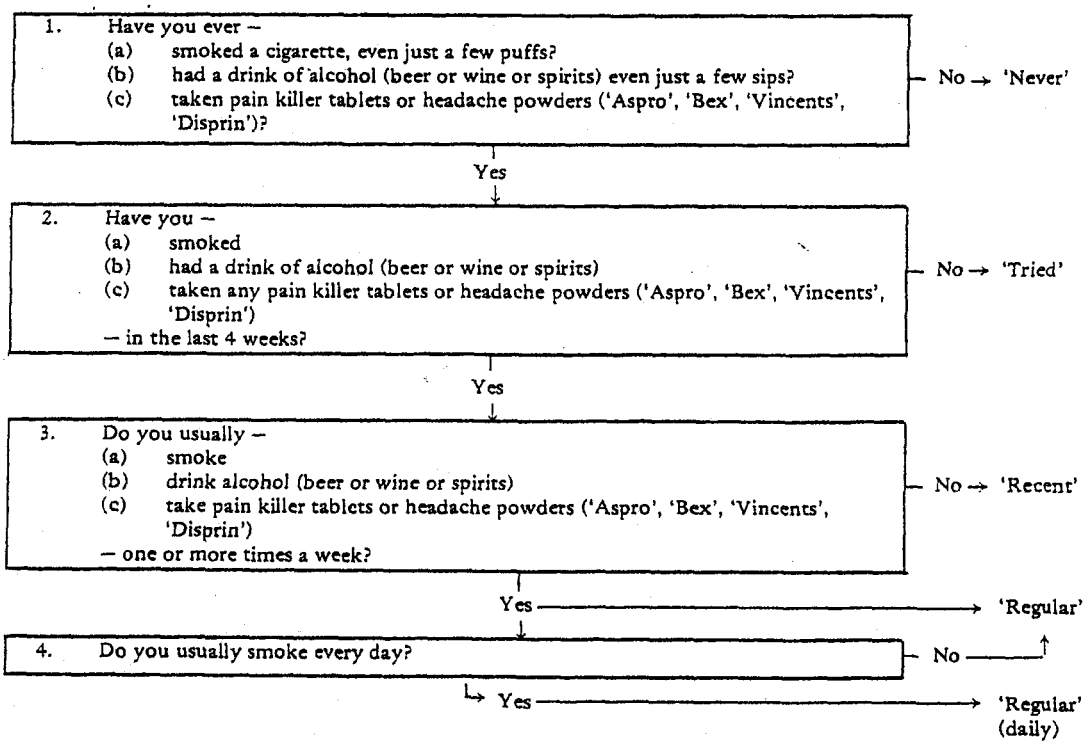
The remaining 6327 (97.1%) children completed confidential self-administered questionnaires during school time in July and August 1979 under the supervision of a member of the study team. Our results were obtained from the 6224 (95.5%) children who were in the age group 10–12 years and provided usable data.

Children were asked several questions about their use of cigarettes. Responses were classified into 4 categories of smoking behaviour (Figure 1) according to a system developed by Brown, Cherry & Forbes, who used identical questions in a survey of Canadian children.[8] The replies of 6075 children with usable data were classifiable in this way, the remainder (classified as unknown), were either incomplete or inconsistent.

In addition to information about age, sex and year at school, the children were asked about the smoking habits of their friends, siblings and parents. All of the children were asked whether cigarettes should be advertised, whether they intended to smoke when they were older and how much money they had to spend weekly. Those subsequently classified as having tried smoking, or as recent or regular smokers, were asked at what age they had smoked their first cigarette. Smokers were also asked where they obtained their cigarettes and what brand they smoked.

Children's knowledge of the effects of smoking on health was measured using a 28-item questionnaire and their attitudes to smoking and cigarette advertising were assessed using semantic differential scales.

Confidential self-administered questionnaires were sent home with the children for their parents



* Format of questions in Figure 1 is not the same as the format used in the questionnaire where each question and each drug group was a separate question or series of questions.

FIGURE 1 *Classification of responses into frequency categories**

(response rate of 90%). Parents were asked about the number of children in the family, the country of birth and position in the family of the index child, their own country of birth and occupation, their smoking habits, and their attitudes to tobacco advertising.

Both the children and their parents were asked about the parents' smoking habits. In nearly all cases (93% of the boys and 95% of the girls) their answers agreed. The parents' answers were used in the analysis because when available they provided more detailed information than the children's data.

Logistic regression[11] was used to determine the relative importance of the various personal and social factors in relation to smoking prevalence amongst the children. Linear modelling techniques were also used to investigate differences in knowledge and attitudes in relation to smoking behaviour, age and sex.

RESULTS

Smoking prevalence was positively associated with age, being male and approval of cigarette advertising (Table 1). Children were more likely to smoke if their friends, siblings (Table 2) or parents smoked (Table 3). Also, the proportion of regular smokers increased with the amount of money available to spend weekly (Table 4).

Other characteristics were associated strongly with smoking prevalence but they were related to the variables already mentioned. For example, class (year 5 or year 6) at school was associated with smoking behaviour ($\chi^2_3 = 124.8$, $p < 0.001$) but it accounted for little of the variation in smoking prevalence once the age of the children had been taken into account because age and class were closely related. Similarly, smoking increased with the number of children in the family ($\chi^2_6 = 66.0$, $p < 0.001$) and with the child's position in

TABLE 1 *Prevalence of smoking by sex, age and approval of cigarette advertising for 10–12 year olds in the Hunter Region in 1979*

Smoking Behaviour	Sex		Age Last Birthday			Approval of Advertising		
	Male	Female	10	11	12	yes	no	don't know
Never	38.0	56.3	56.3	43.4	34.2	19.0	53.3	38.2
Tried	48.6	36.5	36.0	45.9	49.6	47.3	40.9	46.8
Recent	7.5	4.1	4.8	6.1	7.6	13.2	3.9	9.0
Regular	5.9	3.1	2.9	4.6	8.6	20.5	1.9	6.0
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	3091	2984	2301	2921	853	600	4260	1170
unknown	97	52	68	63	18	23	80	44
	$\chi^2_3 = 216.4$			$\chi^2_6 = 173.5$			$\chi^2_6 = 673.08$	
	$p < 0.001$			$p < 0.001$			$p < 0.001$	

TABLE 2 *Smoking prevalence by siblings' smoking and friends' smoking for 10–12 year olds in the Hunter Region in 1979*

Smoking Behaviour	Siblings' Smoke			Friends' Smoke		
	yes	no	no siblings	yes	no	don't know
Never	35.7	55.4	54.8	27.7	73.4	58.1
Tried	47.3	39.3	38.7	53.4	25.3	38.0
Recent	8.5	3.8	4.8	10.0	1.3	2.8
Regular	8.5	1.5	1.7	8.9	0.0	1.1
Total %	100.0	100.0	100.0	100.0	100.0	100.0
N	2569	3214	292	2825	1210	2040
unknown	6	61	82	97	17	35
		$\chi^2_6 = 356.4$			$\chi^2_6 = 1020.6$	
		$p < 0.001$			$p < 0.001$	

TABLE 3 *Child's smoking by parents' (self reported) smoking for 10–12 year olds in the Hunter Region in 1979*

Child's Smoking	Parents' Smoking None Smoke	1 Smokes	2 Smoke	Unknown
Never	55.2	42.9	39.7	42.6
Tried	38.0	46.3	45.9	43.2
Recent	4.6	6.0	7.2	7.1
Regular	2.2	4.8	7.2	7.1
Total %	100.0	100.0	100.0	100.0
N	2289	1923	961	902
Unknown	41	45	35	28
		$\chi^2_9 = 142.05$	$p < 0.001$	

TABLE 4 *Child's smoking by amount of money available to spend weekly for 10–12 year olds in the Hunter Region in 1979*

Child's Smoking	Amount of Money to Spend per Week ($Aust) < $1	$1–$1.99	$2–$4.99	≥$5
Never	52.7	46.8	40.2	30.5
Tried	40.6	42.7	46.3	45.3
Recent	4.2	5.7	7.8	5.8
Regular	2.5	4.8	5.6	5.3
Total %	100.0	100.0	100.0	100.0
N	2588	1858	1136	417
Unknown	62	45	27	13
		$\chi^2_9 = 194.7$	$p < 0.001$	

the family ($\chi^2_6 = 102.3$, $p < 0.001$) but these were both associated closely with siblings' smoking ($\chi^2_4 = 3892.3$, $p < 0.0001$ and $\chi^2_4 = 2551.7$, $p < 0.0001$ respectively) and of the 3 variables, siblings' smoking was the most strongly related to smoking prevalence.

Variation in the prevalence of children's smoking was better accounted for by parental smoking than by other characteristics of the parents such as country of birth, occupation and whether or not they were single parents. However, children were more likely to smoke if both, rather than one of their parents were Australian-born and least likely to smoke if both their parents were born outside Australia ($\chi^2_6 = 13.6$, $p < 0.05$). It was consistent that parental smoking behaviour was also related to country of birth ($\chi^2_9 = 3849.2$, $p < 0.0001$). Whether the father had a manual or non-manual occupation was related to parental smoking behaviour ($\chi^2_9 = 4163.3$, $p < 0.0001$) and in line with this it was found that children of non-manual workers were less likely to smoke than other children ($\chi^2_6 = 19.2$, $p < 0.005$). Of the children with a single parent, 6.7% claimed to be regular smokers compared with only 3.8% of children with 2 parents ($\chi^2_3 = 23.5$, $p < 0.0001$). Again, single parents had higher smoking rates than parents with a partner ($\chi^2_2 = 87.4$, $p < 0.0001$).

There were no differences in smoking prevalence of children in the State and Catholic schools. However, there were lower proportions of recent and regular smokers in schools in the urban areas (Newcastle and the adjacent suburbs in the Lake Macquarie Municipality) than in schools in the non-urban areas (the remainder of the Hunter Valley and the Port Stephens district, north of Newcastle). This urban–non-urban difference was also evident in parents' smoking ($\chi^2_3 = 10.6$, $p < 0.02$).

Some of the characteristics measured showed so little variation that they could not be related to the prevalence rates of children's smoking. For instance, most children (96.0%) were born in

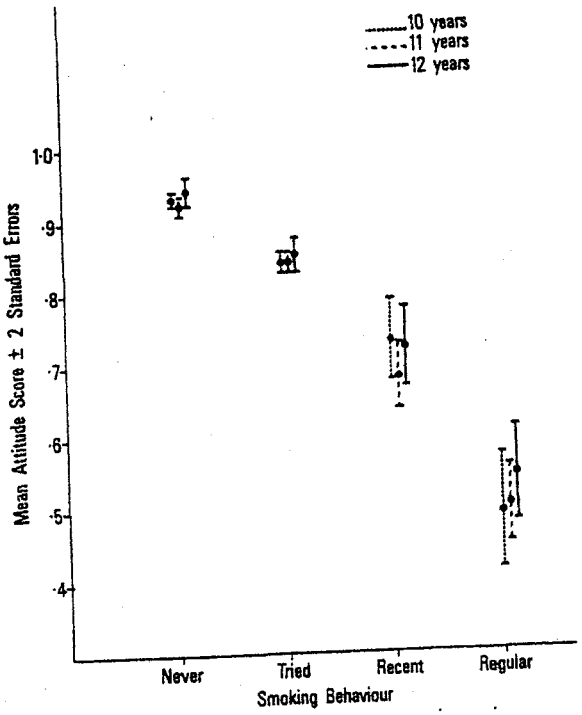


FIGURE 2 *Mean attitude scores of 10, 11 and 12 year old boys according to their smoking behaviour.*

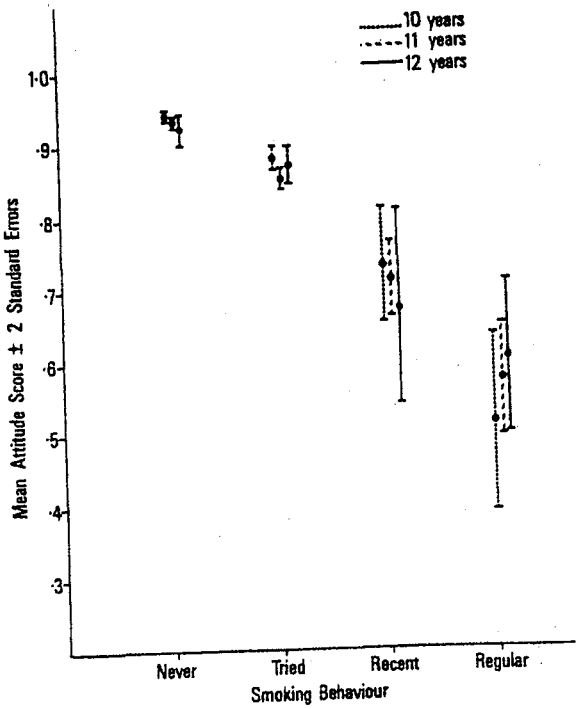


FIGURE 3 *Mean attitude scores of 10, 11 and 12 year old girls according to their smoking behaviour.*

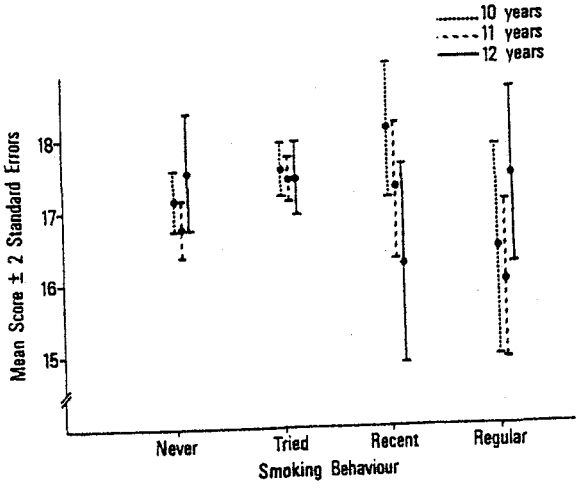


FIGURE 4 *Mean knowledge scores of 10, 11 and 12 year old boys according to their smoking behaviour.*

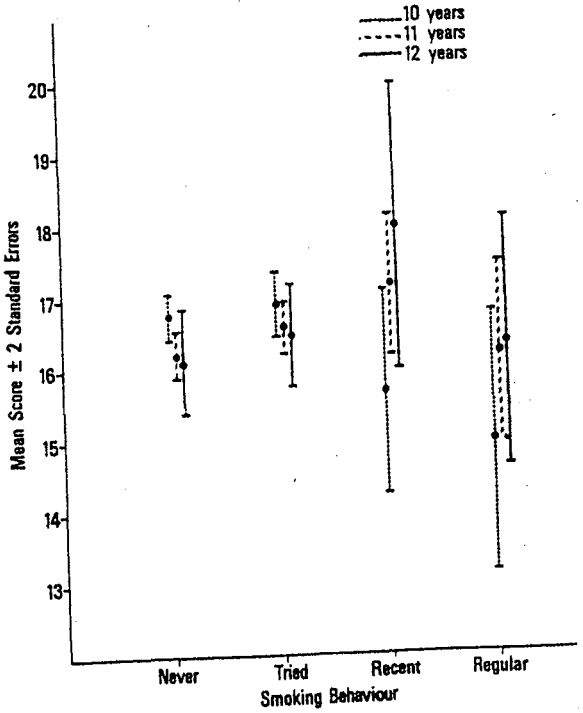


FIGURE 5 *Mean knowledge scores of 10, 11 and 12 year old girls according to their smoking behaviour.*

Australia. Of the children who smoked, most preferred the same brand[10] so that no patterns related to brand preference could be detected.

A logistic regression model was used to determine the relative importance of each of the key factors in relation to the dependent variable, the proportion of smokers in the 'recent' or 'regular' categories. Factors were included in the model in the order which improved the fit most at each stage (Table 5). The significance of each factor was determined by the improvement in fit (deviance) achieved when it was added to the model already including the more important factors.

Friends' smoking was the most important factor followed by the children's approval of advertising, siblings' smoking, amount of money to spend weekly, sex, age, and finally parents' smoking. The location of the school (urban or non-urban) was not significant when added to the model. There was no significant interaction between any pair of these key factors.

Most children categorised as 'tried' or 'recent' smokers, regardless of age, claimed to have smoked their first cigarette within the last year or two (Table 6). Although this pattern was also evident among children who claimed to smoke regularly, many regular smokers reported that they had had their first cigarette when they were 6 years old or younger.

Many children who claimed to smoke, especially regular smokers, said they obtained their cigarettes from shops (Table 7) despite the illegality of selling cigarettes to children. Children who claimed to smoke less regularly, generally obtained cigarettes from friends.

A composite attitude score with values from 1 to 14 was constructed by adding the scores obtained from the 7-point semantic differential scales related

TABLE 5 *Order of importance of factors related to smoking in 10–12 year olds in the Hunter Region in 1979. (Stepwise Procedure)*

Factor	Reduction in Deviance (χ^2)	DF	Probability
Friends' smoking	449	2	$p < 0.001$
Approval of advertising	222	2	$p < 0.001$
Siblings' smoking	171	2	$p < 0.001$
Money to spend per week	38	3	$p < 0.001$
Sex	21	1	$p < 0.001$
Age	8	2	$p < 0.025$
Parents' smoking	8.1	3	$p < 0.05$

TABLE 6 *Age at which children smoked their first cigarette by smoking behaviour and age for 10–12 year olds in the Hunter Region in 1979*

Age at which smoked first cigarette	Tried			Recent			Regular		
	10	11	12	10	11	12	10	11	12
≤ 6 years	17.0	14.9	13.5	17.4	14.9	23.3	31.3	26.1	26.8
7	12.9	7.8	8.8	10.1	10.3	10.0	16.4	13.1	11.3
8	18.2	14.1	10.3	23.9	13.8	8.3	20.9	16.1	7.0
9	34.5	19.3	12.7	24.8	20.7	16.7	22.4	18.5	16.9
10	17.4	33.6	19.7	23.8	24.2	15.0	9.0	18.5	26.8
11		10.3	28.5		16.1	16.7		7.7	8.4
12			6.5			10.0			2.8
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	736	1246	386	109	174	60	67	130	71
unknown	70	82	33	1	2	5	0	2	0

TABLE 7 *Where the 10–12 year olds in the Hunter Region obtained their cigarettes in 1979*

Where they obtained their cigarettes	Smoking behaviour Tried	Recent	Regular
Shop	19.4	24.6	45.4
Friend	40.9	38.8	28.8
Sibling	10.1	12.1	8.9
Parent	10.0	9.0	5.5
Find or take	7.3	9.3	4.8
Other	12.3	6.2	6.6
Total %	100.0	100.0	100.0
N	798	289	271
unknown	1793*	65	4
		$\chi^2_{10} = 85.6$	$p < 0.001$

* Children in the 'tried' category were not required to answer this question

TABLE 8 *Analysis of variance for attitude scores by sex, age and smoking behaviour of 10–12 year olds in the Hunter Region in 1979*

Source	DF	SS	F	P
Sex	1	0.12	4.05	0.04
Age	2	0.07	1.18	0.31
Smoking	3	37.51	439.19	<0.0001
Sex x age	2	0.07	1.25	0.29
Sex x smoking	3	0.20	2.34	0.07
Age x smoking	6	0.26	1.54	0.16
Sex x age x smoking	6	0.16	0.92	0.48
Residual	6051	172.28		
Total	6074	210.67		

to smoking and cigarette advertising. As some children either did not answer or only marked one of the scales, the composite score was divided by the child's possible maximum score to give an attitude score between 0 and 1. There were significant differences (Table 8) in attitude scores between girls and boys and between the various categories of smoking behaviour (Figures 2 and 3). Girls generally had less favouring attitudes than boys, and non-smokers had less favouring attitudes than children who claimed to smoke. There were no significant differences between age groups. Similiar results were obtained when the 2 attitude scales were analysed separately.

The knowledge score consisted of the number of items answered correctly on a 28 item questionnaire about the consequences of smoking on health. Table 9 shows that the strongly significant differences in knowledge were related to sex, the boys obtaining higher scores. Differences in knowledge between the categories of smoking behaviour were significant with regular smokers (particularly amongst boys) having slightly lower scores (Figures 4 and 5).

The correlations between knowledge and attitude scores for boys and girls in the 4 smoking categories were very low (Table 10).

Since children's attitudes were related to their smoking, (more so than their knowledge), we also analysed these in relation to their intentions to smoke in the future (Figure 6). Most children who claimed not to smoke disapproved of advertising

TABLE 9 *Analysis of variance for knowledge scores by sex, age and smoking behaviour for 10–12 year olds in the Hunter Region in 1979*

Source	DF	SS	F	P
Sex	1	203.8	10.04	0.002
Age	2	18.6	0.46	0.63
Smoking	3	199.5	3.27	0.02
Sex x age	2	79.8	1.97	0.14
Sex x smoking	3	16.5	0.27	0.85
Age x smoking	6	111.7	0.92	0.48
Sex x age x smoking	6	248.6	2.04	0.06
Residual	6049	122827.6		
Total	6072	123706.1		

TABLE 10 *Product moment correlations between knowledge and attitude by sex and smoking behaviour of 10–12 year olds in the Hunter Region in 1979*

Smoking behaviour	Never	Tried	Recent	Regular
Girls	0.11	0.12	0.07	−0.04
Boys	0.17	0.17	0.19	0.16

and did not intend to smoke in the future. A higher proportion of those who claimed to smoke favoured advertising and intended to continue smoking. In both categories of current smoking behaviour the groups who favoured or who held neutral attitudes to advertising contained large proportions who were also ambivalent about future smoking; these may be the children at greatest risk of adopting the habit.

DISCUSSION

In common with other studies we found children's smoking to be associated with the personal factors of age and sex and the interpersonal factors of friends', siblings' and parental smoking behaviour.[2–8] We have been able to show the relative order of importance of these factors with friends' smoking behaviour being the best predictor of smoking in children, followed by approval of advertising, siblings' smoking, amount of money available to spend weekly, sex, age and finally parental smoking status. Levitt and Edwards used multiple regression techniques and also found friend and group of friends as the best predictors of smoking in children in grades 5–12.[3] These complex social networks of influence comprising friends and family in both the school and the home setting are particularly difficult to penetrate with effective anti-smoking strategies.

Our data suggest to us that intervention in the field of cigarette advertising may be the most direct and effective means of reducing the prevalence of smoking in children. After the smoking behaviour of the child's friends, approval of cigarette advertising was the strongest correlate of childhood smoking. At this stage our cross-sectional data do not enable us to identify which is the antecedent factor (approval of advertising or smoking behaviour) and the theories of cognitive dissonance could be used to explain either. Data obtained in the follow-up phase of the study may provide some evidence on this issue. Earlier, we found an overwhelming proportion of the children who claimed to smoke, claimed to smoke only one brand.[10] This suggests to us that cigarette advertising plays a major role in encouraging children to commence and continue smoking. In addition, cigarette advertising is one of very few variables associated with childhood smoking that is also amenable to rapid and decisive intervention.

In view of the limited success of programmes which have attempted to influence childhood smoking by health education and related techniques, we suggest that the greatest impact on the pre-

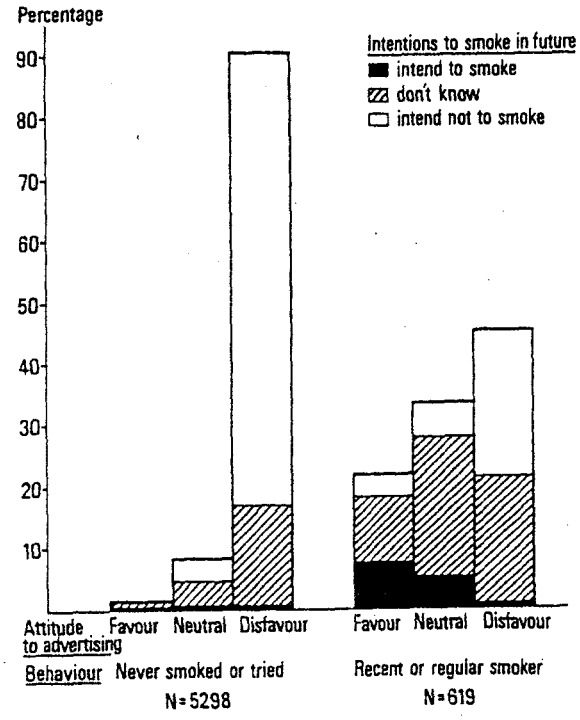


FIGURE 6 *Children's intentions to smoke in the future according to their present smoking behaviour and their attitudes to cigarette advertising.*

valence of childhood smoking would be achieved through legislation to ban all cigarette advertising. Legislation has been demonstrated to be an effective and powerful method of achieving rapid change in other health-related behaviour.[12–14] It could well be used to achieve rapid reductions in the prevalence of childhood smoking.

ACKNOWLEDGEMENTS

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Deadly Targeting of Women in Promoting Cigarettes

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The history of tobacco marketing portrays a strong relationship between cigarette advertising targeted to women and the rise in the prevalence of women smoking. This article describes how tobacco companies crafted their marketing strategies to obfuscate the growing evidence of the health hazards of tobacco and to circumvent attempts to regulate cigarette advertising. It shows how the tobacco industry understood and capitalized on the women's liberation movement to sell cigarettes as symbols of freedom and emancipation, tracing the creation and promotion of Virginia Slims as a case study. And it documents the unfortunate success of these marketing strategies as reflected in the trends of tobacco use, especially among underage girls, and the commensurate increase in tobacco-related disease and death among women.

Anticipation, Interception, and Mutation

The history of tobacco advertising shows that the industry has been remarkably adept at anticipating and deflecting attacks by the health community. The recent revelations of internal documents make clear that the industry's own research into the health effects of tobacco use was often more advanced than studies by the medical community. However, tobacco companies worked hard to conceal what they knew from the public who would be their customers.[1-3]

When news of the health hazards of tobacco first started penetrating the public consciousness in the 1950s, cigarette advertising made explicit health claims, often through celebrity spokespeople. Using popular public figures was, by then, already a staple of cigarette advertising. Baseball legend Babe Ruth, for example, announced in the 1930s that Old Golds had "Not a cough in a carload," and stylized portraits of physicians claimed that "More Doctors Smoke Camels Than Any Other Cigarette" in the 1940s.[4]

As knowledge about tobacco-related diseases became more widespread, however, the industry realized that instead of reassuring consumers, the health claims might actually be raising awareness of tobacco's hazards. The tobacco industry's own trade publication pointed out that the industry had been "warned editorially on many occasions that the 'health' theme was a risky one," and advised the selling of "pleasure" instead.[5] Quietly, cigarette companies ceased making explicit health claims and turned instead to image advertising that projected health, vitality, sexiness, and attractiveness with very little text.[6]

When the industry felt the threat of government regulation of tobacco advertising during the 1960s, cigarette companies instituted a system of self-regulation under the auspices of the National Association of Broadcasters. Although Congress required a health warning on cigarette packages, the industry's self-imposed code successfully forestalled greater government intrusion, and tobacco advertisers achieved unprecedented penetration into the youth market. Oddly, though the code provided for penalties of up to $100,000 for transgressions, not a single fine has ever been imposed.[7]

During the late 1960s, broadcast tobacco ads were subjected to the fairness doctrine, which required stations to air one minute of free counteradvertising for every three minutes of paid ads. The tobacco industry was first to appreciate the potency of this antismoking campaign. Long before health statisticians documented the coincident drop in smoking prevalence, the major tobacco companies agreed to a ban on broadcast advertising and specifically requested that it be codified in a statute so they could avoid charges of collusion and other violations of antitrust law.[8]

Despite the broadcast ban, cigarettes continued to be the most heavily promoted consumer product in America; cigarette companies merely shifted their marketing expenditures. During the first quarter of 1971, the first year of the broadcast ban, the number of tobacco ads in women's magazines increased fourfold.[9] Between 1987 and 1988 alone, total marketing expenditures for tobacco increased by 27%.[10] By the late 1980s, the tobacco industry ranked first in print media,[11] being the largest spender in outdoor advertising, second in magazines, and sixth in newspapers.[12]

More recently, tobacco marketing expenditures have shifted from advertising to promotion, such as distribution of specialty items including clothing and accessories.[13] The most recent report from the Federal Trade Commission shows that cigarette companies spent a record $6.03 billion on advertising and promotion during 1993. This represents a 15.4% increase over the prior year, despite an 8.9% decrease in sales for the same period.[14]

Pursuit of the Women's Market

Tobacco advertising works for the same reasons that other product advertising works. Once a particular market niche has been defined, marketing researchers explore the weaknesses or needs of those targeted individuals and the stimuli to which they respond in seeking to fill those needs. As explained by media consultant and tobacco control advocate Tony Schwartz, the advertiser does not need to pitch or sell values or emotions, because those already exist in the minds of his targets. All the successful advertiser needs to do is to understand what those existing values and emotions are, and then use stimuli that resonate with them.[15] The tobacco industry has been particularly adept at understanding, predicting, and capitalizing on the feminist

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movement by seizing the symbols of feminism and equating women's liberation with smoking.

In addition to direct appeals to consumers, tobacco companies have worked to reduce the potential opposition they would otherwise face for selling a lethal product. Research has shown a significant negative correlation between the amount of tobacco advertising in women's magazines and the number of articles that address the health hazards of tobacco.[16] The tobacco industry has also used philanthropic contributions very strategically to endear itself to the leaders of the populations it targets, especially women. In response to a recent survey, 13 women's organizations reported accepting donations from tobacco interests, each exceeding $318,000.[17] The National Women's Political Caucus, recipient of significant tobacco largesse, honored George Knox, Philip Morris vice-president, at its 1989 Good Guys Award Dinner.[9]

Virginia Slims: A Case Study. Tobacco company executives realized that "The ladies have led every major cigarette trend in the past 15 years . . . Our studies show that they were the first to embrace king-size cigarettes, menthol, charcoal, and recessed filters."[18] Therefore, after a decade of success in repositioning Marlboro as masculine and increasing its market share among male smokers, Philip Morris decided to appeal to modern women with the development of a new brand. Spurning strategies based on traditional feminine imagery, Virginia Slims launched a 100 mm "slimmer than usual" cigarette in 1968 with the slogan "You've Come a Long Way, Baby!"

The Virginia Slims campaign hoped to create a "consumer-related identity . . . to establish and maintain a new attractive brand personality . . . [for] the smoker's motivation and loyalty to a brand comes from identifying with the personality of that brand."[19] The creation of brand personality was to be achieved using aspects of style, tone, music, and visuals, rather than information, for the creative team believed that "in cigarette advertising . . . 90% of what you communicate is nonverbal."[19] A large, all-male staff was assigned to this task, appropriately nicknamed "15 Guys in Search of a Feminine Identity."[19] The creative team settled on a "fun personality for the brand—a lively, sparkly, happy cigarette." It was to be "The first cigarette for women only . . . designed slimmer for a woman's slimmer hands and lips . . . and packaged in a slim purse pack."[19]

> Something about the tone-of-voice felt right. It's a male cigarette company saying, in effect, "Women, we put you on a pedestal. We think you're terrific, you're fabulous, you're great. We love you, and we want you to have this cigarette we made for you." The message is out-and-out flattery, done lightly enough to be acceptable. Is there a woman alive who doesn't like flattery?[19]

One "great brain" came up with the concept of exploiting women's rights, which had re-emerged in the late 1960s. The slogan and copy contrasted women's historical lack of rights with the modern situation in which women could have everything, even "a cigarette brand for your very own."[19] When the campaign concept was translated from magazine pages to radio and TV, the music chosen was deliberately "a corny, happy suffragette kind of sound like an up-dated Salvation Army band," with a message of "Congratulations on being a woman. Congratulations on your success."[19]

After a summer's successful testing in San Francisco, Virginia Slims moved quickly into national distribution. Television and magazine ads contrasted the old social order with new mores by belittling dated restrictions on women:

> In 1910 Pamela Benjamin was caught smoking in the gazebo. She got a severe scolding and no supper that night. In 1915, Mrs. Cynthia Robinson was caught smoking in the cellar behind the preserves. Although she was 34, her husband sent her straight to her room. Then, in 1920, women won their rights."[20]

Virginia Slims' launch year advertising was carried on 9 TV network programs, plus spot TV and radio, 16 women's publications and Sunday supplements.[18]

When cigarette advertising was banned from broadcast media, budgets shifted to dramatically increase the volume of advertising in women's magazines. In 1974, Virginia Slims was backed by $8.3 million in advertising in magazines, newspapers, and Sunday supplements, making it the biggest spender in print.[21] This intensity in print advertising targeted to women continued into the 1980s.

Virginia Slims started sponsoring women's professional tennis in 1970, with a full season of tournaments played in 20 cities in 1971. Free cigarettes were given away at stadium entrances, and contract players were not allowed to take any public position opposing cigarette sponsorship."[22] The Virginia Slims media guide, published annually, became the "encyclopedia of women's tennis,"[23] and the company's public relations firm developed a full program to penetrate the media with stories that extended far beyond the sports pages. Media luncheons were held at the start of the season in New York and before each event in every tournament city, where charity tie-ins created more publicity. Despite the broadcast ban on cigarette advertising, television coverage of the tournaments brought Virginia Slims and its slogan into homes across America. A Philip Morris marketing vice-president explained, "Virginia Slims gets worldwide publicity and an opportunity to sample adult audiences and to spin off retail promotions."[23] It also had the advantage of acquiring grateful allies. In 1990, when Secretary of Health and Human Services Louis Sullivan, MD, called for an end to sports sponsorship by cigarette firms, women tennis stars opposed the effort and supported Philip Morris and the industry.[23]

As part of Virginia Slims' award-winning premium promotion in 1977, 30,000 "Ginny Jogger" sweat suits were distributed. During the mid-1970s an additional 400,000 items were distributed, including "You've come a long way, Baby" T-shirts (200,000), jerseys (110,000), and sweaters (70,000), each requiring cash and proof of purchase.[24] A promotional mainstay has been the "Book of Days," a hard-bound appointment calendar noting historic dates (including the 1968 launch of Virginia Slims), historical anecdotes, and memorable sexist quotes. By 1985, one million of these books were printed annually.[25]

The Success Of Tobacco Advertising

The prevalence of smoking by women, and the corresponding statistics on tobacco-induced diseases in women, serve as testimony to the success of targeted tobacco advertising. In 1923, when lung cancer was extremely rare, women consumed only 5% of all cigarettes sold.

v 1929, this was up to 12% and by 935, 18.1%; it peaked at 33.3% in 965 and remained virtually unchanged rough 1977.[26] Prevalence among men as higher during this time, peaking at 0.2% in 1965, but it has declined ister.[27] In 1987, 31.7% of men[32] and 6.8% of women smoked.[28]

The greatest growth of tobacco advertising aimed at women followed the ntroduction of Virginia Slims. A small xplosion of women's brands ensued, nd by 1979, magazine tobacco adveriisements targeting women equaled those argeted to men.[29] These advertising ampaigns have been associated with sigificant increases in smoking uptake mong girls younger than the legal age for purchase.[30] Smoking prevalence among female high school seniors surpassed that of their male counterparts throughout the late 1970s and 1980s.[31]

Unfortunately, women have indeed come a long way. Between 1950 and 1994, female lung cancer mortality rates increased 500%, from 3% of all female cancer deaths to 22%.[32] In 1965, an estimated 30,000 American women died from ten categories of tobacco-related diseases; by 1985, that figure had risen to 106,000.[33]

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Smoking and Women's Health

Domestic Violence

Race, Ethnicity and Women's Health

Genetics and Women's Health

Recognition of cigarette brand names and logos by young children in Hong Kong

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Abstract

Objective **– To examine the recognition of cigarette brand names and logos by Hong Kong primary school children.**

Design **– Cross-sectional survey with self-completed questionnaires examining smoking behaviour and recognition of 13 food, drink, cigarette, and toothpaste brand names and logos.**

Subjects **– A total of 9591 primary school children (mean age = 10.3; SD = 1.29) living in two districts of Hong Kong included in 1991 as part of a four-year respiratory health, smoking, and air pollution study which started in 1989.**

Results **– Ever-smoking prevalence was 11% (1067); 15% (759) in boys and 7% (308) in girls, and increased with age. Mean age of smoking the first cigarette was 7.8 years. Brand recognition ranged from 53% (Salem name) to 95% (Marlboro name and Salem logo). Significant differences were found by gender and by smoking status for the identification of drink, cigarette, and toothpaste brand groups. After adjustment in a logistic regression model, ever-smokers, who were more likely to be boys (adjusted odds ratio (OR) = 2.22; 95% confidence interval (CI) = 1.91 to 2.57), of older age (OR = 1.54; 95% CI = 1.46 to 1.62), living in Kwai Tsing district (OR = 1.31; 95% CI = 1.14 to 1.50), were more successful than never-smokers in identifying cigarette brands (OR = 1.82; 95% CI = 1.57 to 2.12).**

Conclusion **– Smoking is a paediatric health problem in Hong Kong; tobacco advertisements are widely recognised by young children and associated with smoking experience. A total ban on environmental advertising is needed as part of a comprehensive policy for the prevention of smoking-related disease in Hong Kong.**

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Keywords: environmental advertising; brand names, recognition; children

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Introduction

Smoking-related diseases are the most important preventable causes of death in Hong Kong.[1] In the Asia–Pacific region the advertising and promotion of tobacco to young people in general is intensive, although tobacco companies maintain that their advertising policies and practices are not targeted at the young and that they do not try to influence children to start smoking.[2] Their stated aims are to persuade adults to change brands or to encourage brand loyalty in those adults who currently smoke. Nevertheless, studies in the US found that specific material from tobacco advertising campaigns was more successfully identified by children than by adults[3,4] and in some countries the total banning of tobacco advertising is estimated to have resulted in a reduction of tobacco consumption by 4–16%.[5]

In Hong Kong, only a partial ban on cigarette advertising is in place. Cigarette advertisements are permitted in the print media, are carried by taxis, and large-scale displays, including those running the full height of high-rise buildings, dominate the skyline in urban areas. The high profile that the product receives through this and other means of indirect advertising, such as Salem tennis tournaments, Kent holidays and movies, and Marlboro "Red Hot Hits" (music compact discs) and clothing, projects images of maturity, excitement, glamour, confidence, and success. This has been shown to raise children's awareness of cigarettes, and may encourage them to start smoking.[6,7] A few studies have been carried out, but none in Asia, to examine the impact of environmental tobacco advertising on primary school children.[6,8,9]

The purpose of this survey was to examine the smoking behaviour of Chinese-speaking primary school children in Hong Kong and their ability to recognise brand names and logos of widely advertised products, including foods, drinks, cigarettes, and toothpaste.

Subjects and methods

STUDY POPULATION

In a four-year study started in 1989 to examine respiratory health, smoking, and air pollution, Chinese children in primary classes 3 and 4 and their parents were recruited from 17 schools in two areas of Hong Kong: Southern and Kwai Tsing districts. The original selection of the districts was based on the differences between them in air quality. In 1991 an additional 10 schools, four in Kwai Tsing and six in Southern district, situated

close to the original schools, were added to the study.

Details of the initial study design, selection of schools and classes in 1989, and any sociodemographic differences between the two districts have been reported elsewhere.[10,11] The principal criterion for selection of schools in Kwai Tsing was that they were located in a subdistrict with poor air quality, as rated by local officials and the Government Environmental Protection Department. In Southern district, because of its better air quality, all schools were situated in areas of low air pollution. With respect to sociodemographic differences, Kwai Tsing district had more families living in public housing for lower income groups and fewer parents who had continued through to upper secondary or tertiary education.

The data set reported in this paper was taken from the 1991 survey and consisted of the original children in the 1989 survey, now in primary classes 5 and 6, and the new intake of children in primary classes 3 and 4 from the initial 17 schools, plus children in primary classes 3 and 4 from the schools recruited in 1991.

QUESTIONNAIRES

In each of the four years of the study, all children and their parents completed questionnaires that covered respiratory health, smoking behaviour, and sociodemographic factors. The ever-smoking experience in the children was found, after adjustment for sociodemographic factors and indoor and outdoor air pollution, to be associated with respiratory health effects including wheeze, nasal symptoms, and sore throat.[11]

The children were asked questions about current smoking status, age of starting to smoke, number of cigarettes smoked in the last 24 hours, sources of cigarettes, and knowledge and attitude related to smoking. In 1991 children were asked to classify six brand names in Chinese characters (Marlboro, Salem, Carlsberg, Martell, Cadbury, and Colgate) and seven colour-reproduced brand logos (Marlboro, Salem, Coca Cola, Carlsberg, McDonald's, Garden bakery and Colgate; figure) of 13 assorted food, drink, cigarette, and toothpaste brands into one of five categories: food, cigarette, drink, other products, or not known. Four of the brands – Marlboro, Salem, Carlsberg, and Colgate – were presented independently both as a product name and as a product logo.

The completion rate for the 13 brand recognition questions was 99%, with the exception of the McDonald's logo which had a completion rate of 85%. The McDonald's logo gave rise to indecision in the children because it could be categorised in one of three categories – i.e., food, drink, or other – resulting in non-completion of the question in some cases. The questions to the children and the product logos are illustrated in the figure.

The children's questionnaires were administered by a trained research worker and completed in the classroom under supervised conditions. There was no collusion between children and no teachers were present.

ANALYSIS:

Answers to the brand identification questions were graded 1 for correct and 0 for incorrect. Scores were derived, by summing all the correct answers, for: total brand recognition (maximum score = 13), all brand names (6), all brand logos (7), and each product category: drinks (4), cigarettes (4), food (3), and other (2). In the few instances where there were missing data, the cases were excluded from the analysis.

The child's smoking status was determined from one of six possible answers: (a) have never smoked; (b) tried smoking once or a few times; (c) used to smoke but now do not; (d) smoke sometimes but fewer than one cigarette per week; (e) smoke one to six cigarettes per week; and (f) smoke more than six cigarettes per week. Smoking status was defined as: (1) ever-smoker, from a positive response to answer categories (b)–(f), or (2) never-smoker, from a positive response to category (a).

All analyses were carried out using SPSS PC+4.0. Differences between ever-smoking and never-smoking children, in terms of their gender, age, district of residence, and scores of correct answers were analysed by χ^2 and t tests, with 95% confidence intervals (95% CIs) calculated for all point estimates.

To determine the importance of factors associated with smoking behaviour (ever-smokers), the scores for each of the four product categories: food, drink, cigarette, and toothpaste (divided into 100% correct answers or less than 100% correct) were included in a logistic regression model together with gender, age (as a continuous variable), and district of residence as independent variables; and from the model, the adjusted odds ratios (ORs) with 95% CIs were determined for each factor.[12] The analysis of scores was repeated to examine responses with more than 50% correct, with responses divided as follows:

- drinks, cigarettes: none, one, or two correct answers compared with three or four correct (ie, 75–100% correct);
- food: none or one correct compared with two or three correct (ie, 67–100% correct);
- other: none or one correct compared with two correct (ie, 100% correct).

Results

STUDY POPULATION

In the 1991 survey, 27 schools consisting of 271 primary classes 3–6 took part . A total of 9657 children, representing 99% of the total child population sampled, completed the questionnaires. The 66 (0.7%) children who failed to indicate their smoking status were excluded from the analysis so the final data set consisted of 9591 children (table 1). Numbers of children in the two districts were similar, with 4917 in Southern district and 4674 in Kwai Tsing. There were no differences be-

Please indicate what types of product are represented by the following logos or names? (Please tick in the box under the appropriate product ☑)

			Food	Cigarette	Drink	Others	Don't know
56.	Ka Si Park	嘉士伯	☐	☐	☐	☐	☐
57.	Man Bo Lo	萬寶路	☐	☐	☐	☐	☐
58.	Kut Park Lay	吉百利	☐	☐	☐	☐	☐
59.	Go Lo Kit	高露潔	☐	☐	☐	☐	☐
60.	Sha Lone	沙龍	☐	☐	☐	☐	☐
61.	Ma Dare Lay	馬爹利	☐	☐	☐	☐	☐

Note: For questions 56–61, the Chinese characters are translated into English according to the Cantonese pronunciation of the characters. The English names are: 56. Carlsberg, 57. Marlboro, 58. Cadbury, 59. Colgate, 60. Salem, 61. Martell.

62.  ☐ ☐ ☐ ☐ ☐

63.  ☐ ☐ ☐ ☐ ☐

64. 

☐ ☐ ☐ ☐ ☐

65. 

☐ ☐ ☐ ☐ ☐

66. 

☐ ☐ ☐ ☐ ☐

67. 

☐ ☐ ☐ ☐ ☐

68. 

☐ ☐ ☐ ☐ ☐

Brand names and logos presented in the questionnaire for identification.

Table 1 Number and prevalence (%) of children smoking

Age (years)	Boys		Girls	
	Never-smoker	Ever-smoker	Never-smoker	Ever-smoker
8	753 (93)	59 (7)	800 (97)	28 (3)
9	1208 (91)	115 (9)	1340 (95)	71 (5)
10	981 (86)	157 (14)	1059 (94)	67 (6)
11	772 (79)	204 (21)	728 (91)	72 (9)
12	376 (72)	148 (28)	364 (87)	52 (13)
≥ 13	73 (49)	76 (51)	70 (80)	18 (20)
Subtotal	4163 (85)	759 (15)	4361 (93)	308 (7)
Total	4922		4669	

tween districts of residence by gender (χ^2 = 1.2, df = 1, p = 0.2), or by age (t = 1.2, df = 9598, p = 0.2).

SMOKING PREVALENCE

A total of 1067 (11%, 95% CI = 10.5 to 11.8%) were found to be ever-smokers. Of these, 83% (886) had tried smoking once or a few times; 8% (81) used to smoke; 6% (62) smoked fewer than one cigarette per week, 2% (24) smoked one to six cigarettes per week, and 1% (14) smoked more than six cigarettes per week.

There were differences between ever-smokers and never-smokers: by district of residence, with 9.8% (95% CI = 9.0 to 10.7%) ever-smoking children in Southern district and 12.5% (95% CI = 11.5 to 13.4%) in Kwai Tsing (χ^2 = 17.3, df = 1, p < 0.001); by gender, with 15.4% (95% CI = 14.4 to 16.4%) ever-smokers in boys and 6.6% (95% CI = 5.9 to 7.3%) in girls (χ^2 = 188.8, df = 1, p < 0.001); by age, with ever-smoking children being older (mean age = 11.1 years; 95% CI = 11.0 to 11.2) than never-smokers (mean = 10.2; 95% CI = 10.1 to 10.4) (t = 20.6, df = 9589, p < 0.001).

IDENTIFICATION OF BRANDS

Successful recognition of the individual brand names and logos was very high overall with an average of 82%, ranging from 53% (Salem name) to 95% (Marlboro name and Salem logo). Of the three most successfully identified brands, the top two were tobacco products: Marlboro name (95%) and Salem logo (95%), and the third was a food, Garden bakery (94%).

There were no significant differences in mean total scores for the 13 items between districts but there were gender differences with mean scores of 11.0 (95% CI = 10.9 to 11.1) and 10.6 (95% CI = 10.5 to 10.6) for boys and girls, respectively (t = 9.3, df = 8817, p < 0.001). More boys correctly identified three of the four cigarette brand names or logos, two of the three alcoholic drinks, and the Colgate logo, whereas girls were more successful only in the recognition of the Garden bakery logo (table 2).

Recognition of products was greater with increasing age; successful identification of all 13 items occurred in 10% (153) of eight-year-olds but 32% (71) of 13-year-olds (χ^2 = 360.9, df = 1, p < 0.001). However, even in the eight-year-old age group, 1163 (72%; 95% CI = 60 to 84%) of the children identified three or more of the cigarette names and logos correctly.

Table 2 Boys and girls with 100% correct answers

	Boys		Girls		
	%	n	%	n	p Value
All brands	26	4526	18	4293	< 0.001
All logos	41	4643	35	4399	< 0.001
All names	47	4781	33	4553	< 0.001
Cigarettes	52	4824	35	4593	< 0.001
Marlboro*	96	4893	94	4653	< 0.001
Marlboro†	82	4900	69	4657	< 0.001
Salem*	61	4865	45	4627	< 0.001
Salem†	95	4906	95	4652	0.6
Drinks	60	4838	55	4599	< 0.001
Alcoholic drinks	70	4842	64	4606	< 0.001
Coca Cola†	81	4909	82	4661	0.2
Carlsberg*	91	4882	90	4640	0.3
Carlsberg†	88	4900	85	4654	< 0.001
Martell*	78	4886	73	4642	< 0.001
Foods	72	4638	74	4400	0.2
Cadbury*	89	4869	90	4636	0.2
McDonald's†	83	4701	83	4448	0.5
Garden†	94	4896	95	4651	0.02
Other (toothpaste)	69	4859	66	4620	0.009
Colgate*	86	4875	85	4636	0.2
Colgate†	72	4904	70	4651	0.004

* Brand name; † brand logo.

IDENTIFICATION OF BRANDS BY SMOKING BEHAVIOUR

Overall there were significant differences between never-smokers and ever-smokers in mean total scores (t = 6.5, df = 8817, p < 0.001) with ever-smokers scoring higher (11.2; 95% CI = 11.1 to 11.3) than never-smokers (10.7; 95% CI = 10.7 to 10.8). For the four categories of products, the biggest differences between ever-smokers and never-smokers were seen in the cigarette category (OR = 2.39; 95% CI = 2.10 to 2.72). Other significant differences occurred for drinks (OR = 1.29; 95% CI = 1.13 to 1.47) and toothpaste (OR = 1.23; 95% CI = 1.07 to 1.41) (table 3).

With respect to recognition of individual items, there were significant differences (unadjusted OR) with ever-smokers being more successful for all four cigarette items and the Martell name (table 3). In only one instance, for Garden bakery, were never-smokers significantly more successful than ever-smokers.

In the cigarette category, 756 (72%; 95% CI = 69 to 75%) ever-smokers correctly identified both brand names compared with 4181 (50%; 95% CI = 49 to 51%) never-smokers, whereas 871 (82%; 95% CI = 80 to 85%) and 6117 (72%; 95% CI = 71 to 73%) ever-smokers and never-smokers, respectively, correctly identified both cigarette logos.

After adjustment for age, gender, and district of residence, cigarette brand identification was strongly associated with ever-smoking. This was the result of two comparisons: one in which recognition of both cigarette brands was 100% correct compared with responses < 100% correct; and another in which those with more than 50% answers correct were compared with those with fewer answers correct (table 4). In contrast, the associations

Table 3 Never-smokers and ever-smokers with 100% correct answers

	Never-smokers		Ever-smokers		Unadjusted
	n	%	n	%	OR (95% CI)
All brands	7827	19	992	30	1.77 (1.54–2.04)
All logos	8020	35	1022	41	1.29 (1.13–1.47)
All names	8300	37	1034	55	2.13 (1.87–2.42)
Cigarettes	8376	41	1041	62	2.39 (2.10–2.72)
Marlboro*	8487	95	1059	97	1.63 (1.13–2.33)
Marlboro†	8500	75	1057	84	1.81 (1.52–2.15)
Salem*	8441	50	1051	73	2.60 (2.26–3.00)
Salem†	8494	95	1064	96	1.40 (1.01–1.93)
Drinks	8392	56	1045	62	1.29 (1.13–1.47)
Alcoholic drinks	8403	65	1045	73	1.40 (1.21–1.61)
Coca Cola†	8505	81	1065	80	0.94 (0.80–1.10)
Carlsberg*	8470	90	1052	91	1.16 (0.92–1.45)
Carlsberg†	8491	86	1063	88	1.17 (0.97–1.42)
Martell*	8471	75	1057	82	1.51 (1.28–1.78)
Foods	8017	69	1021	69	1.00 (0.87–1.14)
Cadbury*	8448	90	1057	89	0.93 (0.75–1.14)
McDonald's†	8118	83	1031	83	0.97 (0.82–1.15)
Garden†	8483	95	1064	93	0.76 (0.59–0.97)
Other (toothpaste)	8424	66	1055	70	1.23 (1.07–1.41)
Colgate*	8454	85	1057	88	1.21 (1.00–1.46)
Colgate†	8492	71	1063	73	1.14 (0.99–1.32)

* Brand name; † brand logo.
OR = odds ratio; CI = confidence interval.

Table 4 Demographic characteristics and correct identification of brands as predictors of ever-smoking children

Category	Adjusted OR (95% CI)	
	100% correct for all brands	*> 50% correct for all brands*
Gender (male)	2.22 (1.91–2.57)	2.29 (1.98–2.66)
District (Kwai Tsing)	1.31 (1.14–1.50)	1.29 (1.12–1.48)
Age (per year)	1.54 (1.46–1.62)	1.58 (1.50–1.67)
Cigarettes	1.82 (1.57–2.12)	1.82 (1.44–2.30)
Drinks	1.04 (0.89–1.21)	0.92 (0.74–1.14)
Food	0.82 (0.70–0.96)	0.72 (0.51–1.03)
Toothpaste	0.82 (0.70–0.97)	0.89 (0.76–1.05)

OR = odds ratio; CI = confidence interval.

between smoking and other categories were weak and likely to be chance findings. Ever-smokers tended to be older boys in Kwai Tsing district. The logistic model correctly predicted 89% of all cases as ever-smokers or never-smokers.

Discussion

In Hong Kong, prevalence rates for experimental smoking among secondary school children are high, ranging from 20–47% in 13–16-year-olds[13] and 8–57% in 11–21-year-olds.[14] In 1989, we were the first to report an ever-smoking prevalence of 8% in primary classes 3 and 4, consisting mostly of children aged 8–10 years.[15]

In 1982 Chapman and Fitzgerald[16] found a twofold difference in identification of edited cigarette advertisements by smokers compared with non-smoking Australian children and the debate continues about the impact of advertising on all age groups in society.[5,17] Young people in Hong Kong show differences in smoking behaviour compared with their Western counterparts in that smoking prevalence, especially for girls, is lower at a given age.[13,14,18] Their successful recognition of advertised tobacco brands, however, especially by ever-smokers, shows that the level of awareness is similar to that found in other studies in the West.[3,8,9] Tobacco advertising and tobacco products are clearly making an impression on young children. Even though recognition levels were higher in smoking children, awareness of the product and its promotional messages may influence non-smoking children as young as seven years of age.

Other authors, working in an entirely separate cultural environment, have demonstrated the impact of product promotions on very young children. A recent study in the US reported recognition rates among 3–6-year-olds, for Coca Cola and McDonald's, similar to those reported here.[9] One would expect young children to be able to identify such products because they use them. In primary school children, however, high awareness of the Salem logo and Marlboro name (the two brands identified most successfully in this study from all of those given) is likely to be due to the style and content of advertising and its appeal to young people. In Hong Kong at present, many taxi doors are emblazoned with Joe Camel, a cartoon character recognisable in the US by 91% of six-year-olds.[9] This runs directly counter to clause 9 of the proposed Charter of Children's Rights to freedom from tobacco advertising.[19]

Advertising bans are effective in reducing tobacco consumption[5] and there is considerable local support for strong measures against tobacco advertising in Hong Kong. A 1988 study found that 75% of Hong Kong adults favoured and only 20% opposed restrictions on tobacco advertisements in newspapers and magazines, whereas 76% favoured and 19% opposed restrictions in public transport.[20] A similar but more recent study found that 53% of local residents favoured, and 29% opposed, a total ban on tobacco advertising, including advertisements in printed publications and on billboards.[21]

What is now needed in Hong Kong is legislative action to support both this majority opinion and the Territory's declared health policy, which is to prevent smoking-related diseases. Hong Kong currently imposes some restrictions on cigarette advertisements such as banning them on radio and television and in cinemas. Children are still continuously exposed to indirect advertisements in these media, however, as well as direct advertisements in printed publications and displays, sources from which other reports have demonstrated that they can successfully recall the names and logos of the products advertised.[22] The data presented here indicate that partial restrictions on advertisements – for example, limitation to the use of the name and picture of the product and a health warning – will not protect children from the overall effect of environmental tobacco advertising. The World Health Organisation's Regional Office for the Western Pacific, in its Action Plan on Tobacco or Health for 1995–1999,[23] has called for a "Tobacco-advertising free region by the year 2000" and the Hong Kong Government has endorsed the plan.

This study is the first of its kind in Asia and indicates that new smoking prevention policies to protect young people are needed now, if we are to prevent their recruitment to the ranks of smokers, and if there is any intention to reduce future smoking-related health problems and demands on health resources.

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Children smoking, China. Source: Wang Gang-Feng/Panas Pictures.

PHILIP MORRIS U.S.A.

NEWS RELEASE

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PHILIP MORRIS U.S.A. CALLS FOR FEDERAL LEGISLATION TO STOP UNDERAGE SMOKING

COMPANY OUTLINES COMPREHENSIVE BLUEPRINT FOR IMMEDIATE ACTION

NEW YORK, May 15, 1996 -- Philip Morris U.S.A., the domestic tobacco subsidiary of Philip Morris Companies Inc., today announced a blueprint for comprehensive federal legislation to address concerns regarding the use of tobacco products by minors and called on Congress to enact it swiftly.

"Everyone agrees that kids shouldn't use tobacco," said Steven Parrish, senior vice president, corporate affairs, Philip Morris Companies Inc. "And all reasonable people agree that adults should be able to smoke or use smokeless tobacco if they want to.

"Last week, President Clinton spoke to a group of high school students in Woodbridge, New Jersey, about tobacco," Parrish said. "The President directed some of his comments to the tobacco industry, saying 'do not stay outside of and apart from this debate.' And he went on to say, 'Join with us. Do the right thing.' We are proposing far-reaching and unprecedented federal legislation on the issue of underage use of tobacco. And we will be actively seeking support for this initiative.

"This initiative builds on our fundamental commitment to the propositions that minors should not use -- or even have access to -- tobacco products," Parrish said. "Anyone who violates these principles should feel the full weight of the law.

"A federal law makes sense because it can be implemented quickly, avoiding protracted litigation over the Food and Drug Administration's illegal attempt to regulate tobacco products," Parrish said.

"The President has said that we have a right to market our products to adults. He has also said he would welcome Congressional action instead of waiting for a long, complicated, contentious regulatory proceeding or years of litigation. Let me quote the President directly, '... if they would rather have a law than federal regulation, the FDA Director, Dr. Kessler, and I would rather have an immediate impact on teen smoking, not two years of litigation and then start the work'.

- more -

"We continue to believe that restricting access is the best way to address the problem of underage tobacco use and our proposal includes every sensible federal restriction possible to prevent kids from obtaining tobacco products," said Parrish.

The plan presented by Philip Morris U.S.A. restricts youth access to tobacco products by calling for a federal minimum age of 18 for the sale of tobacco products; a ban on cigarette vending machines; a ban on the sale of single cigarettes or packs with fewer than 20 cigarettes; a requirement that all tobacco sales to be face-to-face, where proof of age can be verified for anyone appearing to be under age 21; a mandate that tobacco products in retail establishments be displayed within the control or line of sight of an employee; a ban on sampling except in locations where minors are denied access; and a requirement that retailers and their employees certify that they understand and will comply with minimum-age laws.

This proposal is consistent with the most significant components of the recommendations on curbing youth access to tobacco products that were made by the Institute of Medicine.

"Our plan also includes marketing restrictions that we have opposed. In fact, the Supreme Court ruling this week in the Liquormart case makes it clear that the FDA's proposed advertising restrictions are blatantly unconstitutional," stated Parrish. "Our plan, by contrast, is a more focused, tailored, and rational effort to respond to the President's concerns, while seeking to avoid the obvious constitutional defects in the FDA's proposed rules.

"We have stated before, and we continue to stress, that our advertising and promotional activities are not 'targeted' at kids and do not cause them to use tobacco products. Nevertheless, we are willing to accept these restrictions in order to find the common ground. We are willing to accept these restrictions so something can be done now," Parrish said.

The plan also would ban tobacco product brand names, logos, characters and selling messages on non-tobacco-related items such as hats or T-shirts; ban tobacco product sponsorship of events with significant youth audiences; create tobacco-free ad zones by banning all outdoor tobacco product advertising within 1,000 feet of any playground or elementary or secondary school, including outward-facing window display advertising; ban tobacco product advertising in or on trains, buses, subways and taxis, and in terminals, stations, platforms or stops for these vehicles; and guarantee that there would be no tobacco product advertising in youth-oriented publications.

"Our proposal is specific, sweeping and direct," Parrish said. "This federal legislative approach will make it impossible for anyone to legally obtain any tobacco product from a manufacturer or retailer without a face-to-face transaction where proof of age can be checked."

To ensure compliance by tobacco manufacturers, serious penalties could be imposed for infractions -- up to $50,000 for violations by a tobacco manufacturer.

- more -

The proposal calls for a $250 million contribution from the tobacco industry (based on market share) over a five-year period to assist the government and others in implementation and enforcement.

Passage of a federal law also would ensure that the various components of the plan would be integrated quickly and uniformly into the normal, everyday business practices of all tobacco manufacturers, distributors and retailers.

The law would be implemented and enforced by the Federal Trade Commission, the Department of Health and Human Services, and the Department of Justice -- agencies already given responsibility by Congress for tobacco issues -- and it would reaffirm existing law under which the FDA has no authority to regulate the tobacco industry.

State law enforcement officials would provide front-line enforcement of the sales and distribution provisions of the law, alongside the appropriate experts in the federal government. This would result in immediate action should violations occur and eliminate the need to create a new federal bureaucracy for enforcement purposes.

In pledging full support to seek enactment of the legislation, Parrish reiterated the company's opposition to FDA regulation of tobacco products -- a move that would ultimately lead to Prohibition -- and said that position remains unchanged.

"Philip Morris will continue to vigorously oppose any effort to expand the FDA's authority to include the regulation of tobacco, because FDA jurisdiction over tobacco would threaten the rights of adults," Parrish said.

"Our proposal would codify existing law and preclude FDA jurisdiction over tobacco products except as to brands for which the manufacturer makes an express health claim to consumers," he said. "We have said all along that our lawsuit against FDA is not about youth smoking. Our lawsuit is about an illegal and unwise attempt by FDA to regulate tobacco products as medical devices. We remain confident in our case and will continue to pursue it absent a legislative solution."

Philip Morris called on others -- including its critics -- to support this comprehensive legislative plan.

"We challenge others to join us in supporting and fighting for this legislation," Parrish said. "In particular, we challenge anti-tobacco groups to join us in working to solve the problem of underage use of tobacco by supporting this proposal. The issue is too important for us to continue shouting at one another, or using it as a political wedge. Let's work together to fight the problem, not each other. We can make progress through cooperation, not confrontation."

# # #

REMARKS BY STEVE PARRISH
PHILIP MORRIS/UST PRESS CONFERENCE

May 15, 1996

Welcome and thank you for coming. I'm Steve Parrish, Senior Vice President, Corporate Affairs, Philip Morris Companies Inc. With me is Richard Verheij, Executive Vice President and General Counsel, UST, Inc.

Last week, President Clinton spoke to a group of high school students in Woodbridge, New Jersey about tobacco. The President directed some of his comments to the tobacco industry, saying "do not stay outside of and apart from this debate." And he went on to say, "Join with us. Do the right thing."

Today, Philip Morris U.S.A. and United States Tobacco Company, the largest manufacturers of cigarettes and smokeless tobacco products in this country, accept the President's challenge. Together, we are proposing far-reaching and unprecedented federal legislation on the issue of underage use of tobacco. And we will be actively seeking support for this initiative.

For our companies, this initiative builds on our fundamental commitment to the propositions that minors should not use – or even have access to – tobacco products. Anyone who violates these principles should feel the full weight of the law.

We offer this comprehensive plan in the hope that all sides in the debate will set aside the hostility of the past and work together so that kids will not use tobacco products. We need to act on this issue now, not just continue the debate about it.

Most of us agree on the central issues. Everyone agrees that kids shouldn't use tobacco. And all reasonable people agree that adults should be able to smoke or use smokeless tobacco if they want to.

The President has said that we have a right to market our products to adults. He has also said he would welcome Congressional action instead

of waiting for a long, complicated, contentious regulatory proceeding or years of litigation. Let me quote the President directly:

> "... if they would rather have a law than federal regulation, the FDA Director, Dr. Kessler, and I would rather have an immediate impact on teen smoking, not two years of litigation and then start the work." Unquote

Today we are proposing a tough federal law, which would:

- ✔ Establish a federal minimum age of 18 for the sale of tobacco products;
- ✔ Ban vending machine sales;
- ✔ Ban all outdoor tobacco product advertising within 1,000 feet of schools or playgrounds;
- ✔ Ban tobacco advertising on outward-facing retail window displays within 1,000 feet of schools or playgrounds;
- ✔ Ban brand names, logos, characters or selling messages on non-tobacco-related items. This means, for example, there would be no more caps, tee shirts, jackets or gym bags with tobacco brand names, logos, characters or selling messages.

The proposal would also:

- ✔ Ban mass transit advertising;
- ✔ Ban all sales or distribution of tobacco products to consumers through the mail;
- ✔ Ban permanent brand name advertising in virtually all sports stadiums;
- ✔ Ban the sale of individual cigarettes;
- ✔ Ban packs of fewer than 20 cigarettes;

ELEMENTS OF PHILIP MORRIS U.S.A.'s AND UNITED STATES TOBACCO COMPANY's COMPREHENSIVE PLAN TO COMBAT UNDERAGE TOBACCO USE

Advertising and Promotion Provisions

- Non-Tobacco-Related Items: Bans the sale or distribution to consumers of non-tobacco items that display tobacco product brand names, brand logos, brand characters, or brand selling messages (e.g., T-shirts, hats, other clothing, gym bags and trinkets), except for tobacco product accessories used in connection with smoking, such as ashtrays, matchbooks and lighters.

- Tobacco-Free Ad Zone: Bans all outdoor tobacco product advertising, including outward-facing retail window display advertising, within 1000 feet of any playground or elementary or secondary school.

- Small Urban Billboards: Bans all tobacco product billboards of less than 225 square feet, regardless of where they are located, i.e., bans "8-sheet" tobacco product billboards that are typically used on sides of buildings in urban neighborhoods.

- Transit Advertising: Bans tobacco product advertising in or on trains, buses, subways and taxis that are available for use by fare-paying passengers, and stations, stops and shelters used by such mass-transit vehicles.

- Stadium Advertising: Limits permanent tobacco product advertising to facilities dedicated primarily to motor sports or rodeo productions. Bans permanent tobacco advertising in all other sports stadiums where amateur and professional sporting events are conducted.

- Event Sponsorship: Limits tobacco product sponsorship of events to motor sports and rodeo productions and other events where the promoter, arena or stadium manager, or sanctioning body certifies that it expects at least 75% of those in attendance to be 18 years of age or older. Bans all other tobacco product sponsorship of events. Allows corporate sponsorship if the tobacco company name was in existence before 1/1/95.

- Entries and Teams in Events: Restricts tobacco product brand identification on entries and teams in events, such as stock cars and their drivers and crews, to tobacco brand names and package logos.

- Video Games: Bans tobacco product brand names, brand logos, brand characters, or brand selling messages in video arcades, family amusement centers, and in or on video games except those located in areas or establishments where minors are denied access.

- **Product Placement**: Bans payments by manufacturers, distributors, retailers or their agents for the placement of any tobacco product, package or advertisement as a prop for a movie or television program made for public viewing.

- **Ads in Publications**: Limits tobacco advertising in publications to those whose publisher certifies that adults account for 85% or more of the publication's subscribers (or circulation, where subscription data are unavailable).

- **Gifts and Contests**: Requires proof of age for the distribution of gifts or other promotional items awarded with the purchase of tobacco products.

- **Redemption of Coupons**: Bans the distribution of tobacco products through the redemption of coupons, except in face-to-face transactions where proof of age is required.

- **Non-Tobacco Brand Names on Tobacco Products**: Bans non-tobacco names, such as Mercedes or Cadillac, for tobacco products, unless such names were in use on tobacco products prior to 1/1/95.

- **Point of Sale**: Permits tobacco product advertising inside all retail establishments selling tobacco products, including retail establishments located in otherwise restricted areas.

- **FTC Enforcement**: Grants the Federal Trade Commission oversight and enforcement authority over the advertising and promotion provisions.

Sales and Distribution Provisions

- **Vending Machine Ban**: Bans vending machine sales of tobacco products.

- **Minimum Sales Age**: Sets a federal minimum age of 18 for the sale of tobacco products, but does not preclude states from setting a higher minimum age.

- **Proof of Age**: Requires picture identification for the purchase or sale of tobacco products for anyone appearing to be under the age of 21.

- **Minimum Age Signage**: Requires retailers to prominently display signs indicating the minimum sales age under state and federal law as well as the proof-of-age requirement under the law.

- **Employee Certification**: Requires retailers and their employees to certify that they understand and will comply with minimum age laws.

- **Retailer Line of Sight**: Requires retail establishments to place tobacco product displays where they are under the control or within the line of sight of an employee.

- **Distribution through the Mail**: Bans sales or distribution of tobacco products to consumers through the mail.

- **Sampling**: Bans tobacco product sampling, except in areas or establishments where minors are denied access.

- ✔ Ban sampling, except in locations where minors are denied access;
- ✔ Ban payments for product placements in movies and television;
- ✔ Ban billboards of less than 225 square feet (of the type typically used in urban neighborhoods);
- ✔ Ban advertising in family amusement centers, video arcades and in video games except those located in areas where minors are denied access;
- ✔ Limit tobacco product sponsorship of events to motor sports and rodeo productions and other events where the promoter, arena or stadium manager certifies that at least 75% of those in attendance are expected to be 18 years or older. The proposal would ban all other tobacco product sponsorship of events.

Our proposal would:

- ✔ Limit tobacco advertising to only those publications with 85% or more adult subscribers.

The proposal would also:

- ✔ Require minimum age signage at tobacco retail outlets;
- ✔ Require tobacco products to be displayed only under the control or within the line of sight of the retailer;
- ✔ Require picture ID for those appearing to be under 21;
- ✔ Require retailers and their employees to certify that they understand and will comply with the minimum-age laws; and
- ✔ Require an industry-funded program of $250 million over 5 years to fund retailer compliance and government oversight.

Our proposal provides for comprehensive federal oversight and enforcement by the Federal Trade Commission, the Department of Health and Human Services, and the Department of Justice. It also gives the states enforcement authority over the proposal's sales and distribution provisions. Our plan would:

- ✔ Provide a system of civil penalties against manufacturers, including fines up to $50,000 for violations, as well as a system of graduated civil penalties against retailers who sell tobacco products to minors.

And finally, our proposal would codify existing law and preclude FDA jurisdiction over tobacco products except as to brands for which the manufacturer makes an express health claim to consumers. We have said all along that our lawsuit against FDA is not about youth smoking. Our lawsuit is about an illegal and unwise attempt by FDA to regulate tobacco products as medical devices. We remain confident in our case and will continue to pursue it absent a legislative solution. But we are announcing our proposal today, because the time has come to address the issue of underage use of tobacco and do it in a legal way and in a way that makes sense.

As you can see, our proposal is specific, sweeping and direct. This federal legislative approach will make it impossible for anyone to legally obtain any tobacco product from a manufacturer or retailer without a face-to-face transaction where proof of age can be checked. The proposal also mandates significant prohibitions and restrictions on the placement of tobacco advertising, while limiting the many First Amendment and other legal problems inherent in the FDA proposal. Our legislative approach contains serious enforcement provisions and significant funding mechanisms, without creating a huge bureaucracy. It would take effect immediately, avoiding years of regulatory delay and legal conflict. And it addresses the issue of tobacco use by minors without unreasonably threatening the rights of adults.

Not all of these ideas are ours alone. Some came from the President, some from Members of Congress, some from the Institute of Medicine and some from anti-tobacco groups. But this is not about ownership of ideas. It is about solving a problem.

We do not want kids to use tobacco products. We have demonstrated that commitment by our voluntary efforts. And as we push for this new legislation, we will continue to pursue those voluntary initiatives.

We continue to believe that restricting access is the best way to address the problem of underage tobacco use and our proposal includes every sensible federal restriction possible to prevent kids from obtaining tobacco products.

But we are willing to do more. Our plan also includes marketing restrictions that we have opposed. In fact, the Supreme Court ruling this week in the Liquormart case makes it clear that the FDA's proposed advertising restrictions are blatantly unconstitutional. Our plan, by contrast, is a more focused, tailored, and rational effort to respond to the President's concerns, while seeking to avoid the obvious constitutional defects in the FDA's proposed rules.

We have stated before, and we continue to stress, that our advertising and promotional activities are not "targeted" at kids and do not cause them to use tobacco products. Nevertheless, we are willing to accept these restrictions in order to find the common ground. We are willing to accept these restrictions so something can be done now.

By working together, we as a nation can move decisively and swiftly toward a marketplace where minors can no longer buy tobacco products. We are prepared to fight for this proposal because there should be no doubt about our commitment and more importantly, there should be no evasion or delay in passing and implementing a truly effective nationwide program.

The time for talk has ended. The time has come to step forward as leading companies in the tobacco industry, with one end in mind: bringing people together to attack underage use of tobacco.

Last year the President urged all of us to put aside our differences and seek common ground. Americans share a lot of common ground on kids and tobacco. In the interests of unified and effective action, we ask Congress and President Clinton to move this legislation without delay.

We challenge others to join us in supporting and fighting for this legislation. In particular, we challenge anti-tobacco groups to join us in working to solve the problem of underage use of tobacco by supporting this proposal.

We realize that government and industry alone cannot solve the problem of underage use of tobacco. Families, educators, retailers and others can and must do their part, too. Even then, we may not be able to completely solve the problem. But we must do our best.

If we argue and delay, we will have only a problem, not progress. If we work together – if we can find the common ground – we can make a difference. The issue is too important for us to continue shouting at one another, or using it as a political wedge. Let's work together to fight the problem, not each other. We can make progress through cooperation, not confrontation.

Before we take your questions, let me introduce Richard Verheij, Executive Vice President and General Counsel of UST, Inc.

# # #

ADDRESS THE PROBLEM OF UNDERAGE TOBACCO USE

- **Philip Morris U.S.A. and United States Tobacco Co.** -- the nation's largest cigarette and smokeless tobacco manufacturer, respectively, -- have made a major announcement supporting a comprehensive federal legislative approach to prohibit minors from using and purchasing tobacco products.

- This legislative approach would have an immediate impact on the issue of minors and tobacco, unlike the FDA's proposed rule to regulate tobacco products, which everyone agrees will be tied up in the courts for many years. In fact, this legislative approach is quite similar to the FDA's proposed regulation, but it explicitly denies FDA jurisdiction, which would lead to Prohibition, and limits the serious constitutional and legal problems inherent in FDA's proposed rule.

- This comprehensive legislative proposal was developed to bring all sides on this issue together **now**. It includes:

  - Providing **FTC** with oversight and enforcement authority over the tobacco advertising and promotion provisions in the proposal; giving **HHS** oversight authority over the sales and distribution provisions in the proposal and concurrent enforcement power over these provisions to **DoJ and the States.**

  - Requiring the tobacco industry to provide **a quarter of a billion dollars** over the next five years to help the FTC, HHS and retailers implement their new responsibilities.

  - Imposing **fines up to $50,000 on tobacco manufacturers**, for violating the new law.

  - **Ban** on cigarette vending machines.

  - **Ban** on the delivery of tobacco products to consumers through the mail.

  - **Ban** on tobacco advertising on non-tobacco related items like caps, T-shirts and other promotional items.

  - **Ban** on outdoor tobacco advertising, including outward facing retail window displays, within 1000 feet around schools and playgrounds.

  - **Ban** on tobacco advertising in any magazine or newspaper that has less than 85% adult subscribership.

  - **And much more...**

- This legislative approach would make it impossible for minors to legally obtain any tobacco product without a face-to-face transaction where proof of age can be checked. The proposal also mandates significant prohibitions and restrictions on the placement of tobacco advertising, while limiting the many First Amendment and other legal problems inherent in the FDA proposal. This approach contains serious enforcement provisions and funding, without creating a huge federal bureaucracy. Finally, this legislative approach is the best way to accomplish a prompt result without regulatory delay or lengthy litigation.

- **We hope you will join us in this serious effort to address this problem now, and look forward to working with you.**

- **Packs of Fewer than 20**: Bans sales or distribution of packages of fewer than 20 cigarettes.

- **Individual Cigarettes**: Bans sales or distribution of individual cigarettes.

- **HHS/State Enforcement**: Grants the Department of Health and Human Services oversight authority over the sales and distribution provisions, and enforcement power to the Department of Justice (after referrals from HHS); grants concurrent enforcement authority over the sales and distribution provisions to state law enforcement officials.

Other Provisions

- **Penalties**: Provides for fines of up to $50,000 for tobacco product manufacturers; a graduated system of penalties for retailers and distributors; and injunctive relief.

- **Industry-Funded Program**: Requires tobacco manufacturers to pay a total of $250 million over a five-year period, according to industry-wide market share, to pay for administration and enforcement of the sales and distribution provisions by HHS in conjunction with DOJ; materials to assist retailers in complying with certain provisions; and administration and enforcement of the advertising provisions by the FTC.

- **FDA Jurisdiction**: Consistent with prior judicial precedent, congressional intent, and prior FDA practice, precludes FDA jurisdiction over tobacco products except with respect to brands for which a manufacturer makes an express health claim to consumers.

- **Construction and Preemption**: Does not limit or modify more stringent state laws that do not conflict with the proposal, the Federal Cigarette Labeling and Advertising Act, or the Comprehensive Smokeless Tobacco Health Education Act of 1986. Also does not affect the "Synar Amendment" to the Public Health Service Act.

- **Sample Ads**: Requires manufacturers to submit annually to the FTC copies of a representative sampling of their product labeling and advertising to assist in the enforcement process.

- **Commission**: Establishes a commission to examine youth usage of tobacco products, which will report to the Congress within five years on progress made by these provisions and make recommendations, if deemed necessary, for additional legislative or other action to further curb underage tobacco use.

- **Definition of Tobacco Products**: Defines tobacco products to include only cigarettes and smokeless tobacco products and retains the current statutory definitions of these terms.

SIDE-BY-SIDE COMPARISON of PHILIP MORRIS U.S.A. and UNITED STATES TOBACCO COMPANY PLAN with FDA'S PROPOSED RULE

Youth Access/Sales and Distribution

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Vending Machines • Bans vending machine sales of tobacco products.	Vending Machines • SAME
Distribution through the Mail • Bans sales or distribution of tobacco products to consumers through the mail.	Distribution through the Mail • SAME
Minimum Sales Age • Sets a federal minimum age of 18 for tobacco product sales, but does not preclude states from setting a higher minimum age.	Minimum Sales Age • SAME
Individual Cigarettes • Bans sales or distribution of individual cigarettes.	Individual Cigarettes • SAME
Packs of Fewer than 20 • Bans sales or distribution of packages of fewer than 20 cigarettes.	Packs of Fewer than 20 • SAME
Minimum Age Signage • Requires retailers to prominently display signs indicating the minimum sales age under state and federal law, a well as the proof-of-age requirement under the law.	Minimum Age Signage • NO COMPARABLE PROVISION

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Employee Certification • Requires retailers and their employees to certify that they understand and will comply with minimum-age laws.	Employee Certification • NO COMPARABLE PROVISION
Identification • Requires picture identification for the purchase or sale of tobacco products for anyone appearing to be under the age of 21.	Identification • Requires picture identification for all persons purchasing tobacco products.
Sampling • Bans tobacco product sampling except in areas or establishments where minors are denied access.	Sampling • Bans sampling of tobacco products.
Face-To-Face Transactions • Requires retailers to ensure that all transactions for tobacco products are face-to-face. • Requires retail establishments to place tobacco product displays where they are under the control or within the line of sight of an employee.	Face-To-Face Transactions • SAME • Bans self-service displays in retail stores and requires tobacco products to be kept behind the counter.

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Manufacturer, Retailer, and Distributor Responsibilities • Manufacturers, retailers, and distributors would be responsible for complying with provisions specifically applicable to them, and would be subject to the penalties discussed below for violating those provisions.	Manufacturer, Retailer, and Distributor Responsibilities • Manufacturers, retailers, and distributors would be responsible for ensuring that their products comply with all of the proposed rule's requirements. Manufacturers are required to visually inspect retail sites (as a part of their regular site visits) to verify compliance with labeling, advertising, and sales practice requirements. Manufacturers are responsible for removing from each point of sale self-service displays, advertising, labeling and other manufacturer-supplied or owned items that violate the proposed rule's requirements.

Advertising and Labeling

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Permissible Outlets for Advertising and Labeling • Permits advertising in outlets unless otherwise specifically restricted. • No comparable provision, as proposed language is unique to FDA regulatory scheme.	Permissible Outlets for Advertising and Labeling • Bans all advertising that is not located in specifically enumerated permissible outlets, to wit: in newspapers, magazines, periodicals, or other publications, on billboards, posters, placards, and in nonpoint of sale promotional material, including direct mail advertising. • With the exception of package labels, labeling bearing a tobacco product brand name or any other indicia of tobacco product identification is permitted only in point of sale promotional material, audio and video formats delivered at the point of sale, and on entries and teams in sponsored events.

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Tombstone Advertising and Labeling • The restrictions set forth below are imposed, rather than content-based tombstone restrictions. – Transit Advertising: Bans tobacco product advertising in or on buses, trains, subways, and taxis available for use by fare-paying passengers, as well as the stations, stops, and shelters used by such mass-transit vehicles. – Small Urban Billboards: Bans all tobacco product billboards of less than 225 square feet, regardless of where they are located, i.e., bans "8-sheet" tobacco product billboards that are typically used on sides of buildings in urban neighborhoods. – Stadium Advertising: Limits permanent tobacco product advertising to facilities dedicated primarily to motor sports or rodeo productions. Bans permanent tobacco advertising in all other sports stadiums where amateur and professional sporting events are conducted. – Video Games: Bans tobacco product brand names, logos, characters, or selling messages in video arcades, family amusement centers, and in or on video games except those located in areas or establishments where minors are denied access.	Tombstone Advertising and Labeling • Advertising and labeling (with the exception of package labels) must be in black-on-white "tombstone" format (no imagery or colors), except for "adult periodicals," as defined below. Point of sale labeling, therefore, must be in tombstone format.

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Tombstone Advertising and Labeling (Cont'd.) – Product Placement: Bans payments by manufacturers, distributors, retailers, or their agents for the placement of any tobacco product, package, or advertisement as a prop for a movie or television program made for public viewing. – Point of Sale: Permits tobacco product advertising inside all retail establishments selling tobacco products, including retail establishments located in otherwise restricted areas.	Tombstone Advertising and Labeling
Adult Periodicals • Limits tobacco advertising in publications to those whose publisher certifies that adults account for 85% or more of the publication's subscribers (or circulation, where subscription data are unavailable).	Adult Periodicals • Adult periodicals, defined as any print advertising that appears in publications for which the youth (i.e., under 18) readership is no more than 15% of the total readership and which are read by fewer than 2 million persons under the age of 18, are the only permissible outlets for non-tombstone advertising.
Tobacco-Free Ad Zone • Bans all outdoor advertising, including outward-facing retail window advertising, within 1000 feet of any playground or elementary or secondary school.	Tobacco-Free Ad Zone • SAME

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Advertising Standard • Advertising of tobacco products will continue to be subject to FTC jurisdiction under its existing advertising standards.	Advertising Standard • Advertising of tobacco products is considered false or misleading if it makes any express or implied false, deceptive, or misleading statements, omits important information, lacks fair balance, or lacks substantial evidence to support claims made for the product.

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rules
Records and Reports • Submissions: Manufacturers are required to submit annually to the FTC copies of representative samples of their advertising and package labels. • Inspections: No comparable provision, as proposed language is unique to FDA regulatory scheme, but see enforcement authority above.	Records and Reports • Submissions: Manufacturers are required to submit annually to the FDA copies of all labeling and representative samples of their advertising and package labels. • Inspections: Manufacturers, retailers, and distributors are required to make available to the FDA upon request all records related to the enforcement of the proposed rule.
Advertising and Labeling Warnings • Nicotine-Delivery Device: No comparable provision, as proposed language is unique to FDA regulatory scheme. • Product Identification: No comparable provision, as proposed language is unique to FDA regulatory scheme. • Additional Warning: No comparable provision.	Advertising and Labeling Warnings • Nicotine-Delivery Device: All cigarette advertising, but not package labels, must include a statement that the product is a nicotine-delivery device, following the product identification statement described below. • Product Identification: Requires all tobacco product advertising and labeling to include the established name of the product and a statement of intended use as follows: "cigarette," "cigarette tobacco," "moist snuff," "dry snuff," "twist chewing tobacco," "plug chewing tobacco," or "loose leaf chewing tobacco." • Additional Warning: All cigarette advertising, but not package labels, must include an additional clear, conspicuous, prominent, and readable warning, contiguous with the Surgeon General's warning. The FDA has suggested the following warning: "About one in three children who become smokers will die from their smoking."

Promotion

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Non-Tobacco Brand Names on Tobacco Products • Bans non-tobacco names for tobacco products, unless such names were in use prior to 1/1/95.	Non-Tobacco Brand Names on Tobacco Products • SAME
Redemption of Coupons • Bans the distribution of tobacco products through the redemption of coupons except in face-to-face transactions where proof of age is required.	Redemption of Coupons • SAME
Tobacco Brand Names on Non-Tobacco Products • Bans the sale or distribution to consumers of non-tobacco products that display tobacco product brand-names, brand logos, brand characters, or brand selling messages (e.g., T-shirts, hats, other clothing, gym bags, and trinkets), except for tobacco product accessories used in connection with smoking, such as ashtrays, matchbooks, and lighters.	Tobacco Brand Names on Non-Tobacco Products • Bans the use of tobacco brand names or any other indicia of tobacco brand identification on non-tobacco products (e.g., T-shirts, hats, other clothing, gym bags, and trinkets).
Gifts and Contests • Requires proof of age for the distribution of gifts or other promotional items awarded with the purchase of tobacco products.	Gifts and Contests • Bans gifts or contests based on proof of purchase of tobacco products or redeemable coupons.

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Brand Name Sponsorship • Limits tobacco product sponsorship of events to motor sports and rodeo productions and other events where the promoter, arena or stadium manager, or sanctioning body certifies that it expects at least 75% of those in attendance to be 18 years of age or older. Bans all other tobacco product sponsorship of events. • Allows corporate sponsorship of any event if the tobacco company name was in existence on 1/1/95.	Brand Name Sponsorship • Bans brand name sponsorship of athletic, municipal, artistic, or other social or cultural events. • SAME
Entries and Teams in Events • Restricts tobacco product identification on entries and teams in events (such as stock cars and their drivers and crews) to tobacco brand names and package logos.	Entries and Teams in Events • Restricts tobacco product identification on entries and teams in sponsored events (such as stock cars and their drivers and crews) to tobacco brand names in tombstone format only.

Jurisdiction, Enforcement, Penalties and Funding

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
<u>FDA Jurisdiction</u> • Consistent with prior judicial precedent, congressional intent, and prior FDA practice, precludes FDA jurisdiction over tobacco products except with respect to brands for which a manufacturer makes an express health claim to consumers.	<u>FDA Jurisdiction</u> • Asserts FDA jurisdiction over "tobacco products" under the Federal Food, Drug, and Cosmetic Act.
<u>Definition of Tobacco Products</u> • Defines "tobacco products" to include only cigarettes and smokeless tobacco products and retains the current statutory definitions of these terms.	<u>Definition of Tobacco Products</u> • Defines "tobacco products" to include only cigarettes and smokeless tobacco, and alters the definition of these terms under current law.
<u>Enforcement</u> • Grants oversight and enforcement authority over the advertising and promotional provisions to the FTC. • Grants oversight authority over the sales and distribution provisions to HHS, and enforcement power to the Justice Department (after referrals from HHS); grants concurrent enforcement authority over the sales and distribution provisions to state law enforcement officials.	<u>Enforcement</u> • Provides for enforcement by the FDA pursuant to the powers set forth under the Federal Food, Drug, and Cosmetic Act.

Philip Morris U.S.A. and United States Tobacco Company Plan	FDA's Proposed Rule
Industry-Funded Program • Requires tobacco manufacturers to pay a total of $250 million over a five-year period, according to industry-wide market share, to pay for administration and enforcement of the sales and distribution provisions by HHS in conjunction with DOJ; materials to assist retailers in complying with certain provisions and administration and enforcement of the advertising provisions by the FTC.	Industry-Funded Program • Requires the tobacco manufacturers, based on their share of total advertising and promotion expenditures, to fund a $150 million/year national T.V.-based educational program to discourage the use of tobacco products by minors.
Preemption • Does not limit or modify more stringent state laws that do not conflict with the proposal or the Federal Cigarette Labeling and Advertising Act or the Comprehensive Smokeless Tobacco Health Education Act of 1986. Also does not affect the "Synar Amendment" to the Public Health Service Act.	Preemption • Does not limit or modify more stringent state requirements that do not conflict with FDA regulation.
Penalties • Provides for civil monetary penalties up to $50,000 for violations of any provision by a manufacturer; a graduated system of penalties for retailer or distributor violations; and injunctive relief.	Penalties • Provides for injunctive relief, seizures, and civil and criminal penalties under the penalty scheme of the Federal Food, Drug, and Cosmetic Act.
Look-Back Provision • Establishes a commission to examine youth usage of tobacco products, which will report to the Congress within five years on progress made by these provisions and make recommendations, if deemed necessary, for additional legislative or other action to further curb underage tobacco use.	Look-Back Provision • The proposed rule states that if, after seven years, youth use of tobacco products has not been reduced by roughly 50%, additional measures should be taken.

PHILIP MORRIS

MANAGEMENT CORP.

Pam Inmann
Regional Director
8822 South Ridgeline Boulevard
Highlands Ranch, Colorado 80126
(800) 848 – 0187

May 23, 1996

Representative David Ewer
1016 5th Ave.
Helena, MT 59601

Dear Representative Ewer:

Philip Morris' position on youth smoking is clear: kids should not smoke, nor should they have access to tobacco products.

Last year, President Clinton expressed his deep concern over the incidence of youth smoking, saying it would be "far better to start right now, as soon as we can, to pass a law, than wait until we wade through all of the litigation" that a regulatory approach by the Food and Drug Administration entails.

On May 7, 1996, President Clinton spoke to a group of high school students in New Jersey and directed some of his comments to the tobacco industry, saying, "Do not stay outside of and apart from this debate." Clinton went on to say, "Join with us. Do the right thing."

Philip Morris U.S.A. has responded to the President's challenge.

We have announced a comprehensive federal legislative blueprint which directly addresses the issue of youth smoking without threatening the rights of adults who choose to smoke. This proposal builds on our earlier voluntary effort – Action Against Access – to prevent minors from using tobacco products. Most importantly, it can be implemented quickly and reduce youth access to tobacco now.

Our proposal is consistent with the most significant proposals of the National Academy of Sciences and the Institute of Medicine and would:

- Ban tobacco ads near schools and playgrounds and in youth-oriented publications;
- Prohibit tobacco brand names, logos and characters on promotional items like T-shirts and caps;
- Ban cigarette vending machines;
- Limit tobacco brand-name sponsorships to events with primarily adult audiences;
- Create a $250 million fund to be paid over 5 years by tobacco manufacturers to cover implementation costs; and,
- Impose penalties of up to $50,000 for tobacco manufacturers for any violation.

Philip Morris' proposal maintains and supports the critical role of the states in preventing youth access to tobacco. This proposal would not affect the Synar Amendment to the Public Health Service Act which requires that states enforce a minimum age law for tobacco sales. In fact, the legislation would support current efforts of state law enforcement officials to enforce the access provisions of the federal law.

Clearly, the problem of youth smoking can only be solved through a cooperative effort in which everybody -- federal and state legislators, parents, retailers, law enforcement and the tobacco industry -- has a role to play.

We hope you will join us in supporting this proposal. Please contact me at the telephone number above if you have any questions.

Sincerely,

Pam Inmann

Pam Inmann

cc: John Delano

Tobacco Industry Promotion of Cigarettes and Adolescent Smoking

John P. Pierce, PhD; Won S. Choi, PhD; Elizabeth A. Gilpin, MS; Arthur J. Farkas, PhD; Charles C. Berry, PhD

Context.—Whether tobacco advertising and promotion increases the likelihood that youths will begin smoking has important public policy implications.

Objective.—To evaluate the association between receptivity to tobacco advertising and promotional activities and progress in the smoking uptake process, defined sequentially as never smokers who would not consider experimenting with smoking, never smokers who would consider experimenting, experimenters (smoked at least once but fewer than 100 cigarettes), or established smokers (smoked at least 100 cigarettes).

Design.—Prospective cohort study with a 3-year follow-up through November 1996.

Setting and Participants.—A total of 1752 adolescent never smokers who were not susceptible to smoking when first interviewed in 1993 in a population-based random-digit dial telephone survey in California were reinterviewed in 1996.

Main Outcome Measure.—Becoming susceptible to smoking or experimenting by 1996.

Results.—More than half the sample (n=979) named a favorite cigarette advertisement in 1993 and Joe Camel advertisements were the most popular. Less than 5% (n=92) at baseline possessed a promotional item but a further 10% (n=172) were willing to use an item. While having a favorite advertisement in 1993 predicted which adolescents would progress by 1996 (odds ratio [OR] =1.82; 95% confidence interval [CI], 1.04-3.20), possession or willingness to use a promotional item was even more strongly associated with future progression (OR=2.89; 95% CI, 1.47-5.68). From these data, we estimate that 34% of all experimentation in California between 1993 and 1996 can be attributed to tobacco promotional activities. Nationally, this would be over 700 000 adolescents each year.

Conclusion.—These findings provide the first longitudinal evidence to our knowledge that tobacco promotional activities are causally related to the onset of smoking.

JAMA. 1998;279:511-515

A NUMBER of studies have implicated tobacco industry advertising and promotional activities as possible causal agents in the stimulation of demand for cigarettes among adolescents.[1-3] The effectiveness of promotional activities over the past 10 years has been postulated as a major reason for the recent increases in adolescent smoking behavior.[4-6] There is abundant evidence that adolescents are exposed to and have high recall of tobacco industry promotional messages.[2,7,8] Studies of smoking initiation rates in population samples demonstrate that sharp increases in adolescent smoking coincide with the conduct of effective tobacco promotional campaigns.[9,10] Since the first Surgeon General's report on smoking and health in 1964,[11] these increases appear to be specific to adolescents aged 14 to 17 years; there were no similar increases among adults.[6,9,10]

A summary of over 2 decades of psychological research on audience receptivity to persuasive communications identifies 3 elements: (1) exposure to the message, (2) attendance to and understanding of the message, and (3) development of a cognitive or affective response to the message.[12] The first goal of any persuasive communication is to ensure that a target audience is effectively exposed. This audience needs to both attend to and understand the message before it can have persuasive impact. To characterize individuals as receptive to the communication, however, requires evidence that they have internalized positive affect or cognitions related to the communication. While these internalizations may facilitate the purchase of a product that is the subject of the persuasive communication, an additional incentive (such as a promotional item or free sample) is often needed to maximize the likelihood that the persuasive communication will lead to actual consumer behavior.[13]

Using this conceptual framework, we previously found measures of adolescent receptivity to tobacco industry promotional activities to be associated with susceptibility to smoking among adolescent never smokers.[5,14,15] This longitudinal study addresses whether the receptivity to tobacco advertising and promotional activities actually precedes the first steps in the smoking uptake process.

See also pp 516 and 550.

The concept of susceptibility to smoking comes from previous research, which showed an increased likelihood of future smoking among never smokers who do not adamantly rule out the possibility of smoking a cigarette in the near future.[16] During the elementary and early middle school years, most children have not yet tried a cigarette and strongly assert that they will not be future smokers.[17,18] Then, as they get older, many change and are no longer prepared to rule out this possibility. When the opportunity presents itself, some young adolescents might respond "why not? " and begin to experiment. While not all adolescents who experiment with smoking will go on to become addicted, experimentation is a necessary step and is a key early marker of eventual smoking uptake.[17-21] To prevent addiction to smoking it is necessary to understand the influences encouraging adolescents to take these early steps in the smoking uptake process.

In this article, which reports on the findings from a longitudinal study, we consider adolescents who were nonsusceptible never smokers at baseline in 1993. As our outcome measure, we use any progression in the smoking uptake process by follow-up in 1996, and investigate the independent influence of

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receptivity to tobacco industry promotional activities on movement toward addiction to smoking.

METHODS

Data Sources

We report data on a representative sample of California adolescents who were 12 to 17 years old at baseline in 1993. These adolescents were identified using a random-digit dialed computer-assisted telephone interviewing (CATI) method as part of the California Tobacco Surveys, which are designed to provide population data on tobacco use in California, as part of the evaluation of the Statewide Tobacco Control Program funded from a voter-initiated constitutional amendment (Proposition 99).[22] In 1993, Westat, Inc, enumerated the members of a total of 30 910 households in California, and identified 6892 adolescents who represent the baseline sample. With parental permission, in-depth interviews on tobacco issues were completed for a total of 5531 (response rate, 80.3%) of these adolescents. Initially, there was no funding support for a follow-back survey and parents were informed only that we might contact them again in the future. When separate funding was obtained, we attempted to contact the parents of all adolescent respondents to the 1993 survey. Those who were not at the same telephone number were traced through online directory assistance, the national change of address database, and national credit reference services using information provided by the parent in 1993. Even with these tracing methods, we were unable to locate 26.5% of the 1993 respondents. Of those we did locate, we completed detailed follow-up interviews on 3376 (response rate, 85%), with 1.2% of parents and 5.8% of adolescents refusing to participate, for a total 7% refusal rate. Accounting for both the initial and follow-up response rates, the overall response rate for the longitudinal study was 61.5%. Considering only the subgroup of this research, the nonsusceptible never smokers at baseline, the overall response rate was 66%, for a total sample of 1752 adolescents.

Measures of Smoking Initiation

Based on our previous research,[16,18] we categorize adolescents into 4 mutually exclusive categories: nonsusceptible never smokers, susceptible never smokers, experimenters, and established smokers. An established smoker is defined as an adolescent giving a positive response to the question, "Have you smoked at least 100 cigarettes in your life?" An experimenter is defined as an adolescent giving an affirmative response to either of the following 2 questions: (1) "Have you ever smoked a cigarette?" or (2) "Have you ever tried or experimented with cigarette smoking, even a few puffs?" A negative response to both of these questions categorizes an adolescent as a never smoker. A nonsusceptible never smoker is distinguished from other never smokers by responses to the following 3 questions about future smoking: (1) "Do you think that you will try a cigarette soon?" (response choices: yes or no), (2) "If one of your best friends were to offer you a cigarette, would you smoke it?" and (3) "At any time during the next year do you think you will smoke a cigarette?" The response choices to the latter 2 questions were: "definitely yes," "probably yes," "probably not," or "definitely not." To be classified as a nonsusceptible never smoker, the adolescent needed to respond in the negative to the first question and "definitely not" to the other 2. Any other response led to the adolescent being categorized as susceptible to smoking. Previous findings from a national longitudinal survey[16] and the results of the current one have validated this measure by showing that susceptible never smokers have about twice the risk of future smoking as nonsusceptible never smokers.

Receptivity to Tobacco Promotional Activities

In the persuasive communication theoretical framework, receptivity to tobacco industry advertising and promotional activities involves a basic exposure to a communication and a cognitive response entailing an understanding of the communication and agreement with the message. The development of a positive affective response to the communication (eg, having a favorite advertisement or being willing to use a promotional product) indicates a greater degree of receptivity.[12,13,23] We defined the highest level of receptivity as having or being prepared to use a tobacco promotional item, and accordingly asked: (1) "Some tobacco companies provide promotional items to the public that you can buy or receive for free. Have you ever bought or received for free any product which promotes a tobacco brand or was distributed by a tobacco company?" and (2) "Do you think that you would ever use a tobacco industry promotional item, such as a t-shirt?" Those who had an item or who would be willing to use one were considered highly receptive to tobacco promotional activities. To characterize a minimal level of receptivity among the remaining respondents, we asked for unaided recall of tobacco advertising with the question: "Think back to the cigarette advertisements you have recently seen on billboards or in magazines. What brand of cigarettes was advertised the most?" Respondents who did not name a brand were considered minimally receptive to tobacco advertising and promotional activity.

To define intermediate levels of receptivity among those not in either the highly or minimally receptive categories, we asked: "What is the name of the cigarette brand of your favorite advertisement?" For the few respondents who hesitated in their response, we probed with the question: "Of all the cigarette advertisements you have seen, which do you think attracts your attention the most?" Naming a brand as most advertised (see previous paragraph) but not having a favorite advertisement classified a respondent as having low receptivity, whereas having a favorite advertisement classified a respondent as having moderate receptivity.

Exposure to Peer and Family Smokers

Adolescents were queried about smokers in the family with the questions: "Do any of your parents, stepparents or guardians now smoke cigarettes?" and "Do you have any older brothers or sisters who smoke cigarettes?" Negative responses to both questions classified an adolescent as having no family exposure to smokers. To determine exposure to peer smokers, respondents were asked: "About how many best friends do you have who are male?" and "Of your best friends who are male, how many of them smoke?" The same 2 questions were asked concerning female best friends. Those who indicated that none of their male or female best friends smoke were classified as unexposed to peer smokers.

Analytic Procedures

All percentages are weighted to represent the population of California according to age, sex, race or ethnicity, and education. We derived variance estimates and 95% confidence intervals (CIs) using the jackknife procedure[24] contained in the WesVar PC program.[25] This program provides an estimate of variance in the setting of large-scale population surveys that are not completely random. We used the WesVarPC χ^2 procedure to evaluate differences in the demographic distribution of who progressed to various levels in the uptake continuum among adolescents who had never tried a cigarette at baseline and who were nonsusceptible to smoking. Then, we used the logistic regression procedure to identify the independent predictors of any progression in the uptake process by follow-up. Demographic variables, exposure to other smokers, the tobacco promotional activities receptivity index, and interactions between exposure to smokers and the index were the independent variables.

Table 1.—Baseline (1993) Distribution of Adolescent, Nonsusceptible Never Smokers and Progression Through the Smoking Uptake Continuum by 1996

Demographics, 1993	1993, %*	Level on Uptake Continuum in 1996			
		Susceptible, % (95% CI)*	Experimenters, % (95% CI)*	Established, % (95% CI)*†	Total Progressed, % (95% CI)*
Overall	1752	16.6 (14.1-19.1)	29.5 (25.8-33.2)	3.6 (2.5-4.7)	49.7 (45.9-53.5)
Sex					
Male	48.5	17.3 (13.4-21.2)	28.6 (23.0-34.2)	4.1 (2.4-5.8)	50.5 (45.1-55.9)
Female	51.5	16.1 (12.6-19.6)	30.3 (26.0-34.6)	3.1 (1.7-4.5)	49.5 (44.4-54.6)
Age group, y					
12-13	45.5	21.2 (17.2-25.2)	29.4 (23.5-35.3)	3.3 (1.8-4.8)	53.9 (48.9-58.9)
14-15	31.3	15.9 (10.5-21.3)	26.3 (20.6-32.0)	4.8 (2.4-7.2)	47.0 (39.7-54.3)
16-17	23.1	8.9 (5.3-12.5)	33.9 (25.9-41.9)	2.5 (1.2-3.8)	45.3 (37.7-52.9)
Race/ethnicity					
White	48.7	12.4 (10.1-14.7)	28.6 (24.4-32.8)	5.8 (3.7-7.9)	46.8 (42.3-51.3)
African American	10.2	22.4 (10.5-34.3)	25.8 (13.6-38.0)	1.9 (0.0-4.2)	50.1 (33.3-66.9)
Hispanic	28.9	18.9 (12.8-25.0)	34.2 (26.7-41.7)	1.3 (0.3-2.3)	54.4 (47.7-61.1)
Asian/other	12.2	23.5 (16.1-30.9)	24.5 (16.2-32.8)	1.6 (0.3-2.9)	49.8 (40.6-59.0)
School performance					
Much better	25.4	15.6 (10.8-20.4)	26.8 (18.8-34.8)	2.0 (0.0-4.2)	44.4 (36.9-51.9)
Better than average	40.5	17.4 (12.8-22.0)	29.5 (24.6-34.4)	3.0 (1.3-4.7)	49.9 (44.7-55.1)
Average/below	34.1	16.6 (11.8-21.4)	31.4 (25.1-37.7)	5.5 (3.4-7.6)	53.5 (46.9-60.1)

*Weighted percentages; CI indicates confidence interval.
†Smoked at least 100 cigarettes.

The attributable risk is a standard epidemiological index for assessing the strength of association between 2 measures.[26] In the current setting, the attributable risk can be interpreted as the proportionate excess risk of future experimentation that is associated with receptivity to tobacco promotional activities. The formula used to calculate the attributable risk percent for receptivity to tobacco promotional activities is: $AR\% = [(I_e - I_o) / I_e] \times 100$, where I_e is the incidence rate of experimentation among those receptive to tobacco promotional activities and I_o is the incidence rate of experimentation among those minimally receptive to tobacco promotional activities.

RESULTS

Characteristics of the Study Population

Table 1 presents the baseline demographic distribution of the nonsusceptible never smokers (left column of data) as well as the proportion of each group who progressed toward smoking by the 1996 follow-up survey. The sample contained slightly more girls than boys and almost half (45%) of the nonsusceptible never smokers were aged 12 to 13 years. Minority groups make up more than half the sample, and two thirds of the sample considered their performance in school better than average.

A total of 49.7% of these nonsusceptible never smokers progressed toward smoking within the 3-year follow-up period: 16.6% by becoming susceptible to smoking, 29.5% by experimenting, and 3.6% by reaching a lifetime consumption level of at least 100 cigarettes.

There were no sex differences for becoming susceptible, experimenting, or becoming an established smoker. Although the percentage experimenting did not vary much by age, the percentage becoming susceptible did; 16- to 17-year-olds were about half as likely to become susceptible by follow-up than the younger adolescents. In African Americans and in the Asian or other group, the rate of susceptibility was higher, but the rate of experimentation was lower than for whites. Perceived school performance was related to future experimentation (but not to susceptibility), with those who reported much better than average school performance showing a lower rate of future cigarette use than those who reported average or below average school performance.

Cigarette Advertisements and Tobacco Promotional Items

Overall, 8.9% of nonsusceptible never smokers in 1993 were at the minimal level of the receptivity index (could not name a brand as most advertised). The percentage at this level did not vary much with age; 9.8% of those aged 12 to 13 years, 7.1% of 14- to 15-year-olds, and 9.3% of 16- to 17-year-olds were at this level.

Over half (56.5%) of nonsusceptible never smokers in 1993 had a favorite cigarette advertisement, and 83% of those who did nominated either Camel (R. J. Reynolds) or Marlboro (Phillip Morris) as the brand of their favorite advertisement. Camel was the clear favorite of young adolescents aged 12 to 13 years (67.8% for Camel vs 16.8% for Marlboro), but Marlboro was named almost as frequently as Camel by older adolescents aged 16 to 17 years (46.6% for Camel vs 33.9% for Marlboro).

The percentage of adolescents who had a tobacco promotional item increased with age among the nonsusceptible never smokers in 1993 from a low of 2.9% among 12- to 13-year-olds to 8.5% among 16- to 17-year-olds; overall, less than 5% (n=92) possessed an item. However, about 10% (n=172) of each age group responded that they would be willing to use a promotional item. It is of interest that among those without a promotional item in 1993, those who were willing to use an item were twice as likely to have obtained one by 1996 than those who were not willing to use a promotional item.

Predicting Future Experimentation

The results of the logistic regression analysis of predictors of which adolescents progressed toward smoking are presented in Table 2. This model included the demographic variables (see Table 1), and the odds ratios (ORs) presented are adjusted for any effects of these variables and the others in the model. Both exposure to family or peers who smoke appeared to increase the probability that a nonsusceptible never smoker would progress toward smoking by approximately 20%; however, the sample size was not sufficient to demonstrate this level of difference to be statistically significant.

The baseline receptivity to tobacco industry promotional activities was strongly related to which adolescents progressed toward smoking. Among those who were assessed as having a minimal level of receptivity, 37.7% progressed toward smoking. Compared with this group, those who had a favorite advertisement but who were not willing to use a promotional item (the moderate level) were 82% more likely to progress toward smoking, which is a statistically significant increase compared with those at the minimal level. Those with a high level of receptivity (at least willing to use a promotional item) were almost 3 times more likely to progress toward

Table 2.—Logistic Regression Predicting Progression Along the Uptake Continuum by 1996 Among Nonsusceptible Never Smokers in 1993 (n=1752)

Independent Variables	Progressed Toward Smoking, % (95% CI)*	Adjusted Odds Ratios (95% CI)†
Exposure to familial smoking		
No	48.0 (43.5-52.6)	1.00
Yes	53.5 (47.1-59.9)	1.19 (0.88-1.59)
Exposure to peer smoking		
No	48.7 (44.2-53.2)	1.00
Yes	52.7 (45.8-59.5)	1.19 (0.85-1.66)
Exposure to tobacco promotions/advertising		
Minimal (no brand, not willing)	37.7 (25.8-49.6)	1.00
Low (brand, not willing)	43.9 (37.2-50.6)	1.32 (0.73-2.41)
Moderate (favorite advertisement, not willing)	51.7 (46.3-57.1)	1.82 (1.04-3.20)
High (willing/has item)	62.1 (52.6-71.6)	2.89 (1.47-5.68)

*Weighted percentages; CI indicates confidence interval.
†Adjusted for age, sex, race or ethnicity, and school performance.

smoking, which was highly statistically significant. Preliminary analyses showed no significant interactions between the index of receptivity and the exposure to smoking variables and these interactions were not retained in the final model.

Percentage of Experimentation Attributable to Tobacco Promotional Activities

From our representative sample survey in 1993, we estimate that there were about 1.18 million 12- to 17-year-old adolescents in California who were nonsusceptible never smokers. The incidence rate of experimentation among those receptive to tobacco advertising and promotion activities was 34%. The incidence rate among those who were minimally receptive was 22%. Thus, using the standard formula, the percentage of experimentation attributable to tobacco advertising and promotional activities is 34.3%. Over half (50.7%) of the 17-year-old California adolescents in the full 1993 cross-sectional sample had already experimented with cigarettes, which represents a total of 158 758 adolescents. Using our attributable risk calculation, we estimate that tobacco promotional activities influenced 54 454 (34.3%) of 158 758 of these adolescents (or 17% of the total population of this age) to experiment with cigarettes before they reached the age of 18 years. This translates to over 700 000 adolescents nationally.

COMMENT

This longitudinal study provides clear evidence that tobacco industry advertising and promotional activities can influence nonsusceptible never smokers to start the process of becoming addicted to cigarettes. The strength of this association is consistent with estimates from other cross-sectional studies[5,8,27] and with previous studies that have demonstrated a coincidence of increases in the incidence of addiction with the conduct of effective promotional campaigns.[6,9,10,28] Our data establish that the influence of tobacco promotional activities was present before adolescents showed any susceptibility to become smokers.

Exposure to other smokers in this analysis does not appear to significantly influence which adolescents begin the smoking uptake process, which is somewhat contradictory to previous studies.[5,29] Although theories of how adolescents become smokers have included a stage prior to experimentation,[20,30-32] most analyses of smoking uptake use smoking within the last month before follow-up as the outcome. This measure underestimates the proportion of people who are in the early stages of the smoking uptake process. The influence of other smokers in facilitating and possibly encouraging adolescents to smoke may be most apparent after first experimentation,[18] rather than influencing the adolescent to experiment for the first time.[5]

We used a communication persuasion framework to assess adolescent receptivity to tobacco promotional activities.[12] This generally accepted framework postulates that the higher the level of receptivity to a persuasive communication, the higher the likelihood that it will have an effect on behavior. Our findings are consistent with this hypothesis. Progress toward smoking by follow-up among these nonsusceptible never smokers was significantly associated with receptivity to tobacco industry advertising and promotional activities at baseline. Indeed, each higher level on the receptivity index was associated with a greater degree of movement toward smoking over the study period.

The results presented here support findings from previous studies showing R. J. Reynold's advertising of their Camel brand to be very effective with children and adolescents throughout the 1990s.[1,4,7,27] Camel advertising was clearly the favorite among adolescents, particularly those aged between 12 and 15 years. Since the popularity of Camel advertisements was highest in the youngest age group, the peak effect of this advertising probably occurs at an even younger age than has previously been suggested.[22,24]

Our findings that willingness to use a promotional item is more effective in predicting progression than having a favorite advertisement is consistent with Ray's theory of how promotion works to build consumer behavior.[13] The majority of the progression that we observe involves actual experimentation with cigarettes. Ray[13] hypothesizes that advertising creates a structure of attitudes and beliefs about a product that will facilitate its purchase. But a promotional item or a free sample is often needed to maximize the probability that the behavior will be performed. We have previously reported that the majority of adolescents who purchase cigarettes buy Marlboros.[14] The most common promotional item possessed by adolescents was for the Marlboro brand. Hence, even though Camel advertising may be the most influential in getting adolescents interested in smoking, the success of Phillip Morris promotional activities would appear to have reduced substantially the potential market share achieved by R. J. Reynolds in young people.

The demographic differences that we observed in progression toward smoking deserve comment. First of all, in this 3-year period, over 16% of adolescents had started on the uptake continuum but had not yet experimented with cigarettes. This was particularly the case in the youngest age groups, suggesting that the duration of the smoking uptake process for many adolescents may be much more extended than previously believed.[20,35] Minority youth were much more likely to only progress to susceptibility than non-Hispanic whites. This suggests that the duration of the uptake process among minority groups is more extended, or that they begin the process at a later age. The decline in the proportion of older adolescents who were at the susceptible stage of the uptake process at baseline is consistent with other studies suggesting that there may be a time window during which adolescents begin the smoking uptake process.[20] Once people are old enough to rationally evaluate the well-known health risks of smoking, they choose not to start smoking.

One limitation of our study is that not all of the 1993 sample were contacted again in 1996. We compared the nonsusceptible never smokers in 1993 with a follow-up interview to the nonsusceptible never smokers in 1993 who were not interviewed again. The group contacted again in 1996 had slightly more males (49% contacted vs 45% not recontacted), and the oldest age group was less represented (23% vs 27%). African Americans and Hispanics were less successfully followed, so that whites comprised 49% of those followed and only 35% of those not inter-

viewed again. The group followed had about a 4% higher rate (56% vs 52%) of naming a brand of cigarette as most advertised or having a favorite advertisement, but the rates for possession or willingness to use promotional items were nearly identical, regardless of follow-up status. The sample weights are constructed to adjust for demographic disparities in the population, so bias from these differences should be minimal. The potential bias from the slight difference in advertising recall rates is difficult to assess but should be minimal.

Our study estimates that tobacco industry promotional activities in the mid 1990s will influence 17% of those who turn 17 years old each year to experiment with cigarettes. We feel that this is a conservative estimate, as there was a 3-year period between the 2 surveys that offered a considerable time period for adolescents who were not receptive to these tobacco industry activities at baseline to become receptive prior to progressing toward smoking. However, the finding that one third of the nonsusceptible never smokers with minimal receptivity at baseline in 1993 did progress, suggests influences other than tobacco advertising and promotions are likely acting to cause smoking as well. It is important to note that not all adolescents who experiment with cigarettes go on to become addicted smokers. Previous national data suggest, very conservatively, that 30% of experimenters become established smokers.[18] We have previously estimated that it will take an average of 16 to 20 years of addicted smoking before the average adolescent, who reaches a lifetime consumption of 100 cigarettes or 5 packs, will be able to successfully quit.[26]

This study only considered the influence of tobacco promotional activities on nonsusceptible never smokers. It is possible that these influences also encourage experimenters to continue smoking until they become addicted and act to prevent addicted adolescent smokers from quitting. These potential influences of tobacco industry advertising and promotions need to be investigated further.

In conclusion, this longitudinal study adds a crucial piece of evidence to the contention that tobacco industry advertising and promotional activities are causally associated with young people starting to smoke. The 5 criteria for assessing causality of a suspected agent from epidemiological studies[27] are that (1) it must clearly precede the hypothesized effect; (2) the association should be strong, (3) consistent, and (4) specific; and (5) it should be expected from theory. From this study it is clear that the effect of advertising and promotional activities precedes the development of susceptibility to smoking. The effect is strong and specific, with at least 34% of experimentation with cigarettes attributed to these activities. The association is consistent with other studies.[5,8,15,27] Finally, such a causal effect is expected from theoretical considerations of how persuasive communications work.

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Validation of Susceptibility as a Predictor of Which Adolescents Take Up Smoking in the United States

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Smoking onset has 4 levels, with a "susceptibility" level preceding early experimentation. This study assessed the predictive validity of smoking susceptibility in a longitudinal study of a nationally representative sample of 4,500 adolescents who at baseline reported never having puffed on a cigarette. At follow-up 4 years later, 40% of the sample had experimented with smoking, and 8% had established a smoking habit. Baseline susceptibility to smoking, defined as the absence of a firm decision not to smoke, was a stronger independent predictor of experimentation than the presence of smokers among either family or the best friend network. However, susceptibility to smoking was not as important as exposure to smokers in distinguishing adolescents who progressed to established smoking from those who remained experimenters at follow-up.

Key words: smoking initiation, adolescents, exposure to smoking, susceptibility to smoking

Preventing the onset of smoking has been identified as essential to the public health priority of achieving a rapid reduction in smoking prevalence (Institute of Medicine, 1994; U.S. Department of Health and Human Services [USDHHS], 1989, 1994). Since the early 1950s, the proportion of adults who begin to smoke has declined markedly (Gilpin, Lee, & Pierce, 1994), so that by 1990, the onset of smoking could be defined as mainly an adolescent behavior (Centers for Disease Control and Prevention [CDC], 1991; Lee, Gilpin, & Pierce, 1993; USDHHS, 1994). Although adolescent smoking rates declined throughout the 1970s and early 1980s, there is little evidence for any decline since 1985 (Johnston, O'Malley, & Bachman, 1993; Nelson et al., 1995). However, there has been a significant decline in the smoking prevalence among Black adolescents, resulting in a widening of the Black–White difference in smoking prevalence (Nelson et al., 1995). Because lack of progress has been concurrent with some of the most extensive public health programs against tobacco (Bal, Kizer, Felten, Mozar, & Niemeyer, 1990; Community Intervention Trial for Smoking Cessation Research Group, 1995; Pierce et al., 1994), the Institute of Medicine (1994) has led the call for research to develop a greater understanding of the natural history of adolescent addiction to nicotine.

Generally, scholars agree that the onset of smoking is a time-dependent four-level process that includes (a) a preparation period, (b) early experimentation, (c) more advanced regular but nondaily smoking, and (d) a stable level of addiction (Elder et al., 1990; Flay, d'Avernas, Best, Kersell, & Ryan, 1983; Leventhal & Cleary, 1980; Schinke & Gilchrist, 1983; Stern, Prochaska, Velicer, & Elder, 1987; USDHHS, 1994). Progress through these levels is presumed to take at least 2 years, although the natural history of the smoking onset process has never been adequately defined (USDHHS, 1994).

Most measures of onset behavior rely on the report of recent smoking behavior. The preferred measure of adolescent smoking is the report of smoking within the past 30 days (USDHHS, 1994). Experimentation is generally inferred from responses to questions about ever smoking or age of first cigarette; however, there is no generally accepted method of identifying adolescents prior to experimentation. As most smoking prevention programs aim to prevent experimentation (USDHHS, 1994), such a measure is needed to facilitate both their design and evaluation. Smoking prevention programs should either prevent target groups from becoming susceptible to smoking or prevent susceptible adolescents from progressing to experimentation.

Having developed an algorithm for this preexperimentation phase of the smoking onset process (Pierce et al., 1993; Pierce, Farkas, Evans, & Gilpin, 1995), we hypothesized that such a measure should identify which "never smokers" are cognitively predisposed to smoking. It should include the participants' intentions (Ajzen & Fishbein, 1980; Conrad, Flay, & Hill, 1992; McNeill et al., 1988; Sussman, Dent, Flay, Hansen, & Johnson, 1987) and expectations (Bandura, 1977; Bandura, 1986; Bauman, Fisher, Bryan, & Chenoweth, 1984) for future behavior. Demonstrating preliminary evidence of the validity of this preexperimentation measure, we noted an urgent need to test the predictive validity of this algorithm in a longitudinal study.

We used a nationally representative longitudinal study of

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adolescents to further evaluate the predictive validity of our measure of preexperimentation on a sample who reported that they were never smokers (or puffers) over 4 years. We examined the appropriateness of the susceptibility to smoking algorithm in this population and tested its ability to predict the next level in the smoking onset process (i.e., experimentation), taking into account other sociodemographic predictors of future smoking and exposure to other smokers. We also addressed the probability that never smokers progress through the onset process in the 4-year time period to the level defined as *established smoking* (having consumed at least 100 cigarettes, current or former smokers).

Method

Participants

The Teenage Attitudes and Practices Survey (TAPS) was designed to provide information on adolescent smoking behavior and was developed under the direction of the National Center for Health Statistics and the Office on Smoking and Health, Centers for Disease Control and Prevention (Allen, Moss, Giovino, Shopland, & Pierce, 1992). The TAPS interviewed adolescents who had responded to the 1989 National Health Interview Survey (NHIS), an annual household interview survey of the civilian, noninstitutionalized population of the United States. TAPS I was conducted in 1989, and the follow-up, TAPS II, was conducted in 1993.

Nine thousand nine hundred sixty-five adolescents aged 12–18 years were interviewed by TAPS I in 1989 by either telephone or mail questionnaire. This represented a response rate of 82% of the original sample of 12,097 adolescents who had responded to the NHIS in 1989. Of the 9,965 adolescents in TAPS I, only the respondents reached by telephone (N = 9,135) were eligible for follow-up in 1993. The 830 adolescents who were not reached by telephone responded through mail questionnaire and were not eligible for the follow-up in 1993.

The follow-up telephone survey, TAPS II, was completed in 1993 by 87% of the eligible TAPS I respondents (N = 7,960), who by that time were aged 15 to 22 years (CDC, 1994). This article focuses on the 4,500 participants from the longitudinal sample who, at baseline, reported never having experimented with smoking.

Measures of Smoking Onset

In both surveys we identified current smokers with the standard question, "Think about the last 30 days. On how many of these days did you smoke?" Experimentation with cigarettes was defined as a positive response to either of two questions: "Have you ever smoked a cigarette?" and "Have you ever tried or experimented with cigarette smoking, even a few puffs?" Two negative responses required classifying a respondent as a never smoker. Only those respondents so classified according to 1989 data were included in this analysis. A positive response to the any cigarette question led to an additional question about whether the individual had ever smoked 100 cigarettes. In 1993, we classified respondents who reported having smoked 100 cigarettes as meeting the criteria for established smoking (either current or former smokers).

The survey included all three questions on the algorithm (Pierce et al., 1995) for classifying a respondent as susceptible to smoking, although one question had slightly different wording from that of the previously published algorithm. To be classified as not susceptible to smoking, a respondent had to answer "no" to the question, "Do you think that you will try a cigarette soon?" and "Definitely not" to the questions, "If one of your best friends were to offer you a cigarette, would you smoke it?" and "Do you think you will be smoking cigarettes *1 year from now*?"

In our published question set, this last question was worded, "Do you think that you will smoke a cigarette in the next year?" Rewording appeared to reduce by about 7% the proportion of never smokers classified as susceptible. We obtained this estimate by analyzing the 1990 and 1993 Youth Attitudes and Practices Survey section of the California Tobacco Surveys, which contained the two different versions of the "smoking in the next year" question.

Other Predictors of Smoking Status

Sociodemographic information obtained for this study included date of birth, gender, and race or ethnicity (non-Hispanic White, Hispanic, Black, Asian, or other). The TAPS sample was drawn from households that had recently completed the NHIS, making adult-provided NHIS data available on family income and the educational attainment of the responsible adult who gave permission for the adolescent to be interviewed. Respondents reported family income in 27 income categories (from <$1,000 to $50,000+) that for the purposes of this analysis were reduced to four categories (<$16,000, $16,000–$29,999, $30,000–$49,999, and $50,000+). Because of the association between school performance and smoking prior to completion of formal education (Farrel & Fuchs, 1982), we analyzed how respondents thought they were performing at school, compared with the average student. We include this reported relative performance.

Exposure to smokers in the social network is a strong and consistent predictor of smoking initiation (Ary & Biglan, 1988; Bauman et al., 1984; Best, Thompson, Santi, Smith, & Brown, 1988; Flay et al., 1983). Both adolescent surveys sought detailed smoking status for each older member of the household and immediate family members not living at home. Respondents also reported the smoking status for each of their designated four best male and four best female friends. Prior detailed analysis of these exposure data led to the development of a single four-level variable that reflected minimal exposure to smoking (i.e., no exposure from family or best friends), exposure through family members only, exposure through best friends only, and exposure through both family and peer networks (Pierce et al., 1995).

Statistical Analysis

The NHIS uses a multistage sample design to provide national estimates of the civilian, noninstitutionalized population. It is a complex sample design that involves both clustering and stratification. The stratification variables were race (Black and non-Black), sex, and age categories (10–14 years, 15–17 years, 18–19 years, and 20–22 years). The multistage NHIS sample design requires a Taylor series approximation to estimate variance on the basis of the NHIS weighting procedures (Allen et al., 1991). We used the SUDAAN program for all statistical analyses (Research Triangle Institute, 1989). All percentages were weighted and adjusted for sampling design and nonresponse.

We used two nested logistic regressions to identify which specified variables predicted any change in use or experimentation with cigarettes in the interval between the two surveys and which predicted established smoking at follow-up. Both logistic regressions included only adolescents who were never smokers in 1989. All percentages (experimentation and established smoking) are based on the initial cohort of 4,500 never smokers at baseline.

The first logistic regression model attempted to separate adolescents who had experimented with smoking (both experimenters and established smokers; N = 1,796) from adolescents who remained never smokers (N = 2,704). The independent variables included age, sex, race or ethnicity, perceived school performance, adult education

level, household income, exposure to other smokers, and susceptibility to smoking. All independent variables were recoded and entered as categorical variables with appropriate design variables, which used referent groups within each independent variable. We also examined two-way interactions between susceptibility to smoking and all predictor variables.

The second logistic regression was performed to predict those adolescents who progressed to established smoking (N = 351) versus adolescents who remained experimenters (N = 1,445) at follow-up. This analysis used the same independent variables as those in the first logistic regression and tested similar two-way interactions with the susceptibility to smoking variable.

For both logistic regressions, we forced all demographic variables (age, sex, race or ethnicity, adult education level, and household income) into the model and examined the significance of the following variables: susceptibility to smoking, exposure to other smokers, and perceived school performance. Odds ratios and 95% confidence intervals were based on standard errors derived from the SUDAAN procedures.

Results

The Susceptibility to Smoking Measure

A strong univariate association was observed between each potential susceptibility to smoking question and later smoking behavior (Table 1). Approximately 17% of adolescent never smokers who in 1989 thought that they would try a cigarette soon had become established smokers by 1993, compared with only 7% of those who did not think that they would try a cigarette soon (p = .0006). Almost twice as many respondents had experimented with smoking in the interim (71% vs. 38%, p < .0001). The vast majority of never smokers indicated that they would definitely not smoke cigarettes if they were offered by friends. These respondents were less likely than others to be established smokers in 1993 (7% vs. 11%, p = .0105) or to have experimented with cigarettes (37% vs. 60%, p < .0001). Similarly, the vast majority of respondents indicated "definitely not" when asked if they thought they would be smoking 1 year later. Members of this group were also less likely to be established smokers in 1993 (p = .0003) or to have experimented (p < .0001).

Table 1
Never Smoker 1989 Susceptibility Responses as Predictors of 1993 Experimentation or Established Cigarette Smoking

Susceptibility responses, 1989	N	Cigarette smoking status, 1993: Experimentation[a] % (95% CI)	Established % (95% CI)
Do you think you will try a cigarette soon?			
Yes	199	71.2 (64.7, 77.6)	17.1 (11.9, 22.4)
No	4,301	38.4 (36.9, 39.8)	7.2 (6.5, 8.0)
p value		<.0001	.0006
If one of your best friends were to offer you a cigarette, would you smoke it?			
Definitely yes, probably yes, or probably not	501	60.3 (56.1, 64.5)	11.0 (8.4, 13.7)
Definitely not	3,999	37.2 (35.6, 38.8)	7.3 (6.4, 8.1)
p value		<.0001	.0105
Do you think you will be smoking cigarettes 1 year from now?			
Definitely yes, probably yes, or probably not	509	55.1 (50.6, 59.6)	13.3 (10.3, 16.3)
Definitely not	3,991	37.8 (36.3, 39.4)	7.0 (6.1, 7.8)
p value		<.0001	.0003

Note. N = 4,500. Weighted percentages, adjusted for sampling design and nonresponse. CI = confidence interval.
[a]Experimentation group includes adolescents in the established group.

Table 2
Never Smokers' Rates of Experimentation and Established Smoking 1993 by 1989 Susceptibility Score

Susceptibility score, 1989[a]	N	Smoking onset level, 1993: Experimentation[b] % (95% CI)	Established smoker % (95% CI)
0	3,610	35.6 (35.9, 37.2)	6.5 (5.7, 7.3)
1	623	52.8 (48.8, 56.8)	12.3 (9.7, 14.9)
2	215	64.6 (57.9, 71.4)	11.3 (6.9, 15.7)
3	52	74.6 (60.9, 88.3)	20.6 (9.4, 31.8)
2 + 3	267	66.5 (60.6, 72.5)	13.1 (8.9, 17.2)

Note. N = 4,500. Weighted percentages, adjusted for sampling design and nonresponse. CI = confidence interval.
[a]0 = Not susceptible; 1 = one response indicating susceptibility; 2 + 3 = two or three responses indicating susceptibility. [b]Experimentation group includes adolescents in the established smoker group.

To develop our a priori additive index of susceptibility to smoking, we dichotomized each of these questions. To be labeled "nonsusceptible" (a score of zero on the index), the respondent had to answer "No" or "Definitely not" to all three questions (Table 2; Pierce et al., 1993, 1995). The majority of the 1989 TAPS never smokers (N = 3,610) were in this nonsusceptible category and, by 4 years later, 35.6% had experimented with cigarettes and 6.5% were established smokers (i.e., had smoked more than 100 cigarettes). Only 1% (N = 52) of the 1989 never smokers answered all three questions in a way that was incompatible with the nonsusceptible definition; at follow-up three quarters of such respondents had experimented, and almost 21% were established smokers. Although these data suggest a strong relationship with later experimentation, the small sample sizes of the categories with a score of 2 or 3 on the index dictated their combination. The result is a three-level index of susceptibility to smoking in which each level has nonoverlapping 95% confidence intervals on the probability of experimentation by the 1993 follow-up (0 = 35.9%–37.2%; 1 = 48.8%–56.8%; 2 + 3 = 60.6%–72.5%).

The three-level susceptibility to smoking scores were inversely related to age and perceived school performance, positively related to exposure to other smokers, and were greater for Hispanics and for adolescents in the lowest adult education and family income categories.

Predictors of Experimentation With Smoking

Table 3 shows the multivariate analysis of which never smokers had experimented with smoking by 1993. Approximately 40% of those aged 12–16 years had experimented prior to the second survey. A lower experimentation rate was observed in those aged 17 (odds ratio [OR] = .80) and 18

Table 3
Predictors of Experimentation Before 1993 Among 1989 Never Smokers

Independent variables, 1989	n	Experimentation before 1993 %	OR (95% CI)
Age (years)			
12	981	40.4	1.00
13	807	39.8	0.96 (0.79, 1.17)
14	741	41.4	1.02 (0.82, 1.27)
15	595	42.1	1.03 (0.81, 1.31)
16	504	41.1	0.98 (0.76, 1.26)
17	477	35.9	0.80 (0.63, 1.01)
18	395	35.5	0.81 (0.62, 1.07)
Sex			
Female	2,297	38.1	1.00
Male	2,203	41.6	1.17 (1.03, 1.33)
Race/ethnicity			
White	3,196	42.1	1.00
Black	769	31.6	0.64 (0.52, 0.78)
Hispanic	367	41.7	0.88 (0.68, 1.13)
Asian/other	168	33.1	0.69 (0.49, 0.98)
Adult education			
< 12 years	456	39.4	1.00
12 years	1,630	39.6	1.01 (0.78, 1.31)
13–15 years	1,092	40.6	1.07 (0.80, 1.42)
16+ years	1,322	39.5	1.05 (0.79, 1.41)
Family income ($)			
< 16,000	760	39.7	1.00
16,000–29,999	1,191	37.7	0.89 (0.71, 1.11)
30,000–49,999	1,499	39.5	0.99 (0.79, 1.25)
50,000+	1,050	42.5	1.17 (0.91, 1.51)
Perceived school performance			
Much better than average	922	33.0	1.00
Better than average	1,781	37.7	1.16 (0.97, 1.39)
Average and below	1,797	45.4	1.56 (1.30, 1.87)
Exposure to other smokers			
Minimal	2,019	34.6	1.00
Family only	1,200	39.4	1.25 (1.05, 1.49)
Best friends only	685	46.8	1.60 (1.34, 1.90)
Both family and best friends	596	49.7	1.84 (1.49, 2.26)
Susceptibility			
Not susceptible	3,610	35.6	1.00
Susceptible level 1	623	52.8	1.92 (1.61, 2.30)
Susceptible level 2	267	66.5	3.15 (2.37, 4.17)

Note. N = 4,500. Weighted percentages, adjusted for sampling design and nonresponse. OR = odds ratios, adjusted for all the variables in the table; CI = confidence interval.

(OR = .81) years at baseline, although these were not statistically significant. Males were more likely to experiment than females. Blacks (OR = .64) and Asians (OR = .69) were significantly less likely to experiment than Whites or Hispanics.

The educational achievement of the responsible adult showed no association with experimentation, which was not the case for reported relative performance in school. Respondents who classified themselves as having school performance at an average or below-average level were significantly more likely to experiment than were those who responded that their performance was much better than average (45% vs. 33%).

A strong relationship was also seen for exposure to other smokers. Thirty-five percent of those respondents who at baseline reported no exposure by either family or best friends had experimented with smoking by follow-up. A higher percentage of those exposed to smokers only within their family had experimented. Those who reported smoking by best friends had an even higher experimentation rate again. The rate of experimentation was highest in respondents exposed to smoking by both their family and their best friend network (OR = 1.84).

Both levels of susceptibility to smoking in 1989 were significant in predicting experimentation by 1993. Respondents with a lower level of susceptibility to smoking had an odds ratio of 1.92, whereas adolescents classified in the higher susceptibility to smoking level in 1989 had a slightly higher odds ratio, 3.15. This susceptibility–experimentation effect had a stronger association than all other predictor variables in the multivariate analysis. None of the two-way interactions between susceptibility to smoking and the other predictor variables were significant.

Predictors of Established Smoking

Table 4 presents the multivariate analysis of predictors of progress toward established smoking prior to the 1993 follow-up as compared with those adolescents who remained experimenters. There were no significant differences among those aged 12 years compared with those aged 13 to 17 years who had smoking rates that varied between 6.8% and 10.0%. However, a significantly lower smoking rate (3%) was observed for adolescents aged 18 years at the initial interview, compared with that of 12-year-olds. There were no significant gender differences in the progression to established smoking. Blacks (OR = .41) and Asians (OR = .35) were significantly less likely than Whites to have progressed to the extent of becoming established smokers at follow-up. Hispanics also appeared less likely than Whites to become established smokers.

Although the educational level of the responsible parent was not statistically significant in predicting who progressed to established smoking, there was some suggestion that adolescents from higher-educated households were more likely to be established smokers. Adults' reported family income level was not associated with progress toward established smoking at follow-up. However, reported relative school performance demonstrated a significant association: Respondents who perceived that they were average or below average in relative school performance were much more likely to progress to established smoking than were those who perceived that they were performing much better than their peers (OR = 1.79, 95% CI, 1.20–2.66).

Exposure to other smokers was an important predictor of whether adolescents progressed to established smoking or remained experimenters at follow-up. Approximately 5% of never smokers who at baseline had minimal exposure to other smokers had progressed to established smoking at follow-up. This rate increased among those exposed to smokers in either the family (OR = 1.85) or best friend network (OR = 1.66). Adolescents exposed to smokers in both their family and their best friend network had the highest rate of established smoking at follow-up, 13.8%.

Susceptibility to smoking was not significant in distinguishing adolescents who progressed to established smoking from those that remained experimenters during the 4-year study period.

Table 4
Predictors of Progress to Established Smoking Versus Experimentation

Independent variables, 1989	n	Established cigarette use, 1993 %	OR (95% CI)
Age (years)			
12	981	7.8	1.00
13	807	7.8	1.03 (0.70, 1.52)
14	741	8.1	1.05 (0.70, 1.57)
15	595	10.0	1.36 (0.89, 2.08)
16	504	8.8	1.07 (0.68, 1.67)
17	477	6.8	0.91 (0.55, 1.50)
18	395	3.0	0.41 (0.21, 0.80)
Sex			
Female	2,297	7.0	1.00
Male	2,203	8.4	1.18 (0.91, 1.51)
Race/ethnicity			
White	3,196	9.3	1.00
Black	769	3.4	0.41 (0.24, 0.69)
Hispanic	367	5.8	0.57 (0.35, 0.95)
Asian/other	168	2.9	0.35 (0.14, 0.88)
Adult education			
< 12 years	456	5.3	1.00
12 years	1,630	8.8	1.63 (0.98, 2.74)
13–15 years	1,092	7.7	1.41 (0.84, 2.40)
16+ years	1,322	7.2	1.55 (0.85, 2.81)
Family income ($)			
< 16,000	760	7.2	1.00
16,000–29,999	1,191	7.3	0.76 (0.49, 1.17)
30,000–49,999	1,499	8.0	0.84 (0.57, 1.26)
50,000+	1,050	8.0	0.83 (0.51, 1.35)
Perceived school performance			
Much better than average	922	4.4	1.00
Better than average	1,781	6.9	1.39 (0.92, 2.10)
Average and below	1,797	10.2	1.79 (1.20, 2.66)
Exposure to other smokers			
Minimal	2,019	4.7	1.00
Family only	1,200	8.7	1.85 (1.34, 2.56)
Best friends only	685	9.3	1.66 (1.16, 2.38)
Both family and best friends	596	13.8	2.46 (1.73, 3.51)
Susceptibility			
Not susceptible	3,610	6.5	1.00
Susceptible level 1	623	12.3	1.34 (0.99, 1.82)
Susceptible level 2	267	13.1	0.97 (0.63, 1.49)

Note. N = 4,500. Weighted percentages, adjusted for sampling design and nonresponse. OR = odds ratios, adjusted for all the variables in the table; CI = confidence interval.

Again, no two-way interactions between susceptibility to smoking and the independent variables were significant.

Discussion

This article reports natural history information concerning smoking behavior in a large national sample of adolescents who reported in 1989 that they had never so much as puffed on a cigarette. By the follow-up survey 4 years later, approximately 40% of the sample reported having experimented with cigarettes, and nearly 8% had progressed so far as to be labeled as established smokers according to the common definition for defining adult ever smokers in the United States.

We looked for baseline evidence of cognitive susceptibility to smoking as an initial level in the process of starting to smoke and found evidence to support the use of both intention and expectations to define this susceptibility period among never smokers, provided that nonsusceptibility was defined as the existence of a determined decision not to smoke (Pierce et al., 1993). Susceptibility to smoking at baseline was strongly associated with moving to the next step in the smoking onset process (defined as experimentation with cigarettes). This susceptibility to smoking measure was a more independent and stronger predictor of experimentation than was the existence of smokers among either the family or the best friend network, commonly regarded as the strongest predictor of smoking onset. However, because the majority of adolescents in absolute numbers who ultimately experimented with smoking came from the initially large and lowest susceptibility level group, efforts to deter subsequent smoking behavior in this group are still needed.

Our data suggest that the predictors of who will experiment with smoking and who will progress to become established smokers differ, indicating that different processes might be at work at various levels in the onset process. The strongest predictor of which individuals would make up the small group that progressed to become established smokers (i.e., consuming at least 100 cigarettes by 1993) was exposure to other smokers. The presence of smokers in the social environment may reinforce the adolescent who experiments, increasing the likelihood that he or she will become an established smoker. However, susceptibility to smoking at baseline was not predictive in distinguishing established smokers from experimenters at follow-up. The small sample size in the top susceptibility category may have contributed to the insignificant finding. The strong relationship between susceptibility to smoking and experimentation demonstrates the validity of the susceptibility to smoking measure in predicting which adolescents are at elevated risk for taking up smoking.

Another important predictor of established smoking was the level of parental education. Adolescents whose parents had not completed high school were less likely to become established smokers than were adolescents whose parents had more education. Analysis of national data on high school seniors and the prevalence of past-month smoking with respect to parental education yielded similar results (National Center for Health Statistics [NCHS], 1993). Among high school seniors whose parents did not graduate from high school, the prevalence of past-month smoking decreased from 33% in 1980 to 31% in 1991; among seniors whose parents graduated from high school, the prevalence of smoking decreased from 34% to 29% during the same time. However, for high school seniors whose parents had some postgraduate education, the prevalence of smoking increased from 24% in 1980 to 27% in 1991 (NCHS, 1993).

Several potential limitations of the current study should be considered. One is the reliance on self-reported data from telephone interviews of adolescents in their homes. Studies of adolescents have shown that there is stability of self-reported substance use in the adolescent population and that questionnaires provide highly reliable data (Barnea, Rahav, & Teichman, 1987).

Another possible bias may exist because of differences in reported smoking behavior between adolescents who were successfully followed up in TAPS II and nonrespondents. In

addition, adolescents who resided in nontelephone households in 1989 (who were excluded from the baseline sample in TAPS I) may have been more likely to be smokers. For these reasons, prevalence estimates from TAPS II may be lower than they would have been had the entire TAPS I cohort been successfully followed up, and therefore these results may include some bias that makes interpretation difficult.

This analysis provides evidence of the different levels involved in the process of taking up smoking. The positive move toward becoming a smoker appears to be the development of a cognitive susceptibility to smoking. During this "preparatory" period, the adolescent develops expectations and beliefs about smoking (Institute of Medicine, 1994). Further research is needed to identify the environmental variables associated with becoming susceptible to smoking. One obvious candidate is tobacco marketing. Over $5 billion per year is being spent by tobacco companies on the advertising and promotion of cigarette smoking (Federal Trade Commission, 1995). Unfortunately, federally supported national surveys, such as TAPS, include no questions to measure adolescent response to tobacco marketing activities.

Other possible influences on susceptibility to smoking are parental influence, effective school smoking programs, an effective smoke-free learning environment, and community smoking norms. Further research may make it possible to identify what types of preventive efforts will be effective in preventing adolescents from becoming susceptible to smoking. Some of this research should focus on the period after experimentation. Many of the adolescents who experimented with cigarettes in this study did not progress further in the smoking onset process, but appeared to become nonsusceptible to future smoking. Identifying the factors that influence an adolescent to not progress beyond experimentation could also lead to the development of more powerful smoking prevention programs.

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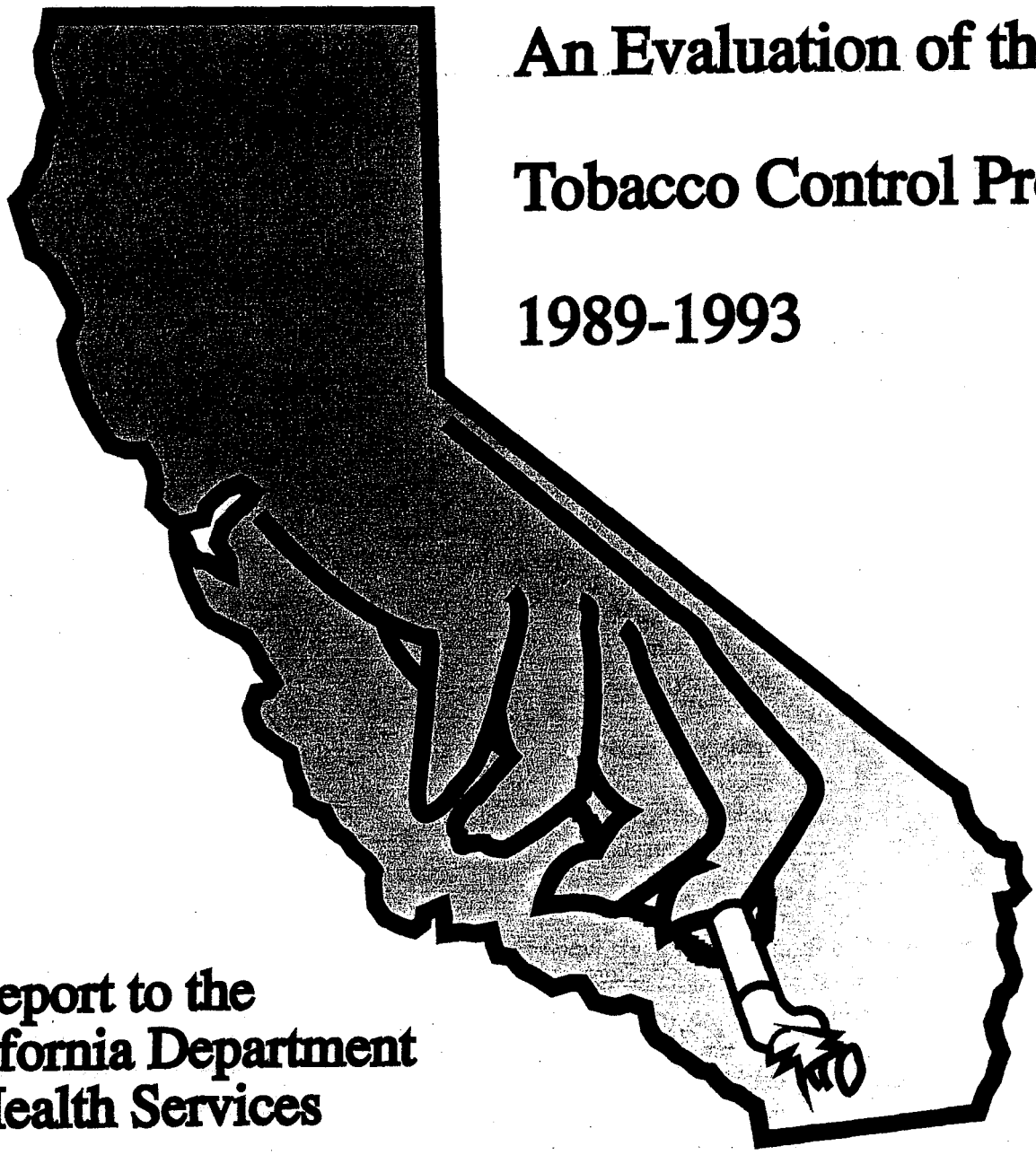
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TOBACCO USE IN CALIFORNIA



An Evaluation of the Tobacco Control Program, 1989-1993

A Report to the
California Department
of Health Services

Pierce JP, Evans N, Farkas AJ, Cavin SW, Berry C, Kramer M, Kealey S, Rosbrook B, Choi W, Kaplan RM.

Cancer Prevention and Control Program
University of California, San Diego

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Chapter 6

TOBACCO MARKETING AND SMOKING IN SCHOOLS AS BARRIERS TO EFFECTIVE ADOLESCENT PREVENTION PROGRAMS

INTRODUCTION

In the three decades following the release of the first Surgeon General's report on the health consequences of smoking,[36] the public health movement has been very successful in its efforts to convince adults not to start smoking. By 1990, smoking uptake among people older than 21 years was approaching zero.[3,37] This change in patterns of initiation presents a problem for the tobacco industry: to remain profitable, the industry needs to recruit new smokers in order to compensate for the attrition of adult smokers through cessation or mortality. Currently, adolescents are the only population group taking up smoking in significant numbers. In Chapter 4, we presented evidence suggesting that smoking initiation was increasing among adolescents before the start of the Tobacco Control Program. The imposition of excise taxes appeared to have little effect on that increasing trend. Although the end of the increase in smoking initiation coincided with the start of the Tobacco Control Program, we observed no decline in smoking among adolescents over the duration of the Program, as might be expected from an effective prevention program. In this chapter, we focus on barriers that may detract from the effectiveness of prevention efforts that have been funded by the California Tobacco Control Program.

Barriers to Change in Adolescent Smoking Behavior

(1) Tobacco Advertising. There is now considerable evidence to suggest that tobacco advertising is a major influence on adolescent smoking behavior and that it constitutes a significant barrier to the achievement of tobacco control goals for adolescents.[38,39]

In Chapter 4, we showed that between 1984 and 1988, smoking prevalence appeared to decline significantly among 16- to 18-year-old Californians. This declining trend was abruptly reversed in 1988 when the prevalence of smoking in this age group began to increase at a rapid rate. The turnaround in this trend in smoking prevalence among adolescents coincided with the introduction of a new marketing campaign for Camel cigarettes, featuring a cartoon character called "Joe Camel." A number of studies, including analyses of CTS data, have demonstrated high levels of recall and knowledge of this campaign in adolescents, and in children as young as 6 years.[40-43] The study of 6-year-olds sparked national controversy, prompting the tobacco industry to sponsor a replication of this research. Although the study sponsored by the tobacco industry reported lower levels of recall and knowledge of the Camel campaign than the initial study, the findings still revealed that two thirds of 6-year-olds recognized the Camel campaign and understood that it marketed cigarettes.[44]

Evidence of high awareness of tobacco advertising among adolescents and children is not sufficient to conclude that tobacco advertising causes minors to take up smoking. Few experts would argue that young children who are responsive to cigarette advertisements immediately

begin smoking. However, considerable research on the uptake process suggests t
experimentation with cigarettes by adolescents is preceded by the development of
predisposition to smoke.[45] A period of perhaps 2 years may elapse before the child o
adolescent converts a predisposition to smoke into the decision to try a cigarette.

For this reason, our earlier report introduced a measure of "susceptibility to smoke," a
refinement of predispositional measures that enables us to examine whether tobacco advertisi
influences smoking initiation by cultivating in adolescents a positive attitude toward the ide
of smoking.[17] This chapter extends previous analyses to explore further the relationshi
between various kinds of tobacco marketing strategies and adolescent susceptibility to smo

(2) Smoking in Schools. Exposure to other smokers has been repeatedly demonstrated to h
a major predictor of youth smoking.[46-48] Close friends and peers who smoke are a particula
strong source of pressure to smoke on adolescents. A potential site where adolescents risk
exposure to smoking is the school. Thus, the provision of a smokefree learning environme
is an important tobacco control goal. The absence of smokefree schools may undermine
effectiveness of an antitobacco curriculum. According to the 1993 report of the Tobacc
Education Oversight Committee, just one half of all public schools in California have declar
themselves to be smokefree environments.[12] In this chapter, we examine whether
prevalence of smokefree schools in California changed between 1990 and 1993.

In a previous report, we suggested that adolescent recall of ever having had a class on smoki
provides one indicator of the existence of effective antitobacco school curricula.[17] Th
effective use of tobacco control monies should lead to a decrease in the proportion
adolescents who are unable to recall such a class. In this report, we present information on
proportion of adolescents who recalled ever having a class on the health risks of smoking i
1990 and 1993.

Section 1 of this chapter draws on the 1992 CTS to analyze patterns of tobacco advertising
awareness among adolescents and adults. The objective of this analysis was to see
adolescents appear to be a primary target audience for tobacco advertising. The 1993 yo
CTS included additional questions on adolescent perceptions and attitudes toward the marketing
of tobacco products. Using these additional questions, we created a summary index
adolescent receptiveness to tobacco marketing. Section 2 describes the measures used
construct this index, the susceptibility measure, and presents data on the relationship of th
marketing index to adolescent susceptibility to smoke. In Section 3 we examine the relat
importance of tobacco marketing by comparing the influence of tobacco marketing o
adolescent susceptibility to the influence of peer and family smokers. Studies have consistentl
documented that exposure to peer and family smokers is one of the most important independ
predictors of smoking initiation among adolescents.[46-48] If tobacco marketing plays
substantial role in adolescent initiation of smoking, we should be able to demonstrate th
tobacco marketing is associated with adolescent susceptibility to smoke independently of ot

known predictors of susceptibility, such as exposure to family/peer smokers. Section 4 of this chapter compares data from the 1990 and 1993 CTS to determine if the proportion of schools reported to be smokefree has increased in California. This section also assesses changes in student compliance with smokefree school policies and perceived exposure to teachers who smoke in schools. Students were asked about their level of support for smokefree policies in schools and about the existence of antitobacco curricula in their school.

SECTION 1
Does Tobacco Advertising Target Adolescents?

One way of determining which population groups are most receptive to cigarette advertising is to examine how many people are able to name a favorite cigarette advertisement. Having a favorite ad implies that the individual is sufficiently aware of cigarette advertising to have established affective preferences for certain advertisements. The 1992 CTS asked both adult and adolescent respondents:

> *What is the name of the cigarette brand of your favorite cigarette advertisement?*

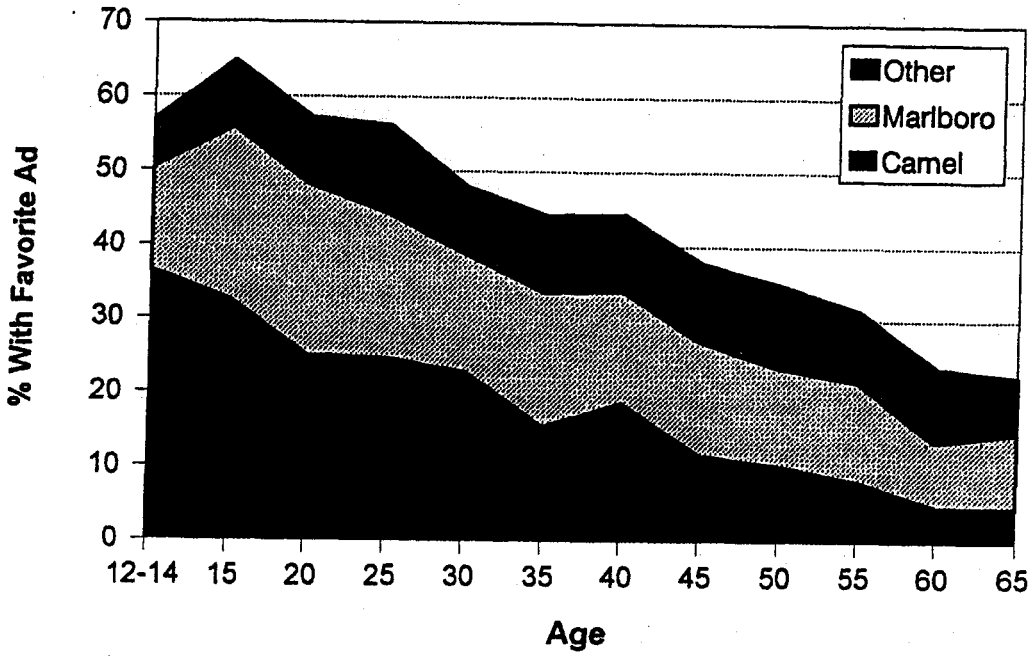
Respondents who could not name a brand were probed with the following question:

> *Of all the cigarette advertisements that you have seen, which do you think attracts your attention the most?*

Figure 6-1 presents the proportion of respondents who had favorite cigarette ads within different age groups. As shown, having a favorite cigarette advertisement is inversely related to the respondent's age. For each age group from 12 to 25 years, more than half of respondents were able to name a favorite cigarette ad. After age 25, the proportion of respondents with a favorite ad decreased dramatically and linearly to approximately 22% of adults older than 60 years. Two thirds of 16-year-old adolescents nominated a favorite advertisement, the highest level of any age group. We note that 16 years is the modal age for young people to start smoking.[7] Whether or not the tobacco industry specifically intends to advertise its products to adolescents is not an issue here. These data indicate that adolescents are significantly more likely than adults to see and to develop a liking for cigarette advertising.

Figure 6-1 also reports the brands of the favorite cigarette ads chosen by respondents. Older adolescents tended to choose Marlboro as the brand advertised in their favorite cigarette ads. Thus, 23.5% of 15- to 19-year-olds chose Marlboro compared to 14.2% of 12- to 14-year-olds who named this brand as their favorite ad. The choice of Marlboro (as is the case for all brands) declines in adulthood. Nomination of Joe Camel as the favorite advertisement was highest among 12- to 14-year-olds (36.6%) and declined rapidly with age. The latter finding

suggests that the concerns expressed by the Surgeon General of the Unites States, the American Medical Association, and others — that the Joe Camel cartoon character featured in the Camel cigarette campaign may be particularly attractive to young children — are well-founded.



Source: CTS 1992

Figure 6-1

SECTION 2
Developing an Index of Receptiveness to Tobacco Marketing

Interpretation of Advertisement Messages

A considerable research literature suggests that advertisements are most effective when they are successful in eliciting high levels of cognitive involvement from the audience (see review by McGuire).[49] Before individuals can become cognitively involved with an advertisement, they must be able to interpret the message of the advertisement in order to develop a set of

related cognitions that build on this message. To ascertain whether adolescents are capable of cognitively attending to and interpreting the message of cigarette advertising, the 1993 CTS asked all adolescents who had seen a cigarette advertisement (90.7%) what message they believed cigarette advertisements intended to communicate. Adolescents could select from any or all of the following options:

(1) Smoking as an enjoyable experience
(2) Smoking helping people to relax
(3) Smoking helping people to feel comfortable in social settings
(4) Smoking as a pleasurable way to pass time
(5) Smoking helping people to stay thin
(6) Smoking helping to reduce stress
(7) Smoking helping people when they are bored
(8) The idea that the "in" crowd are smokers
(9) The idea that successful people smoke

In 1993, 89% of adolescent surveyed in California said that cigarette advertising promoted at least one of these benefits.

Affective Response to Cigarette Advertisements

Research on the persuasive mechanisms of advertising suggests that advertisements may also be effective when they stimulate an affective response from the audience that may be distinguished from cognitive appraisals of the advertisement's message.[50-52] This affective response is best characterized by how much people like the advertisement.[50,53,54] As described above, we invited adolescents in the 1992 CTS to nominate their favorite cigarette advertisement and the two questions about their affective response to cigarette advertising were repeated for adolescents interviewed in the 1993 CTS.

Of adolescents surveyed in 1993, 65.4% had a favorite cigarette advertisement. The brands of the cigarette ads chosen as favorite were distributed among adolescents as in 1992, with Marlboro and Camel selected most often by adolescents as the brands of their favorite cigarette advertisements.

Establishment of Brand Preferences Among Adolescents

In 1993, only 9.3% of adolescents could not recall seeing any cigarette advertising or name a favorite cigarette ad. Given that the vast majority of adolescents are aware of cigarette advertising, we were interested in whether adolescents had moved beyond awareness to the establishment of brand preferences. Research on advertising in general suggests that

advertisements are designed to create a demand for the general product category and to create a preference for particular product brands within that category.[55] To ascertain whether adolescents had established a preference for certain cigarette brands, the 1993 CTS asked all adolescents who had never smoked a cigarette:

> *If you wanted to buy a pack of cigarettes tomorrow, what brand do you think that you would buy?*

Adolescents who had smoked before were asked if they had ever bought their own cigarettes and if so, which brand they usually bought.

In 1993, more than half of the adolescents surveyed (54%) were able to name the specific brand of cigarettes that they would prefer to buy or usually bought. Marlboro was the preferred brand for 32% of adolescents surveyed, and 11% reported that they would or did purchase Camel cigarettes. These results suggest that the advertising effect on purchasing may be indirect and that the change in preferences is incremental over time.

The Role of Tobacco Promotional Items

Recently, the tobacco industry has moved its marketing emphasis toward promotional items, such as clothing, sports bags, and other gadgets bearing the tobacco company logo. Promotional items now represent more than one quarter of the tobacco industry's national marketing budget that is estimated to be approximately $4 billion.[56] The 1993 CTS attempted to assess the extent to which adolescents are willing purchasers of tobacco industry promotional products. The following question was asked of all adolescents surveyed in 1993:

> *Some tobacco companies provide promotional items to the public that you can buy or receive for free. Have you ever bought or received for free any product which promotes a tobacco brand or was distributed by a tobacco company?*

In 1993, 9% of adolescents (n=529) indicated that they had received a promotional item. To gauge the attitudes of adolescents toward use of such products in the future, we asked those who had not received or bought a tobacco promotional item:

> *Do you think you would ever use a tobacco industry promotional item such as a t-shirt?*
>
> ***Approximately one quarter of all adolescents indicated that they would be willing to use such a promotional item.***

Measuring Adolescent Susceptibility to Smoke

Susceptibility to smoke is defined as the absence of a conscious decision not to smoke another cigarette.[17] The susceptibility measure was developed to discriminate between adolescents resolved not to smoke and those who are still open to the possibility of smoking, even if they have not yet tried a cigarette. We consider that adolescents classified as susceptible to smoke are relatively more vulnerable to personal, social, and environmental factors that may prompt adolescents to experiment with smoking. In the CTS youth interviews, a series of questions asked adolescents if they currently smoked or wanted to smoke in the future. Adolescents who responded negatively were then probed with further questions to test the strength of their resolve. The procedures for classifying adolescents as susceptible to smoke were as follows:

- Adolescents who indicated that they had never puffed on a cigarette were asked whether they would try a cigarette soon. A positive response to this question classified this individual as susceptible to smoke.

- Adolescents who did not intend to try a cigarette soon or who reported having puffed on a cigarette were asked if they would accept a cigarette from a best friend if offered. Any response other than "definitely not" classified this individual as susceptible to smoke. Those who were definite that they would not accept a cigarette from a best friend were then asked if they would smoke a cigarette at any time during the next year. Any response other than "definitely not" to this question classified an individual as susceptible to smoke.

- Adolescents who had ever smoked a whole cigarette were asked if they intended to smoke a cigarette at any time during the next year. Any response other than "definitely not" classified an individual as susceptible to smoke.

- All adolescents who had smoked in the last month were automatically classified as susceptible to smoke in the future.

Figure 6-2 presents a flowchart of the questions from the youth CTS used to define susceptibility to smoke.

An Index of Adolescent Receptiveness to Tobacco Marketing

Altogether, five sets of questions were used to explore adolescent receptiveness to tobacco advertising and promotional marketing. We investigated whether adolescents (1) cognitively attend to the messages of advertising (benefits of smoking); (2) affectively respond to cigarette advertising (having a "favorite ad"); (3) have established brand preferences for current or future cigarette purchases; (4) possess a tobacco industry promotional item; and (5) would be willing to use such a promotional item.

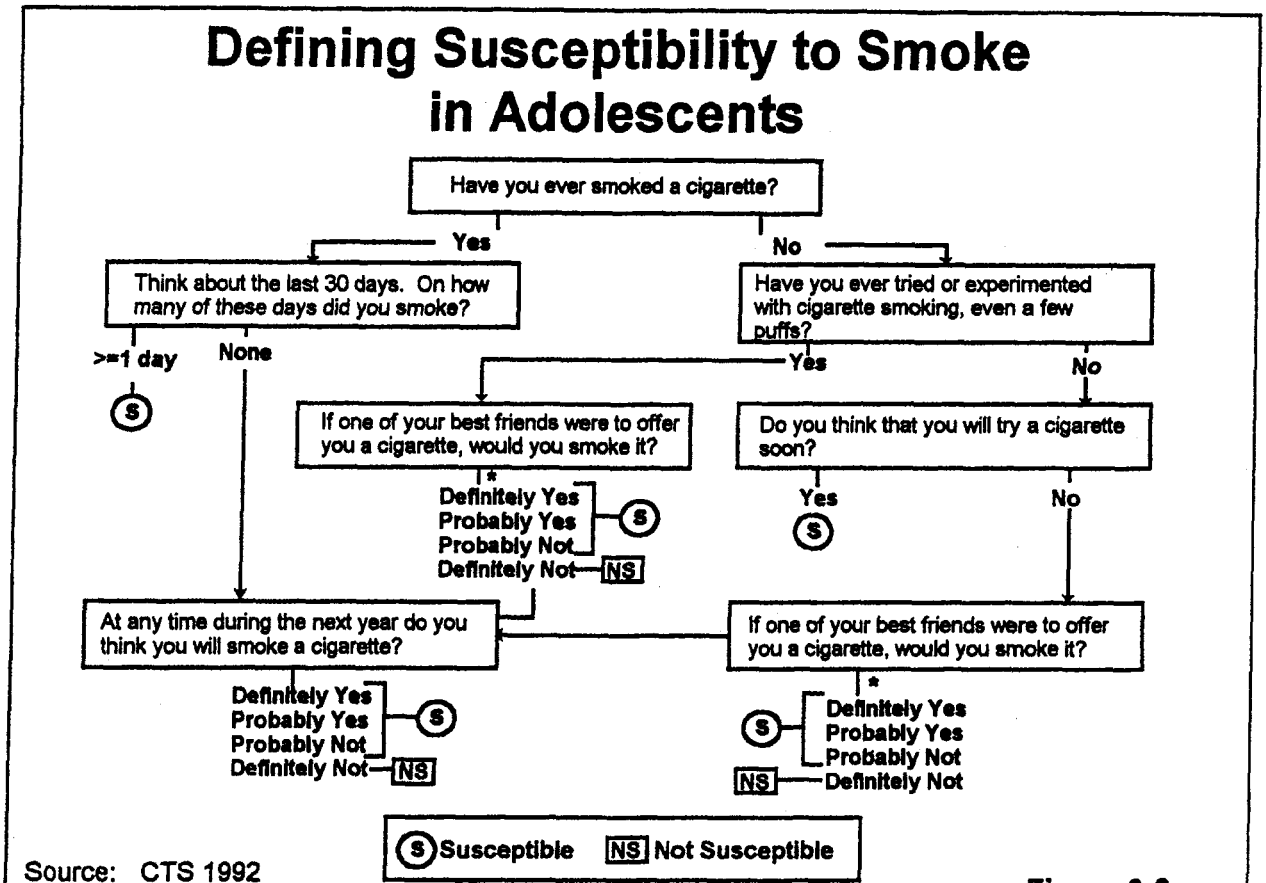


Figure 6-2

We collapsed each set of questions into a binary variable to which an adolescent could have responded either Yes or No. Table 6-1 shows how each of these variables is related to smoking susceptibility. In every case, a positive response indicating receptiveness to advertising greatly increases the proportion of adolescents who are susceptible to smoke in the future. For example, adolescents who indicated that they would be willing to use tobacco promotional items are almost twice as likely to be susceptible to smoke compared to adolescents who would not use such items. The confidence intervals for these estimates do not overlap and therefore the association between each advertising variable and smoking susceptibility is statistically significant.

To develop an index of receptiveness to tobacco advertising, we performed a factor analysis of the variables measuring receptiveness to advertising. Three of the items measuring receptiveness specifically to tobacco advertising (favorite ad, brand preference, ad messages) made up one factor and two items referring to tobacco promotional products (purchase or willingness to use) made up a second factor. However, the internal consistency of the five

items was sufficient (Cronbach's α=0.56) to justify treating these items as a single index of receptiveness to tobacco marketing.

Table 6-1
The Impact of Cigarette Marketing Practices on Susceptibility to Smoke

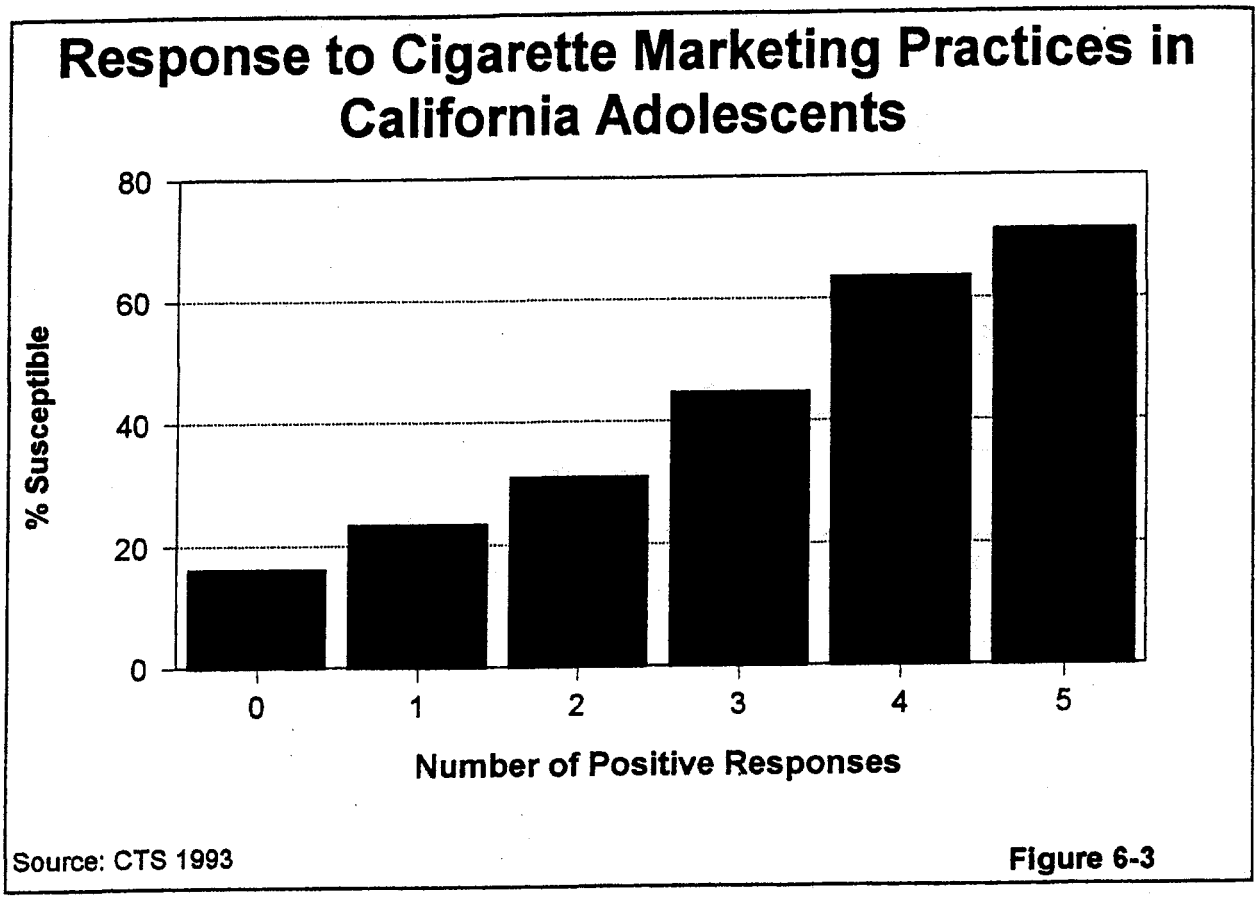
		n	% Susceptible	C.I.*
Ads Promote Benefits	No	635	23.4	18.2–28.6
	Yes	4896	41.1	38.9–43.3
Have Favorite Ad	No	1870	26.6	23.8–29.4
	Yes	3661	45.3	41.9–47.7
Would Buy Brand	No	2521	26.5	23.8–29.2
	Yes	3010	49.3	46.3–52.3
Willing to Use Item	No	4196	32.4	30.2–34.6
	Yes	1335	60.0	56.2–63.8
Received Promotional Item	No	5002	37.0	34.9–39.1
	Yes	529	57.7	50.1–65.3

Source: CTS 1993
* C.I. = 95% confidence interval

Adolescents were scored on the marketing index by counting the number of positive answers recorded for each adolescent in response to the five binary variables. Thus, adolescents could score from 0 to 5 on an index of receptiveness to tobacco marketing.

As shown in Figure 6-3, we observed a strong association between adolescent scores on the marketing index and their susceptibility to smoke in the future. Each index level includes at least 200 adolescents. Sixteen percent of adolescents who scored zero on receptiveness to tobacco marketing were classified as susceptible to smoke compared to almost two thirds of adolescents who scored 4 on the index. The differences between index levels are all statistically significant.

These data make a strong case for the potential impact of tobacco advertising and marketing practices on the future smoking behavior of adolescents.



Source: CTS 1993

Figure 6-3

SECTION 3
The Importance of Tobacco Marketing Relative to Other Influences on Adolescent Smoking Uptake

Peer and Family Smokers

As noted earlier, one of the strongest predictors of smoking uptake among adolescents is the presence of smokers in the family or in the peer network. To assess the importance of tobacco marketing as a factor in adolescent smoking uptake, we created a comparison index measuring exposure to peer and/or family smokers. The relationship of the two indices to susceptibility could then be compared to give an idea of the significance of tobacco marketing relative to other influences that are known to predict adolescent smoking uptake.

The 1993 CTS asked adolescents whether any members of the four following groups used tobacco: (1) parents, stepparents, or guardians; (2) older brothers and sisters; (3) best friends who were male; and (4) best friends who were female. On the basis of responses received, adolescents were divided into four categories of "exposure to other smokers": (1) adolescents with smokers in their family and with best friends who smoked; (2) adolescents exposed to best friend smokers only; (3) adolescents exposed to smokers in their family only; and (4) adolescents with no smokers either among peers or in the family. Adolescents in the latter group were considered to be "minimally exposed" to other smokers. In 1993, each of the four categories contained more than 1,000 adolescents. The relationship of exposure to smokers to susceptibility to smoke is presented in Figure 6-4.

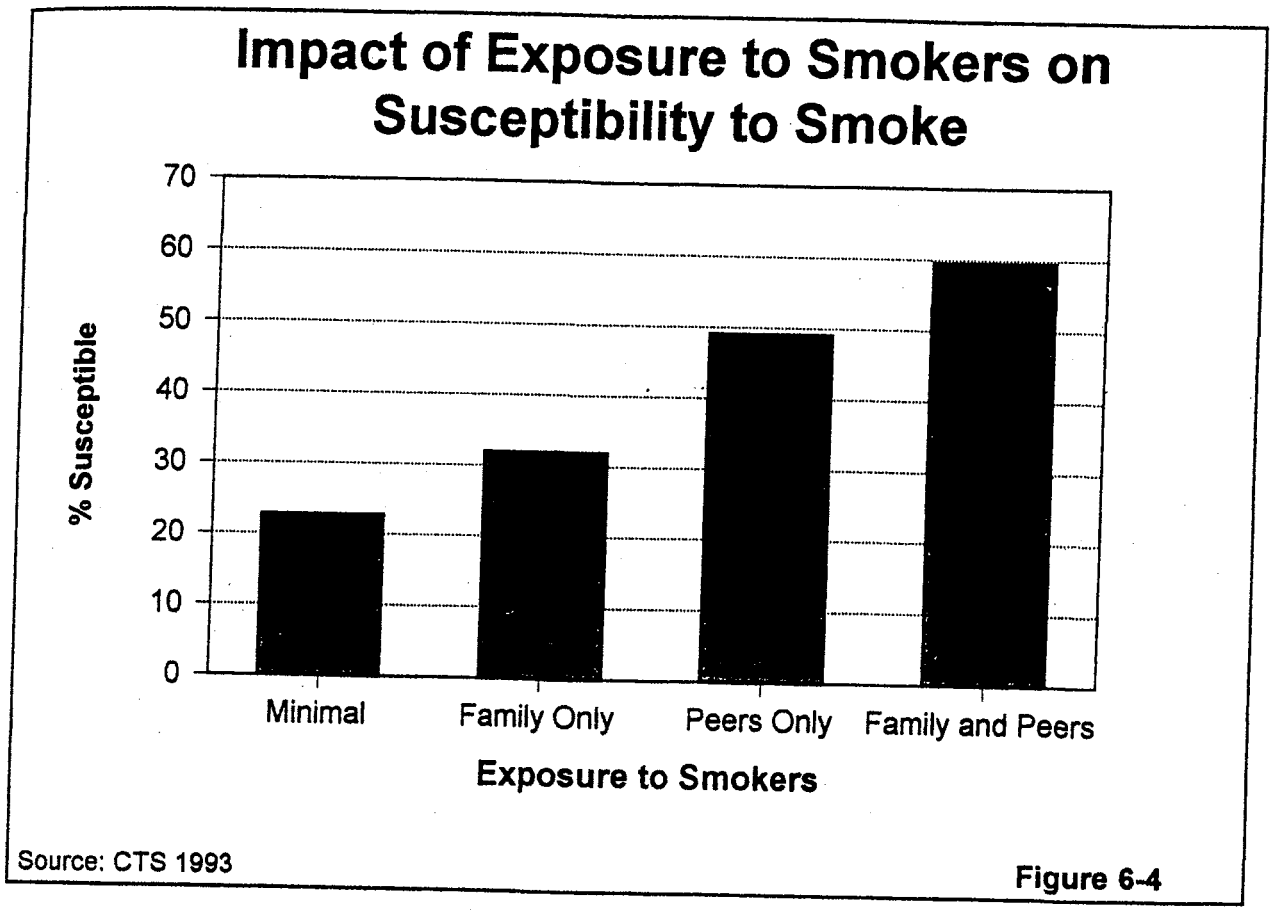


Figure 6-4

As expected, adolescents with minimal exposure were least likely to be susceptible to smoking (23%). Exposure to peer smokers only appeared to be more strongly associated with susceptibility than exposure to family smokers only. Sixty percent of adolescents with best friends who smoked and smokers in the family were classified as susceptible to smoke.

Comparing the Influence of Tobacco Marketing and Exposure to Peer/Family Smokers on Adolescent Susceptibility

The main purpose of a comparison between the exposure index and the tobacco marketing index is to assess whether tobacco marketing is a factor that should be considered in predicting adolescent smoking uptake. For this reason, we limited our comparison of the two indices to adolescents who had never smoked. In 1993, 3,536 adolescents (64%) indicated that they had never even puffed on a cigarette (never puffers).

A logistic regression of susceptibility to smoke was performed for adolescents who had never smoked, controlling for major sociodemographic variables (age, gender, race-ethnicity, and self-reported school performance). The results are presented in Table 6-2. Both receptiveness to tobacco marketing and exposure to other smokers were found to be independently associated with susceptibility to smoke among adolescent never puffers. Adolescents exposed to peer puffers, with or without smokers in the family were approximately twice as likely to be susceptible to smoke in the future compared to adolescents with minimal exposure. Similarly, a score of 2 on the receptiveness to tobacco marketing index (31% of adolescent never puffers) versus a score of zero doubled the proportion of adolescents susceptible to take up smoking. A score of 4 on the marketing index produced 4 times as many adolescents susceptible to smoke compared to a score of zero.

Table 6-2
Impact of Exposure to Smokers and Response to Cigarette Marketing on Susceptibility Among Adolescents Who Have Never Smoked

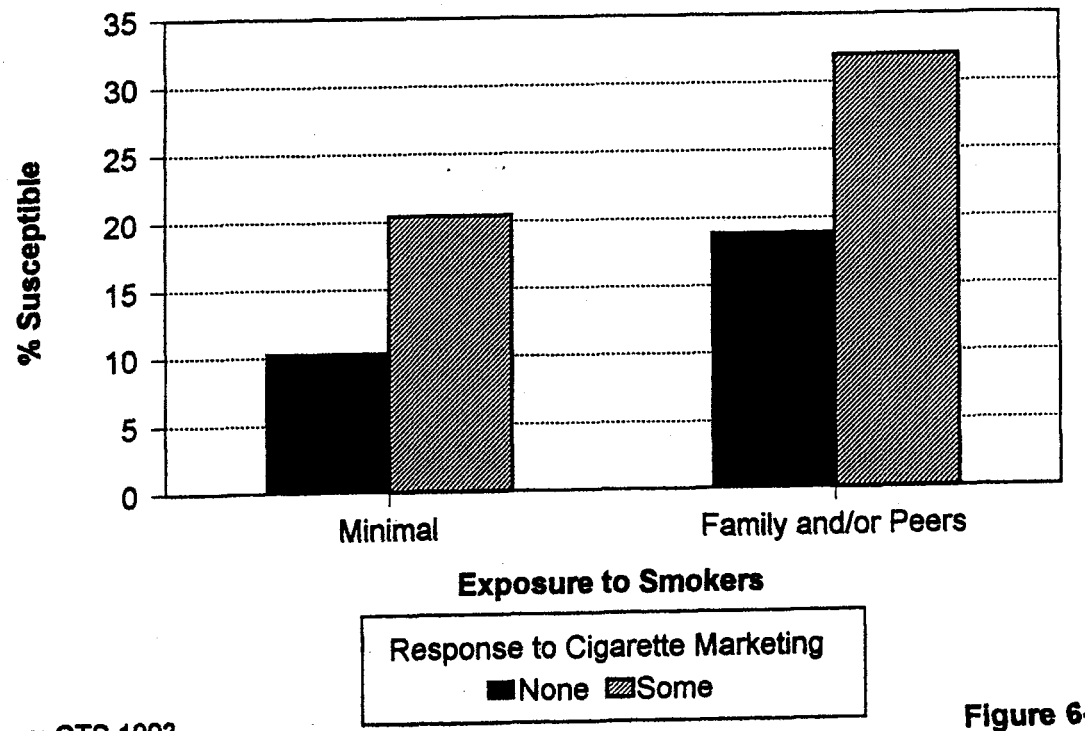
		n	% Susceptible	Adjusted Odds Ratio	C.I.
Exposure to Smokers	Minimal	1645	19.0	1.00	--
	Family Only	755	25.9	1.31	1.00–1.72
	Peer Only	647	33.2	1.92	1.36–2.70
	Family + Peer	489	36.7	1.89	1.30–2.74
Response to Cigarette Marketing	None	351	13.5	1.00	--
	1	747	18.9	1.59	1.00–2.51
	2	1090	24.0	2.03	1.31–3.15
	3	987	31.3	2.81	1.89–4.16
	4+	361	40.5	3.91	2.38–6.42

Source: CTS 1993
C.I. - 95% Confidence Interval

It is important to note than only 10% (n=351) of adolescent never puffers scored zero with respect to their receptiveness to tobacco marketing. This finding disputes the frequent argument that tobacco advertising is primarily appreciated by or salient to adolescents who already smoke. We also observed a dose-response effect, in that as adolescents indicate higher levels of receptiveness to tobacco marketing, their susceptibility to smoke in the future increases.

Figure 6-5 compares the relative influence of exposure to family and/or peer smokers and receptiveness to tobacco marketing on adolescent susceptibility to smoke. The sample is again confined to adolescents who have never puffed on a cigarette, in order to weigh the relationship of these two factors to smoking uptake. As shown, tobacco marketing appears to

The Effect of Response to Cigarette Marketing and Exposure to Smokers on Susceptibility to Smoke in Never Puffers



Source: CTS 1993

Figure 6-5

be at least as important as exposure to other smokers as a factor influencing adolescent susceptibility to smoke. Of adolescents who did not have smokers in the family or among best friends, 20.4% were susceptible to smoke if they indicated any receptiveness to tobacco marketing. Conversely, of adolescents who were not receptive to tobacco marketing but were exposed to family and/or peer smokers, 18.9% were susceptible to smoke. When adolescents

were both exposed to other smokers and receptive to tobacco marketing, almost one third of this group of never puffers were classified as likely to take up smoking in the future, suggesting an additive relationship between tobacco marketing and exposure to smokers.

SECTION 4
Changes in Indices of Smoking Behavior in Schools, 1990–1993

The objectives for smoking prevention efforts in schools include the implementation of smokefree policies on school property, strict enforcement of such policies, and the incorporation of antitobacco education into the curriculum at many levels. The 1990 and 1993 CTS collected information on progress toward these objectives.

Student Smoking at School

All adolescents in both survey years were asked the following question:

> *Is there a rule at your school that students are not allowed to smoke on school property?*

In 1990, 93.4% of adolescents indicated that their school had such a rule. In 1993, this proportion was marginally higher at 94.5%. These data indicate that officially, at least, most schools are perceived to have comprehensive smoking policies. However, the existence of a policy is not sufficient to ensure a smokefree environment for students unless compliance with the policy is also high.

To assess compliance, adolescents who reported a school smoking policy were also asked the following question in both survey years:

> *How many students who smoke obey that rule?*

Adolescents could respond "all" "most" "a few" "none" or "don't know" to this question.

The results are presented in Figure 6-6. In 1990, just under a quarter of all students indicated that all students obeyed the no smoking rule, suggesting that there was some enforcement of the policy. However, between 1990 and 1993 this proportion decreased; by 1993 only 22% of students reported that all students obeyed the no smoking rule. A case can be made that a school smokefree policy is adequately enforced if respondents report that "most" students obey the rule. Under this definition, approximately 48% of students indicated high levels of enforcement of school smokefree policies in 1990. Again this proportion decreased to 45% in 1993.

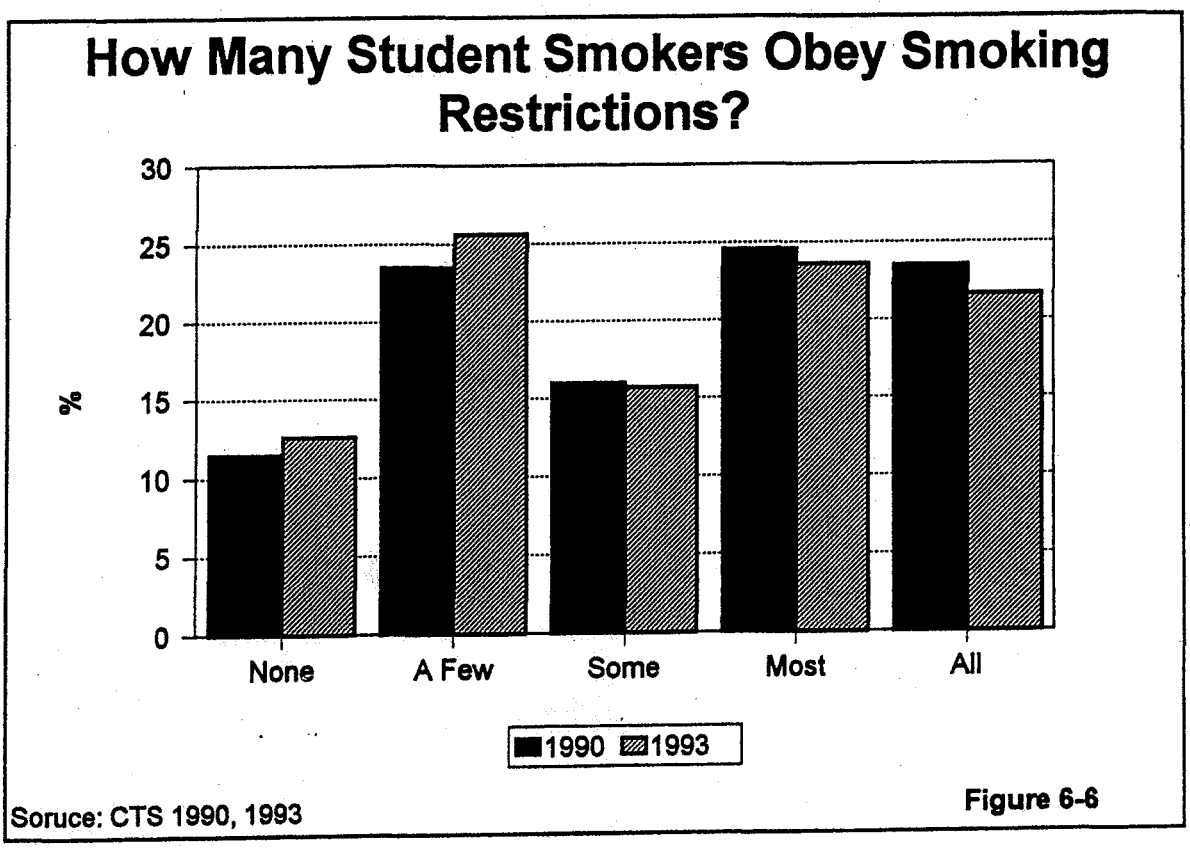


Figure 6-6

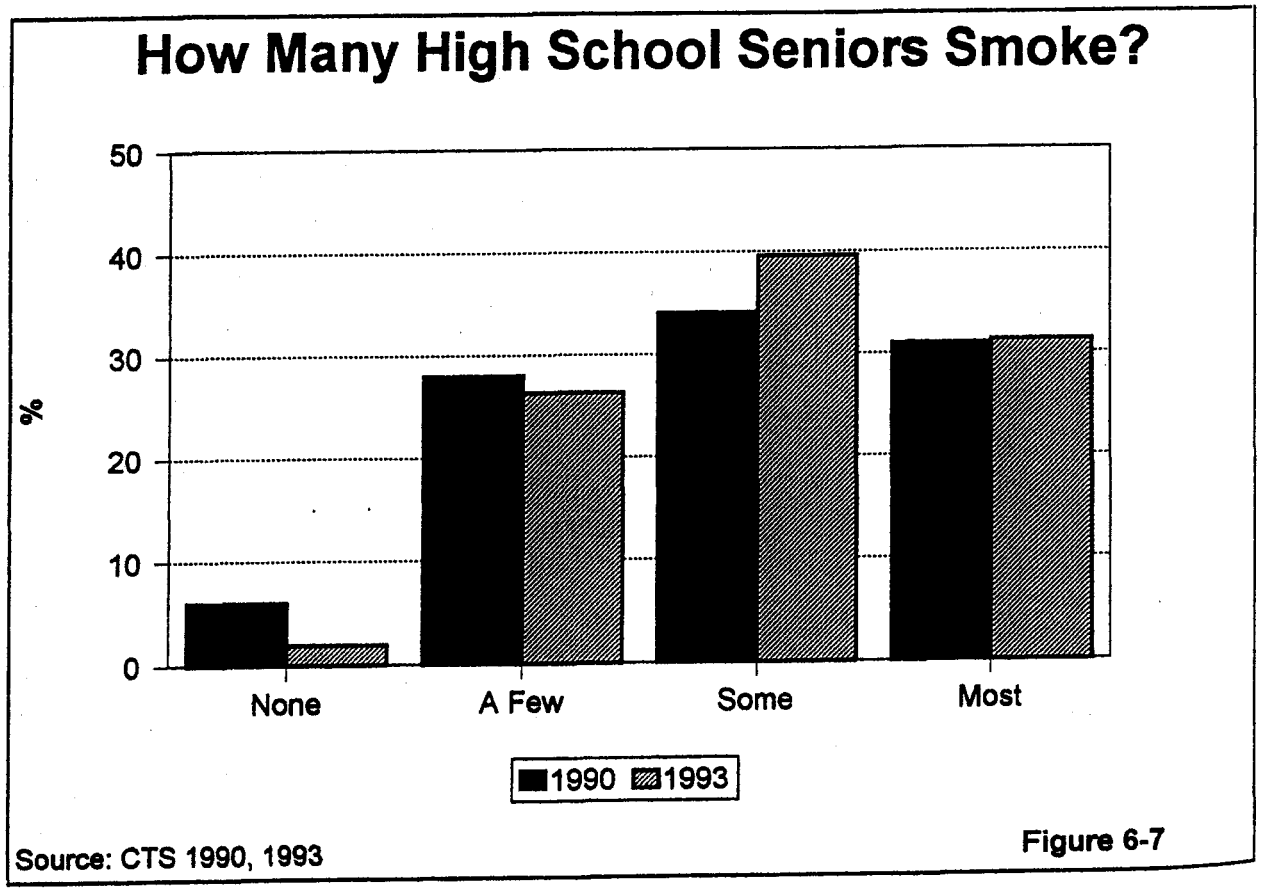
Although there appears to have been no improvement in enforcement or compliance with school smoking policies over the duration of the Tobacco Control Program, we considered the possibility that the number of schools that appeared to be lax in securing full compliance with smokefree policies might have decreased. In 1990, 12% of adolescents surveyed indicated that none of the student smokers at their school obeyed the no smoking rule. This proportion increased slightly to 13% in 1993.

To obtain an estimate of the perceived smoking level at school, we asked adolescents in both survey years:

How many high school seniors do you think smoke cigarettes?

Only 6% of adolescents surveyed in 1990 thought that none of the high school seniors at their school smoked (Figure 6-7). In 1993, this proportion was even lower at 2%. In both survey years, approximately one third of adolescents thought that the majority of high school seniors at their school were smokers. Several studies have shown that adolescents tend to overestimate the prevalence of smoking among their peers.[57,58] Actual prevalence estimates of teen smoking

make it highly unlikely that the majority of high school seniors in any school are smokers. Nevertheless perceptions that smoking is prevalent and acceptable among peers are known to be a factor in the decision by adolescents to take up smoking and many smoking prevention programs aim to correct such overestimations.[59,60] These findings do not indicate that programs have been successful in changing adolescent perceptions of peer smoking in California between 1990 and 1993.



Smoking Among School Teachers

Exposure to other smokers is one of the strongest predictors of smoking initiation among adolescents. Thus, teachers who smoke risk furnishing the student with negative role models that may undermine antitobacco education in schools.[61]

In both 1990 and in 1993, we asked all students the following question:

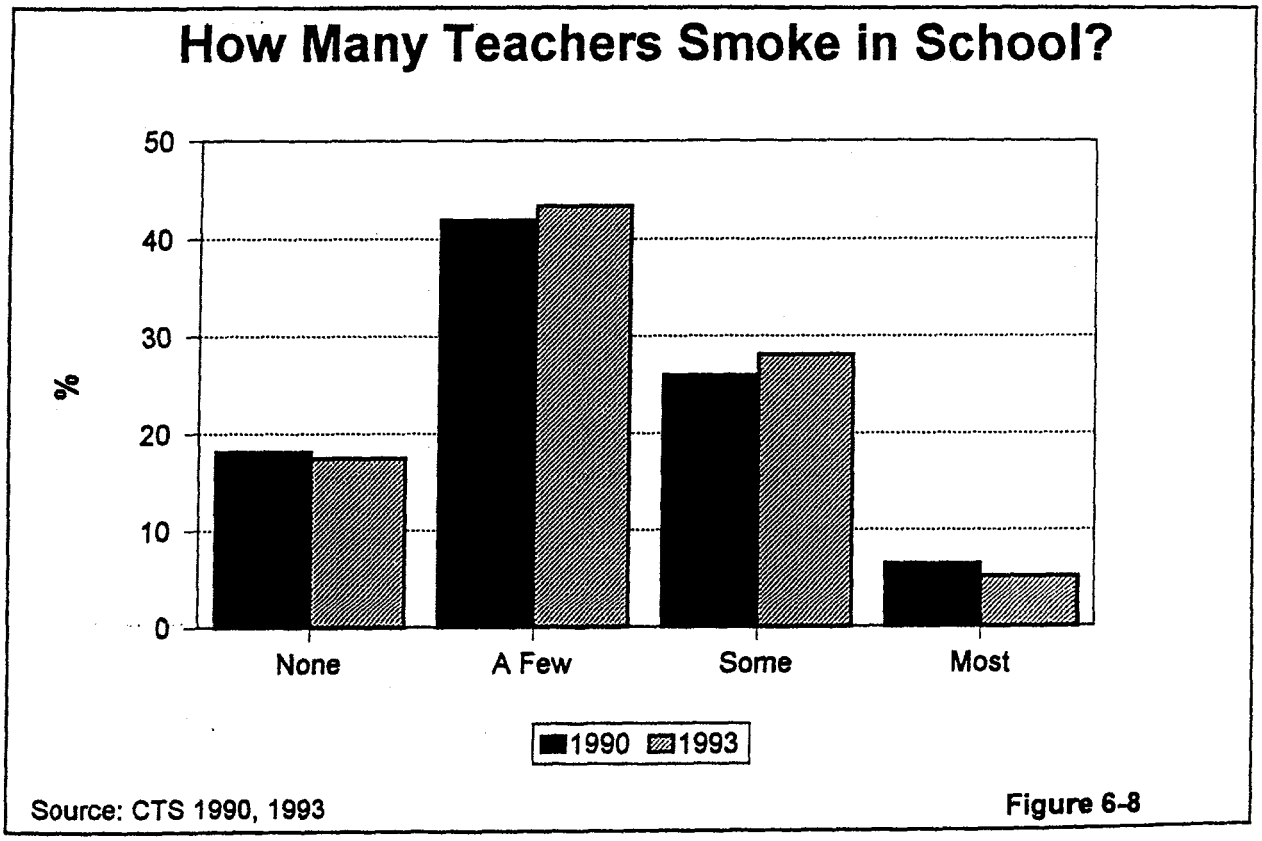
How many of the teachers in your school smoke cigarettes?

The findings are presented in Figure 6-8. In both survey years, only 18% of students indicated that none of their teachers smoked. It is important to emphasize that in general, adolescents do not think that the majority of their teachers smoke. Only 5% of adolescents in each survey year thought that most teachers smoked. It may also be argued that adolescents who report that their teachers smoke acquired this information from observation of teachers outside the school environment. It is however unlikely that this explanation can account for all reports of teachers who smoke in view of the high proportion of students who in each year indicated that at least some of their teachers smoked. Given the high salience of the teacher as a role model and a source of information about community norms, these results must raise some concern respecting the enforcement of smokefree policies in California schools.

Do Students Want Smokefree School Grounds?

Some observers warn that strict enforcement of smokefree policies is likely to meet with resistance and disruption from students. To address this issue, the 1993 CTS asked all adolescents the following question:

> *Do you think that all smoking by anyone should be banned on school grounds at all times, including meetings and sporting events?*



Source: CTS 1990, 1993

Figure 6-8

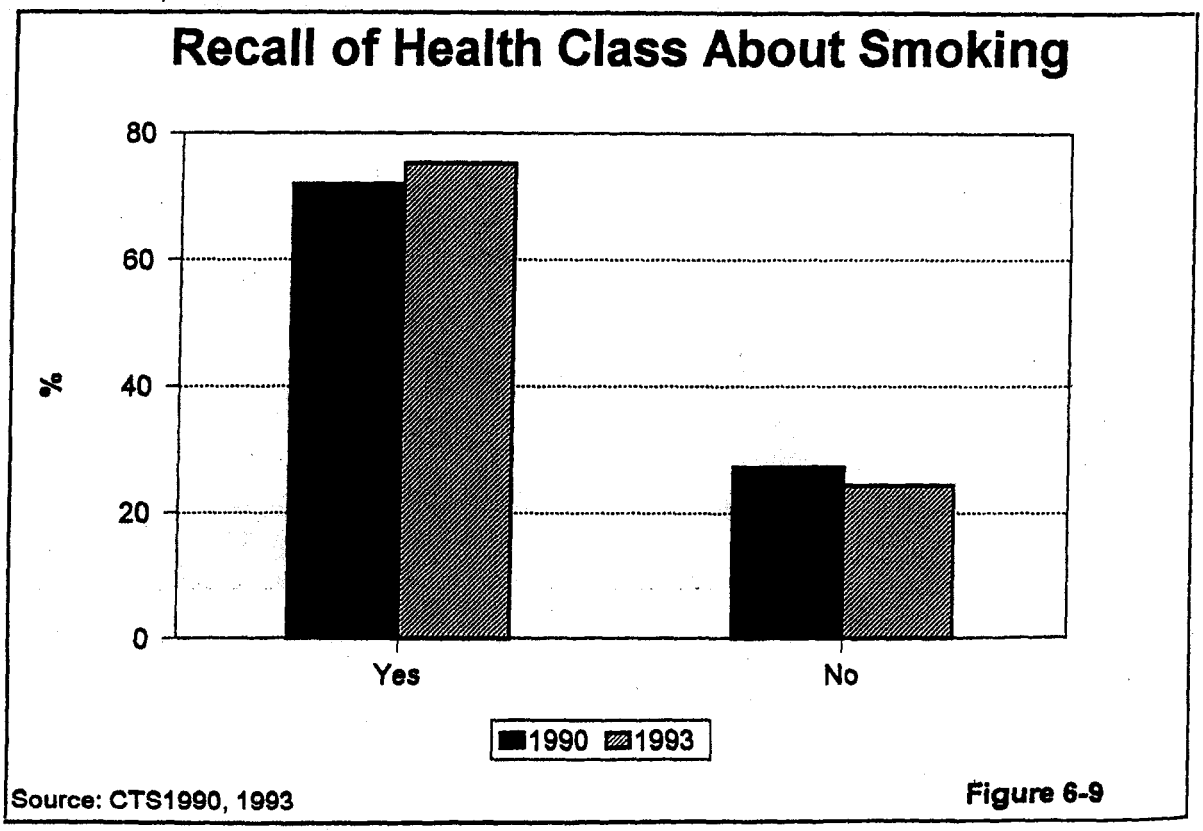
The word "ban" was deliberately included in this question to maximize the number of adolescents who would disagree and to thus provide a conservative estimate of student support for school smoking policies. Despite the contentious wording of this question, fourfifths (83.6%) of adolescents surveyed in 1993 supported the imposition of a smokefree policy prohibiting all smoking at any time on school grounds.

Health Education Classes on Smoking

In 1990 and 1993, we sought information on the extent to which schools in California have incorporated education on the health risks of smoking into their curricula. All adolescents were asked:

> *Have you ever taken a class or course at school in which the health risks of smoking were discussed?*

The question was purposely broad because it is unlikely that even the most comprehensive school prevention programs would be able to deliver information on smoking at every grade level. As shown in Figure 6-9, the proportion of adolescents who could not recall ever having such a class remained essentially unchanged between 1990 and 1993 at around 25%.



Source: CTS1990, 1993

Figure 6-9

SUMMARY OF FINDINGS

1. Adolescents appear to be the most receptive audience for tobacco advertising. Awareness and liking of cigarette advertisements is higher among adolescents than among adults in California. Liking and awareness of the "Joe Camel" cigarette campaign was highest in the youngest age group studied (12 to 14 years).

2. Two thirds of adolescents have a favorite cigarette ad, and one quarter are willing to use products promoting tobacco.

3. Adolescents who are receptive to tobacco advertising are more likely than adolescents who are not receptive to be susceptible to smoke in the future.

4. Tobacco advertising and marketing practices are an important and independent predictor of smoking uptake. The effect of tobacco marketing on susceptibility is at least as large as the effect of exposure to peers or family members who smoke.

5. There appears to have been no improvement in the level of exposure of adolescents to smokers at school over the duration of the Tobacco Control Program.

6. While most schools are reported to have smoking policies, enforcement of those policies and compliance by students continued to be low over the duration of the Tobacco Control Program. Adolescents strongly support the existence of a strict smoking policy at school.

7. In 1993 as in 1990, 25% of students could not recall ever having received instruction on the health risks of smoking at school.

Tobacco Use in California

1992

A Focus on Preventing Uptake in Adolescents

Cancer Prevention Program
University of California,
San Diego

California Department of
Health Services, Sacramento

Westat, Inc.

Suggested Citation:

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Chapter 10

DOES TOBACCO ADVERTISING INFLUENCE TEENS TO START SMOKING?

INTRODUCTION

The relationship between tobacco advertising and tobacco consumption has been the subject of much research. In recent years a number of countries have introduced a total ban on tobacco advertising (Norway in 1975, Finland in 1977, Canada in 1989, Australia in 1990, and New Zealand in 1990). A review of the evidence from these countries found that the elimination of tobacco advertising was associated with a significant decline in tobacco consumption.[72]

The contribution of tobacco advertising to smoking uptake among children has been more difficult to quantify. Evidence from several countries suggests that both smokers and prospective smokers find tobacco advertising more attractive than nonsmokers do.[73] In December 1991, this issue was brought into sharp public focus with the publication of three research papers in the *Journal of the American Medical Association* (JAMA).[56,74,75] These studies demonstrated that the revitalized campaign for Camel cigarettes in the United States had a stronger impact on the very young than it did on adults. A further survey conducted by the advertising industry and reported in the *Advertising Age*[76] found that the majority of children aged 8 through 13 years could name cigarette brands. Moreover, this age group was able to describe how these brands were advertised (with a camel and cowboy and not with other images such as dolphins, clowns, etc.).

Publication of these findings produced considerable outrage and prompted several leading figures in the public health community to question the morality of tobacco advertising when directed toward children (*Associated Press; March 10, 1992*). Despite extensive public discussion, no further restriction on the ability of tobacco companies to advertise has ensued.

In this chapter, we revisit the issue of the impact of tobacco advertising. The data presented aims to provide not only additional evidence that tobacco advertising successfully targets young children, but also to promote further research into the impact of advertising on smoking behavior, by elucidating the mechanisms by which tobacco advertising may encourage young children to start smoking.

AWARENESS OF CIGARETTE ADVERTISING AMONG TEENS

In the 1992 survey, teenagers were asked to name any cigarette brand that they knew was advertised. Table 10.1 shows which cigarette brands were most often recalled as advertised by age. Among 12- to 13-year-olds, almost two thirds nominated both Marlboro and Camel as advertised brands. A much smaller 13% nominated Virginia Slims as a brand that they knew was advertised, followed by Winston, Salem, and Newport, all with small percentages. This pattern remained essentially the same among older age groups, with slightly higher recall rates. Based on these data we estimated that Camel has achieved 96% of its total penetration among 13-year-old teenagers, Marlboro has achieved 82%, and Virginia Slims 69%.

Table 10.1
Recall of Advertising for Most Recalled Cigarette Brands by Age in California Teens

	Age		
	12-13	**14-15**	**16-17**
Marlboro	62.5	73.7	76.7
Camel	64.3	67.2	67.2
Virginia Slims	12.7	16.5	18.4
Winston	5.5	9.6	11.6
Salem	4.8	11.5	5.6
Newport	3.3	10.2	8.2

Figure 10.1 presents the number of advertised brands recalled by teenagers within age. In the youngest age group, less than 14% of teens could not recall a cigarette brand that was advertised and this proportion decreased with age. Two thirds of 12- to 13-year-olds recalled at least two advertised brands. This increased only slightly to 78% for those aged 16-17 years.

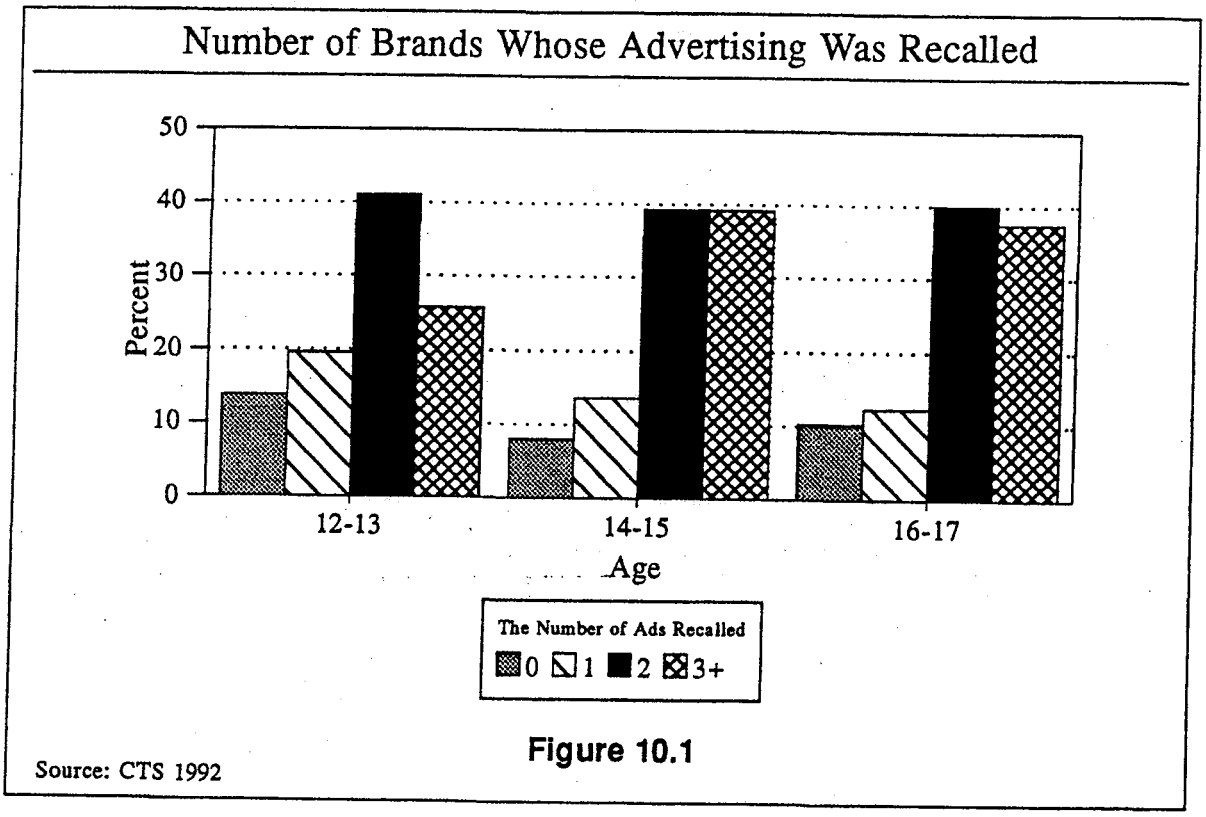


Figure 10.1

Source: CTS 1992

These data provide further strong evidence that the impact of tobacco advertising reaches the youngest adolescents in our society.

FAVORITE CIGARETTE ADVERTISEMENTS OF TEENAGERS

Figure 10.2 presents data from the 1992 survey on the targeting of tobacco advertising. Information was obtained by asking adolescents:

"What is the name of the cigarette brand of your favorite cigarette advertisement?"

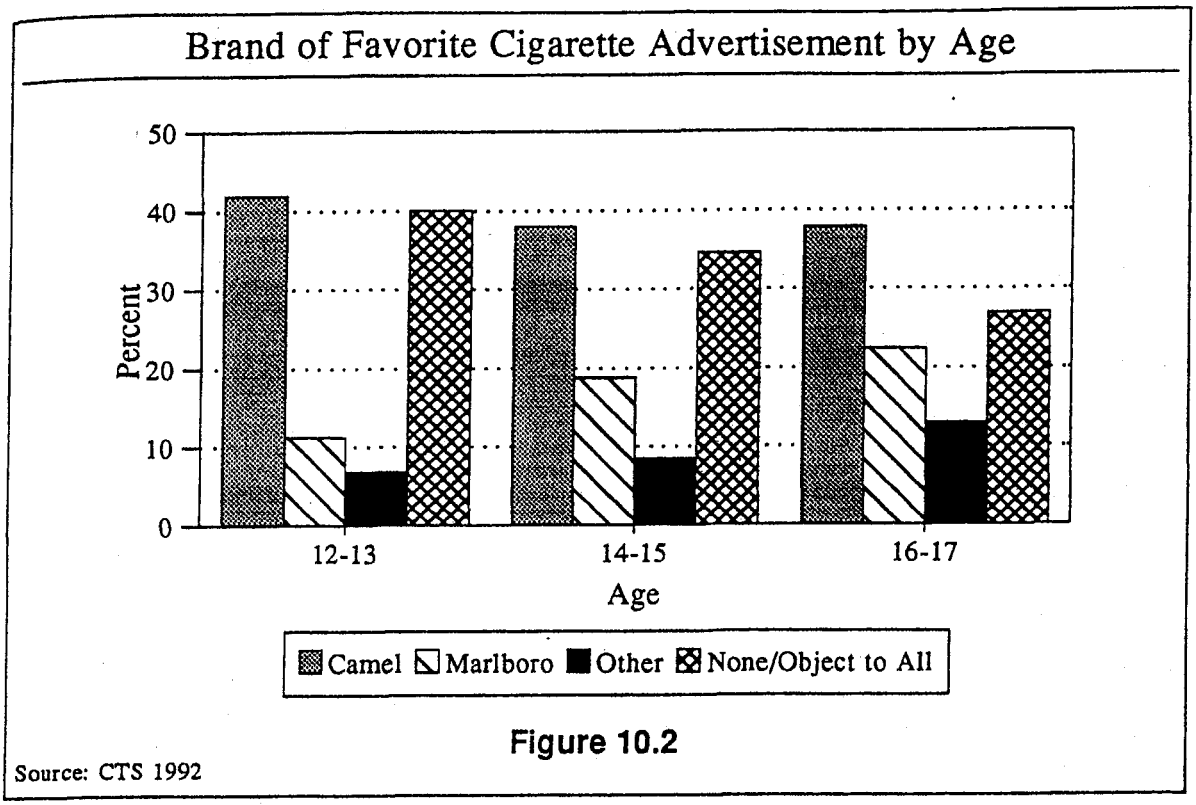


Figure 10.2

Source: CTS 1992

Some 40% of 12- to 13-year-olds indicated that they objected to all cigarette advertising or had no favorite advertisement. This number decreased to 35% for 14- to 15-year-olds and to 27% for 16- and 17-year-olds.

In each age group, the Camel advertisement was much preferred to the Marlboro advertisement. This was particularly true of the 12- to 13-year age group, where nearly four times as many children indicated that Camel was their favorite advertisement as indicated Marlboro. Among 14- to 15-year-olds, twice as many preferred Camel to Marlboro, a proportion that decreased to 69% in 16- to 17-year-olds.

By inviting teenagers to specify their favorite advertised brand we found further support for the high salience of cartoon advertising such as *Joe Camel* among very young adolescents.

NOMINATION OF A FAVORITE ADVERTISED BRAND AND SUSCEPTIBILITY TO SMOKE

Figure 10.3 compares the susceptibility to smoke among California adolescents of different ages according to whether or not they reported a favorite tobacco advertisement. For those who were unable to nominate a brand as being advertised or indicated that they objected to all tobacco advertising, approximately one quarter were susceptible to smoke regardless of age.

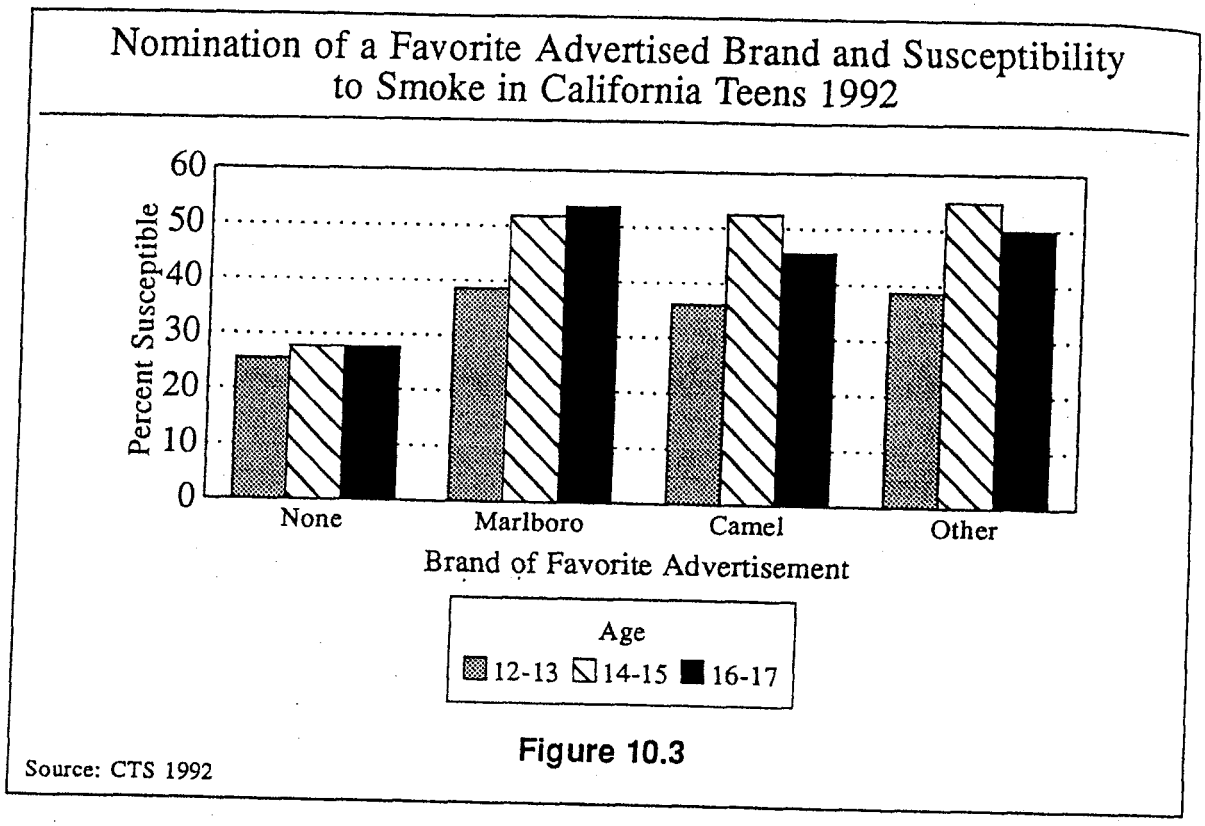


Figure 10.3

Among 12- to 13-year-olds, nomination of a favorite cigarette ad brand increased the proportion who were susceptible to smoke by more than 40%. This increase in susceptibility did not depend on which brand ad was chosen as the favorite by adolescents. The level of susceptibility remained the same for adolescents who chose Camel, Marlboro, or any other brand as their favorite advertisement.

The effect of having a favorite tobacco ad on susceptibility to smoke was similar among older teenagers. Having a favorite brand nearly doubled the proportion of adolescents aged 14 to 17 years who were susceptible to smoke.

DO CIGARETTE ADVERTISEMENTS PROMOTE THE BENEFITS OF SMOKING?

In earlier chapters we showed that teenagers who attached specific benefits to smoking (such as helping people to relax or to feel comfortable in social situations) were more likely to be

susceptible to smoking than teenagers who saw no utility in smoking. Given that advertising is generally concerned to establish the rewards available to anyone using the advertised product, we hypothesize that some of the information teenagers possess about the benefits of smoking might derive from tobacco advertising. We suggest that tobacco advertising may encourage teenagers to smoke by influencing their expectations about the behavior, such that they become aware of the supposed advantages to smoking.

Figure 10.4 shows how teenagers who have a favorite advertisement responded when asked whether cigarette advertising promotes the benefits of smoking. Irrespective of age, most teenagers agree that cigarette advertising made claims about the benefits of smoking, particularly its role in facilitating social intercourse and as a means of relaxing or coping with stressful situations. Although older teenagers were more likely to attribute this function to cigarette advertising, a substantial proportion of the youngest age group were already cognizant of the positive messages contained in cigarette advertising.

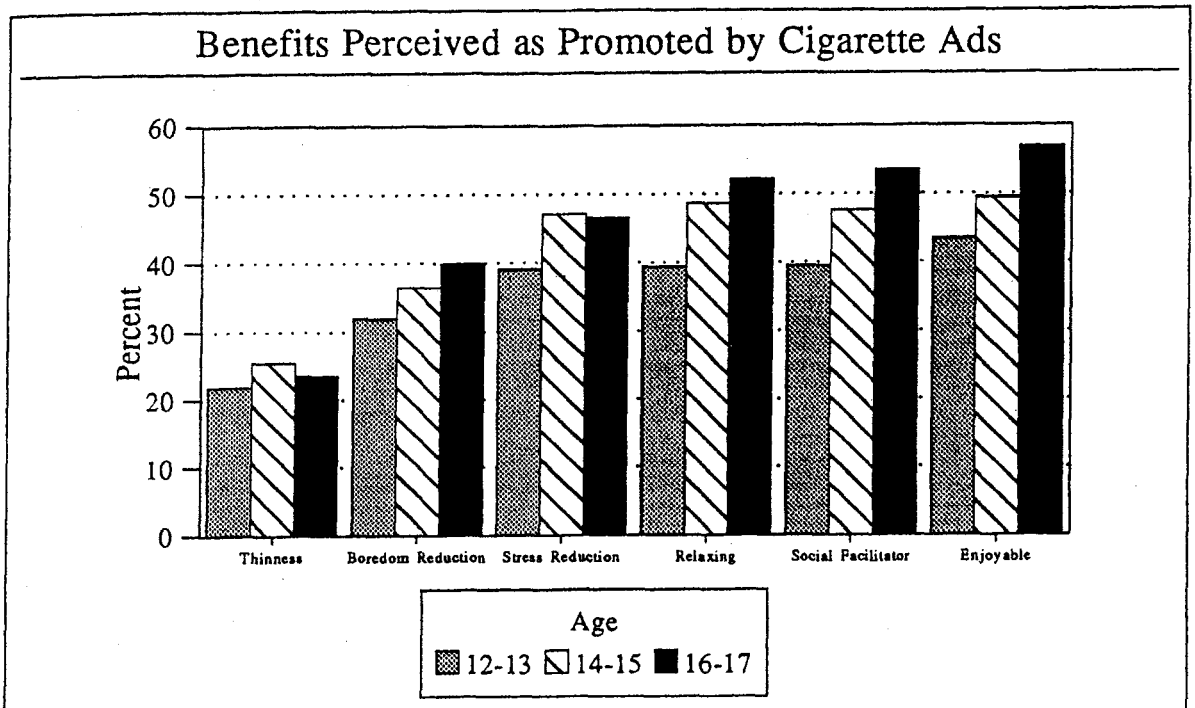


Figure 10.4

Source: CTS 1992

The Impact of Nominating Multiple Cigarette Advertisements on Perceptions of Advertising Themes

Is the reception of positive messages about smoking from advertising a cumulative effect that is based on exposure to more than one cigarette advertisement? This question is addressed in

Figure 10.5, which examines the relationship between the number of brand advertisements recalled and the perception that advertising promotes the benefits of smoking. As shown, a 12- or 13- year-old teenager who could recall at least three cigarette brand advertisements was nearly eight times more likely to feel that cigarette advertising promoted the benefits of smoking compared to teenagers in this age group who could not recall an advertisement.

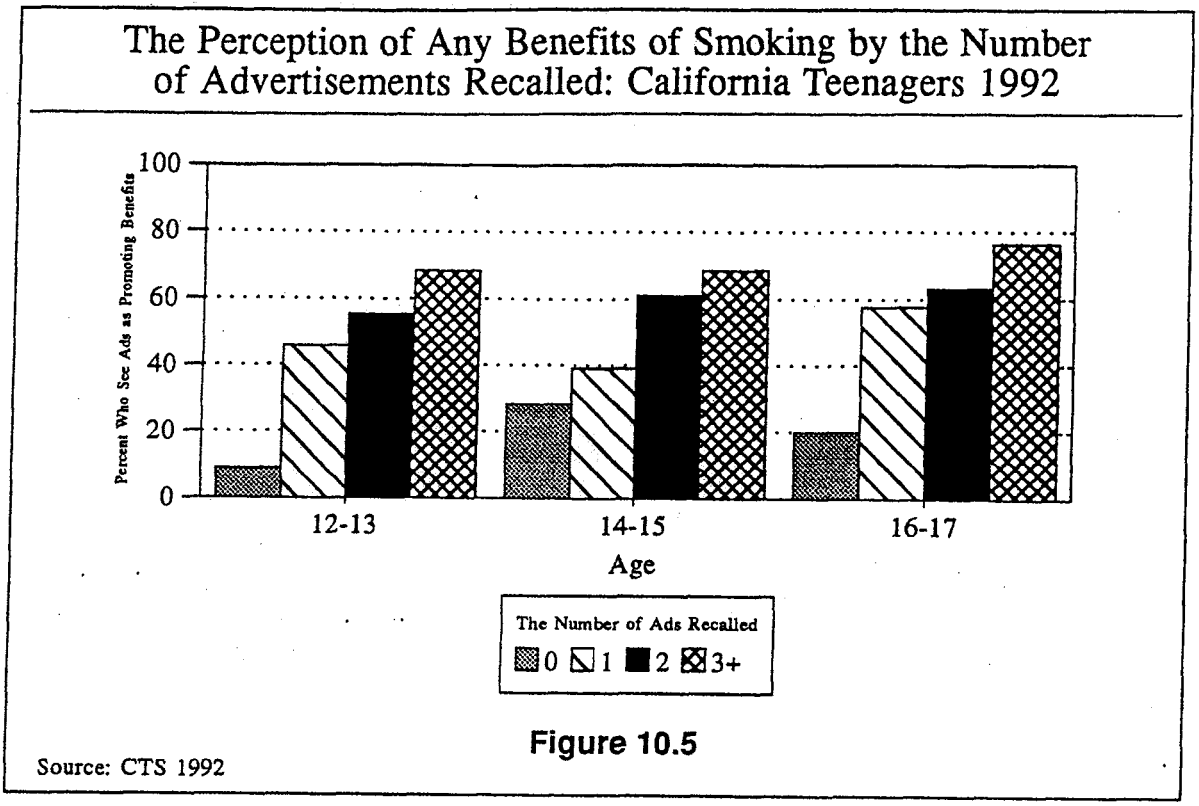


Figure 10.5

CAN THE PERCEPTION OF BENEFITS OF SMOKING BE EXPLAINED BY EXPOSURE TO OTHER SMOKERS IN THE SOCIAL ENVIRONMENT?

It may be argued that information about the benefits of smoking is acquired primarily from friends who smoke or from smokers in the family, rather than from tobacco advertising. To address this issue, adolescents were divided into two groups: those who knew at least one smoker (Figure 10.6) and those who knew no one who smoked (Figure 10.7). These figures present the relationship between the perception that tobacco advertising promotes the benefits of smoking and the personal belief that smoking is beneficial.

Among adolescents who knew smokers (Figure 10.6), 56% of those who did not think that cigarette advertising promoted any of the benefits of smoking saw smoking as beneficial. Thinking that advertising promoted any smoking benefits increased by one third the proportion seeing smoking as beneficial to 73%. This finding occurred for each benefit individually. The perception that advertising promoted the benefit markedly increased the proportion of adolescents who attributed that benefit to smoking. The proportion doubled when the benefit was weight

control; it increased by 60% when the benefit was handling stressful situations; and increased by 40% when the benefit was social facilitation.

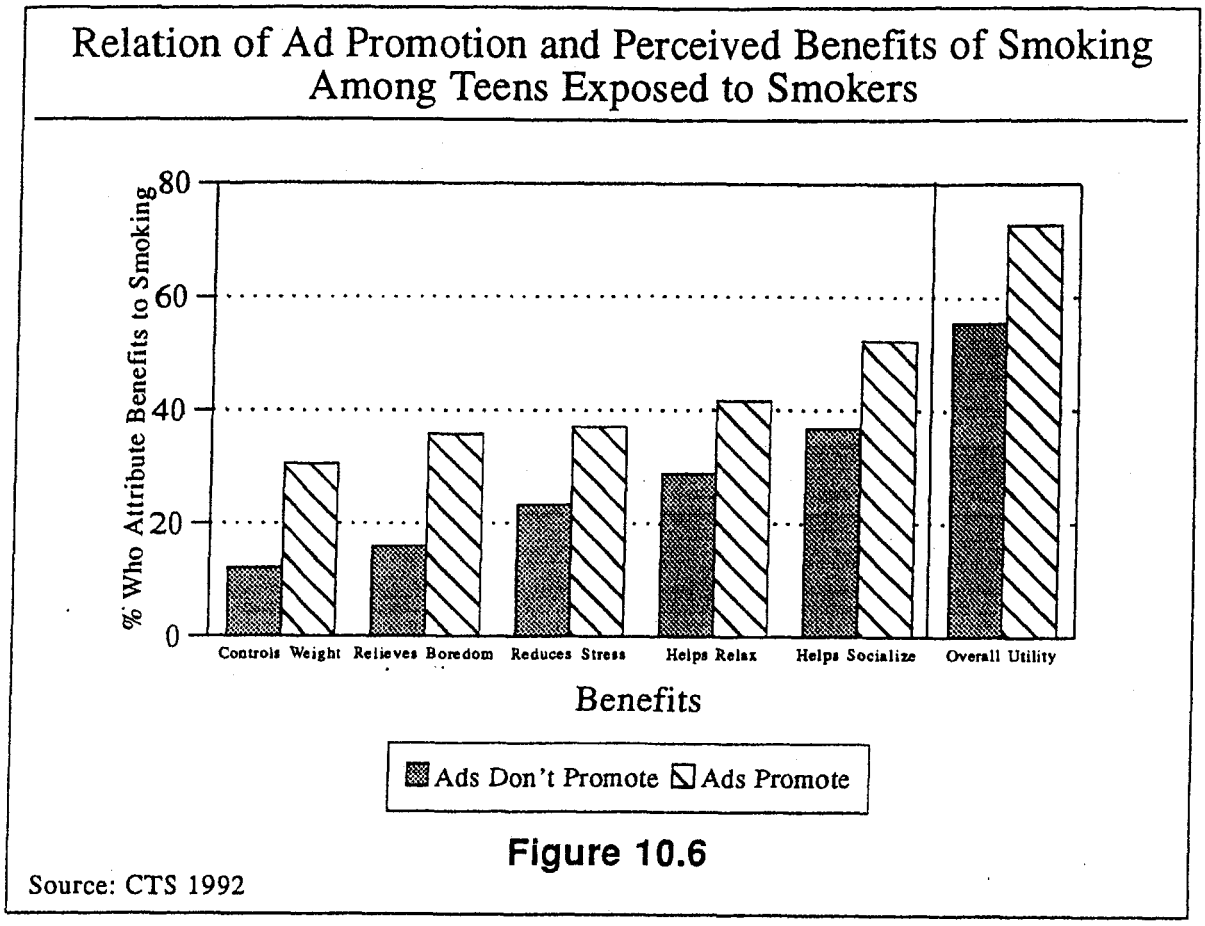


Figure 10.6

Source: CTS 1992

Among adolescents who knew no one who smoked (Figure 10.7), 28% of those who did not think that advertising promoted any smoking benefits saw smoking as beneficial. Among those who saw advertising as promoting any benefit, this proportion increased almost threefold to 76%. Again the effect of perceiving advertising as promoting a benefit had a marked effect on the proportion of adolescents who attributed that benefit to smoking. The proportion increased sixfold when the issue was weight control; it more than doubled when the benefit was stress control; and it increased threefold when the benefit was to increase confidence in social settings.

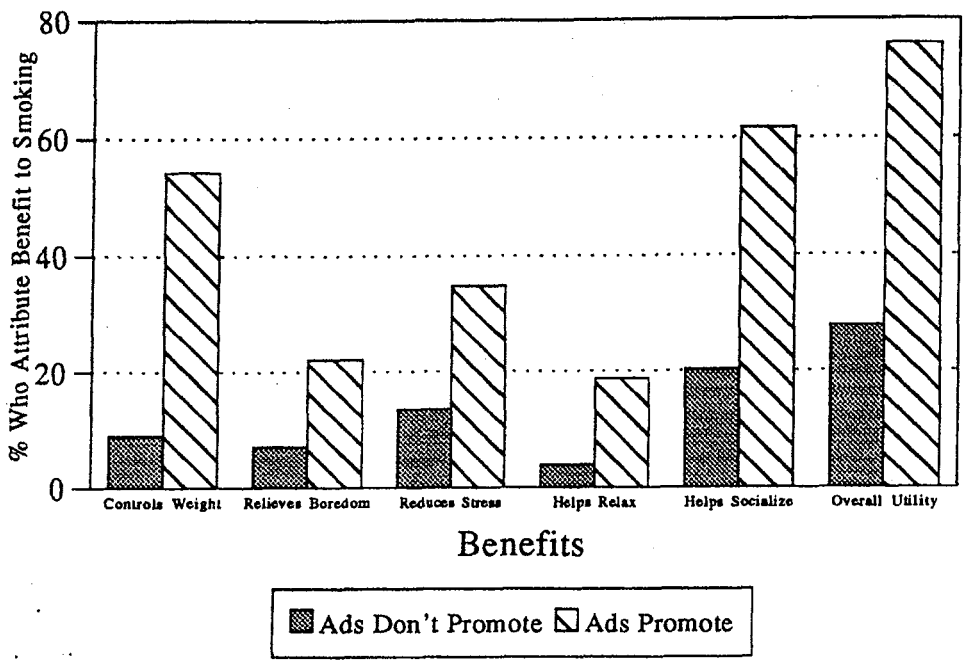


Figure 10.7

Source: CTS 1992

We can assess the differential effect of knowing a smoker with the effect of seeing advertising by comparing those who did not perceive advertising as promoting smoking benefits in Figure 10.6 with those who did in Figure 10.7. We have reproduced these data in Figure 10.8. Knowing someone who smoked had a larger effect than advertising only in attributing relaxation as a benefit of smoking. For each other perceived benefit, the effect of advertising was greater than the effect of knowing a smoker. The effect of advertising was particularly striking for the attributing of weight control and social facilitation as benefits of smoking.

The Differential Effect of Advertising and Knowing a Smoker on Benefits Attributed to Smoking

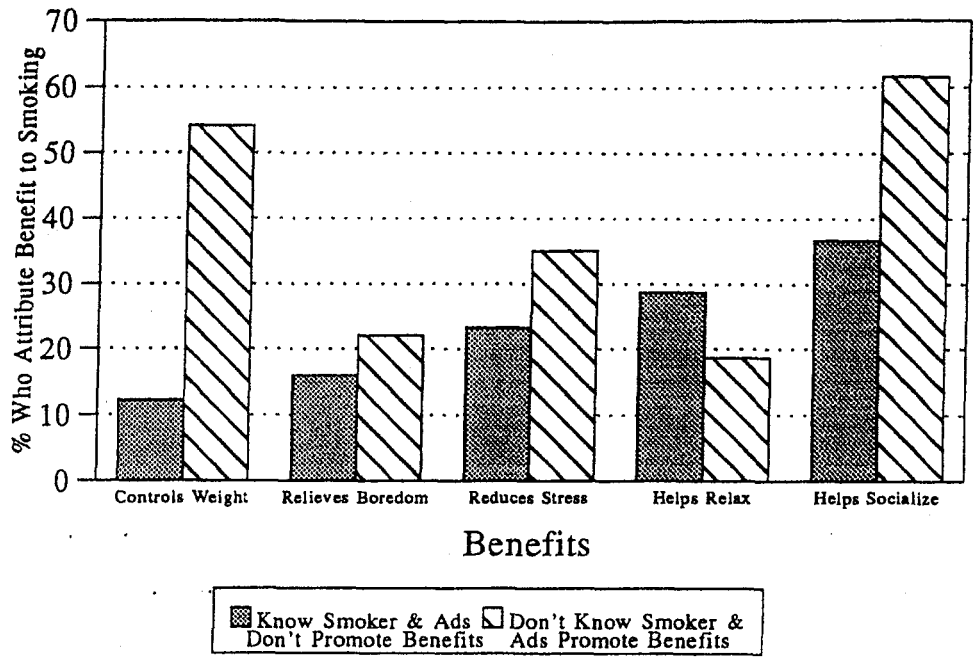


Figure 10.8

Source: CTS 1992

SUMMARY OF FINDINGS

1. Tobacco advertising reaches the very young. Audience awareness of cigarette advertising for the most popular brands is already well established in young adolescence. More than 90% of 12- to 13-year-old children could nominate a brand that was advertised. The cigarette brands most frequently recalled were Camel and Marlboro.

2. The cartoon character, Joe Camel, is particularly salient to the very young. Adolescents under 17 years chose the Camel advertisements as their favorite advertisements at a rate far exceeding that for any other cigarette brand. Among 12- to 13-year-olds, Camel advertisements were chosen as their favorite advertisements almost four times as often as Marlboro advertisements.

3. Salient advertising may promote future smoking. Having a favorite brand of advertisement doubled the proportion of adolescents over the age of 14 who were susceptible to smoking. It also had a marked effect on the susceptibility of 12- to 13-year-old children.

4. Evidence suggests that tobacco advertising may encourage teenagers to smoke by associating smoking with benefits that they want. Adolescents across age groups were overwhelmingly in agreement that tobacco advertising promotes specific benefits of smoking. The more cigarette advertisements adolescents recalled, the more likely adolescents were to believe that advertising promotes the benefits suggested in the survey.

5. Cigarette advertising appears to be a powerful independent source of information about the benefits of smoking for adolescents, beyond the information they receive from smokers they know. Cigarette advertising was especially associated with attributions that smoking was beneficial for increasing confidence in social settings and in weight control. Having a smoker in the social environment was especially associated with the attribution that relaxation was a benefit of smoking.

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A Historical Analysis of Tobacco Marketing and the Uptake of Smoking by Youth in the United States: 1890–1977

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This article presents evidence for sex-specific temporal associations between major cigarette marketing campaigns and increases in youth smoking initiation using national survey data for 1910–1977 (N = 165,876). Considerable smoking initiation occurred in males under 18 and born before 1890 when marketing focused only on males. Initiation in male youth increased greatly during 1910–1919; in 1912, R. J. Reynolds launched its unprecedented campaign for Camel brand. Initiation in female youth began in the mid-1920s, coincident with the Chesterfield and Lucky Strike women's marketing campaigns. In the late 1960s, smoking uptake among young females again increased rapidly, coincident with large-scale marketing of women's brands. Male initiation did not increase with these campaigns. Thus, in each instance, major marketing impact occurred in youth smoking initiation only in the sex group targeted.

Key words: smoking initiation, tobacco advertising

The role of tobacco marketing practices in promoting adolescents to smoke is a hotly debated public policy issue (Beales, 1994; Boddewyn, 1993; Davis, 1987; Pierce et al., 1991; Pollay, 1994; Rafferty, 1989). The tobacco industry, perhaps more than any other, has been characterized since its inception by a strong and aggressive use of marketing practices, particularly advertising (Goodrum & Dalrymple, 1990). Advertising and promotion are an important part of everyday business practice, in which companies attempt to influence the purchasing behavior of potential consumers (Kotler, 1991). Their purpose is either to bring new consumers into the marketplace, stimulating primary demand (Ray, 1982), or to convince current consumers to switch from another product to theirs, stimulating secondary demand (McCarthy & Perreault, 1984).

The tobacco industry argues that advertising and promotion are only effective in creating this latter, secondary demand. Under this argument, the primary stimulation of demand must result from other societal forces such as exposure to smokers. Public health advocates accuse the industry of successfully stimulating primary demand among those to whom it is illegal to sell cigarettes. The vast majority of smokers begin experimenting with cigarettes while they are adolescents (U.S. Department of Health and Human Services [USDHHS], 1994) even though laws against the sale of cigarettes to minors have been in place for most of this century (USDHHS, 1989b). Furthermore, about 70% of persons who experiment with cigarettes progress to become addicted to tobacco (Burns & Pierce, 1992; Russell, 1990) and may smoke for 30 to 40 years.

A series of studies on the content and placement of cigarette advertisements over the past 30 years has convinced many public health advocates that cigarette advertising specifically targets adolescents (Albright, Altman, Slater, & Maccoby, 1988; Altman, Slater, Albright, & Maccoby, 1987; King, Reid, Moon, & Ringold, 1991; Mazis, Ringold, Perry, & Denman, 1992; Schooler & Basil, 1990; Schooler, Basil, & Altman, 1991). Other studies have demonstrated high recognition levels of cigarette advertisements among children and adolescents (DiFranza et al., 1991; Fischer, Schwartz, Richards, Goldstein, & Rojas, 1991; Pierce et al., 1991, 1993). However, although this evidence has been remarkably consistent, it has not been sufficient to influence the Federal Trade Commission to take action (Federal Trade Commission, 1994).

In this article, we investigate the historical evidence for the effect of major tobacco marketing campaigns on age- and gender-specific rates of smoking uptake. We have chosen to analyze five time periods, four of which coincide with major marketing campaigns designed to stimulate demand for cigarettes within one gender or the other. The cigarette industry did not become established until after the Philadelphia Exposition in 1876 (Tilley, 1948). Beginning in the 1880s, aggressive cigarette marketing was used to build a consumer market among males (Robert, 1967). Marketing was a major weapon used to consolidate a business monopoly in the late 1880s, and there were no major innovations in marketing until the court-ordered break-up of the Tobacco Trust in 1911 (Wagner, 1971). The period before 1910 is designated Period 1 for the

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analyses in this article. The dissolution of the tobacco monopoly led to the development and effective promotion of the Camel brand of cigarettes by the R. J. Reynolds Tobacco Company beginning in 1911. Tobacco consumption surged from 1912 to 1923, with Camel capturing nearly half of the market (Tennant, 1950). Marketing strategies continued to focus only on men (Sobel, 1978; Tilley, 1985). The period from 1910 to 1925 is considered Period 2. Starting in 1926, the cigarette companies began to selectively target women with their cigarette marketing (Tennant, 1950; Whelan, 1984); accordingly, the interval from 1926 to 1939, immediately before World War II, is considered Period 3. During the 1940s, 1950s, and well into the 1960s, cigarette marketing was endemic across all media and was not focused at any particular population subgroup; this period is designated Period 4. The second wave of marketing designed to stimulate demand among women began with the introduction of specific women's brands of cigarettes in 1967 (Albright et al., 1988; Ernster, 1985). In a previous article, we showed that this campaign was associated with an increase in smoking uptake by adolescent girls, which lasted through the mid-1970s (Pierce, Lee, & Gilpin, 1994). Accordingly, the period from 1968 through 1977 is designated Period 5 for this study.

Method

Data Sources

Incidence of smoking data was determined from national surveys of adults that included an age of initiation question. These included the first national smoking survey undertaken as a supplement to the Current Population Survey (CPS) in 1955 and the smoking supplements to the National Health Interview Surveys (NHIS) in 1970, 1978, 1979, 1980, 1987, and 1988. All of these surveys contained probability samples of the adult, civilian, noninstitutionalized U.S. population. The original data from the approximately 45,000 interviewees of the 1955 survey no longer exist. Accordingly, we use summary tables (Haenszel, Shimkin, & Miller, 1955) and restrict our consideration of these data to the earliest study time periods. To estimate trends in the later four time periods of the study, we combined data from the six NHIS, each of which had a sample size varying between 10,000 and 80,000. Some but not all of the surveys interviewed people as young as 18 years of age, and to avoid any bias that might result from such an inconsistency, we restricted our consideration to self-respondents who were at least 20 years of age at the time of the interview for a total sample size of 165,876. Sampling methods for the NHIS change every decade, and details concerning the survey methodology are reported elsewhere (Pierce, Fiore, Novotny, Hatziandreu, & Davis, 1989; USDHHS, 1985, 1989c). All surveys had reported response rates in excess of 86%.

All surveys included the question, "Have you smoked at least 100 cigarettes in your entire life?" Those who answered "yes" were classified as "ever smokers." Ever smokers were then asked, "How old were you when you started smoking cigarettes fairly regularly?"

All of the NHIS have composite weights that can be used to generate population-based estimates. Base weights were calculated to reflect the probability that a person was sampled, and these weights are further adjusted to reflect the U.S. population at the time of the survey (USDHHS, 1985, 1989c).

Initiation Rate Computation

We reconstructed the age of each respondent in all the relevant surveys during each calendar year from 1910 through 1977. To define the age-specific pool of individuals eligible to start smoking during each 2-year interval we computed the sum of the weights for those of that age who had not started smoking up to that particular interval. Also, if someone of a given age–sex–race group did begin to smoke in that interval, their sample weight was added to the pool of initiators for that interval. (Individuals were not included in the eligible or initiator pools if their age in the year when they were surveyed was less than the age being considered.) We then summed the year-specific eligible and initiator pool weights over all ages of interest and computed the rate by dividing the total initiator pool by the total eligible pool. We plot male and female initiation rates for each 2-year interval between 1910 through 1911 and 1976 through 1977 for youth and young adults aged 10 to 13, 14 to 17, 18 to 21, and 22 to 25 years. This time interval covers the latter four time periods described in the introduction. The four age groups are somewhat arbitrary but include an equal number of ages and make a clear distinction between age groups for whom the purchase of cigarettes is and is not legal.

Reconstructing the incidence of smoking by this method may be subject to recall bias, which would be a particular problem if the recalled age of initiation for a birth cohort varied with age of the respondent when surveyed. We examined this issue previously, and although there is evidence of digit preference (i.e., more often reporting ages 16 or 18 rather than 17), the pattern of recall for an age cohort is remarkably consistent regardless of the age of the smoker or former smoker when surveyed (Gilpin, Lee, & Pierce, 1994).

The initiation rates computed for the earlier decades may be underestimated because of differential mortality among smokers (Haenszel, 1966). Many smokers who started smoking during the early decades may not have been alive to be surveyed by the 1970s and 1980s. This might be particularly true for heavy smokers, who may have started to smoke at a younger age than lighter smokers (USDHHS, 1989b). If this is the case, then the initiation rates may actually be higher, especially among those 10 to 13 and 14 to 17 years of age.

Statistics

We computed exact binomial 95% confidence intervals for the initiation rates computed from the NHIS data (Larsen & Marx, 1986).

Within each period, regression slopes for initiation rate were calculated separately for males and females using a weighted (inverse of standard error) least squares fit. Slopes were compared between genders for a given time period and within gender for adjacent time periods using a simple normal deviate test (difference ÷ standard error of difference; Neter, Wasserman, & Kutner, 1985). The p values are two-tailed. Although this periodwise regression analysis may obscure trends that begin in one period and continue into the next, it allows approximate quantification of general trends over the time period of interest and provides some basis for statistical comparison. Only linear effects were examined, and moving the boundaries of one period either way did not substantially change the results; the boundaries were chosen on the basis of the timing of advertising campaigns, but in some cases a year earlier or later was included to obtain as many data points as possible in the shorter periods.

Results

Trends From the 1955 CPS: Periods 1 and 2

Among both males (Figure 1) and females (Figure 2), each successive birth cohort reached higher levels of smoking and at

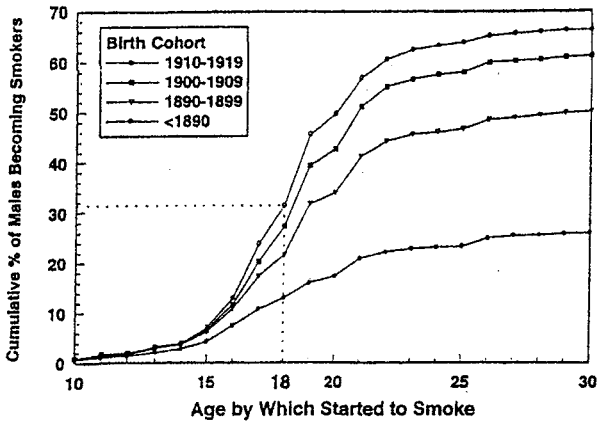


Figure 1. Cumulative percentage of males becoming smokers by age. Data obtained from Haenszel, Shimkin, and Miller (1955).

younger ages, but females initiated considerably less than males. Respondents who were over the age of 65 years in the 1955 CPS were born before 1890; hence, all were 18 years of age or older by 1908. In this birth cohort, 4% of the males started to smoke before the age of 15 years and 13% started before the age of 18 years (Figure 1). Less than 0.5% of females in this birth cohort started smoking before the age of 18 years (Figure 2). Respondents who were aged 55 to 64 years when surveyed were born between 1890 and 1899 and were adolescents between 1910 and 1920. Among this birth cohort, 22% of males reported that they had started to smoke by 18 years of age. This represents a 69% increase from males born before 1890 (Figure 1). Subsequent cohorts of males showed much more modest increases in initiation by age 18 years.

Among females, the major increase in initiation by age 18, compared with the next older cohort, was for the cohort born between 1910 and 1919 (Figure 2). This cohort of females was of adolescent age during the 1920s. The percentage of females in this cohort who started to smoke by age 18 was 7%, compared with 2% for those born between 1900 and 1909, a 250% increase (see also the section on Period 3 below).

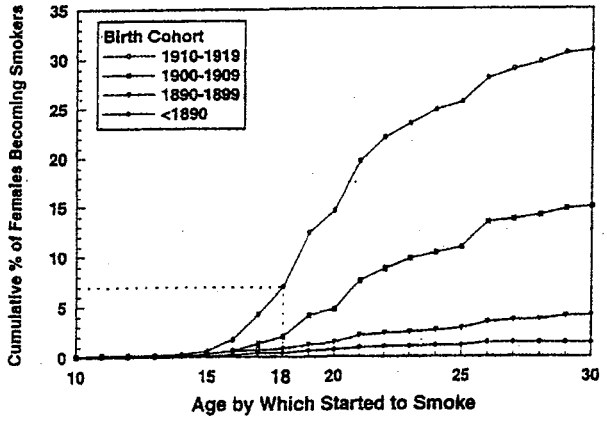


Figure 2. Cumulative percentage of females becoming smokers by age. Data obtained from Haenszel et al. (1955).

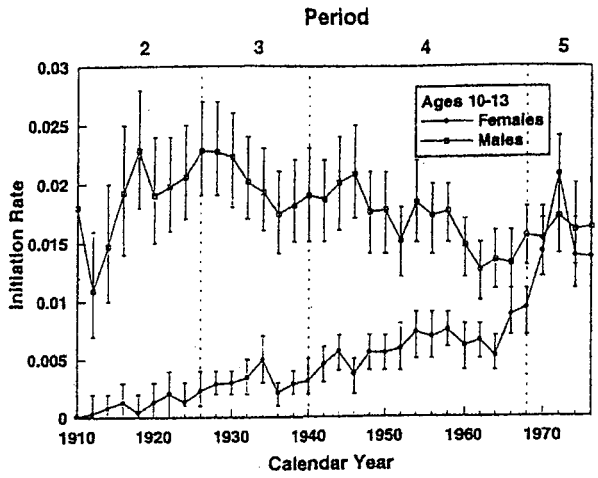


Figure 3. Incidence of initiation by calendar year among adolescents aged 10 to 13 years. Data obtained from the National Health Interview Survey for 1970, 1978, 1979, 1980, 1987, and 1988 (U.S. Department of Health and Human Services, 1979, 1981a, 1981b, 1988, 1989a; U.S. Department of Health, Education, and Welfare, 1972).

Trends in Initiation Rates From the NHIS in Period 2 (1910–1925)

Figures 3 to 6 show the smoking initiation rates for males and females in each of the four age groups: 10 to 13, 14 to 17, 18 to 21, and 22 to 25 years. Table 1 presents the periodwise regression results, including the statistical comparisons of trends (slopes). The computed linear slopes for each gender in each time period are presented together with p values (in parentheses) to test whether the slopes are different from zero. A significant positive slope indicates that the initiation rate is increasing with time during the period, a significant negative slope indicates that it is decreasing, and a nonsignificant slope

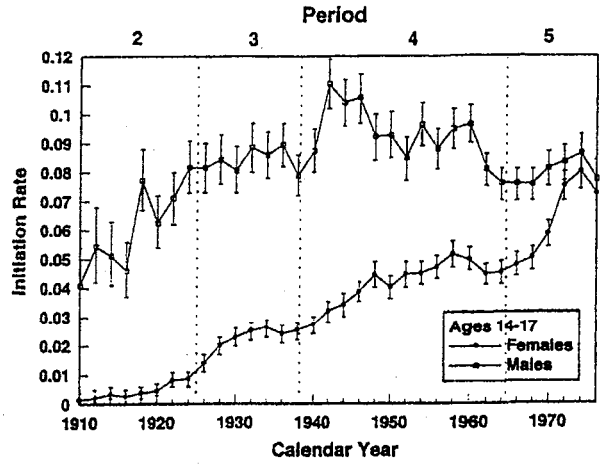


Figure 4. Incidence of initiation by calendar year among adolescents aged 14 to 17 years. Data obtained from the National Health Interview Survey for 1970, 1978, 1979, 1980, 1987, and 1988 (U.S. Department of Health and Human Services, 1979, 1981a, 1981b, 1988, 1989a; U.S. Department of Health, Education, and Welfare, 1972).

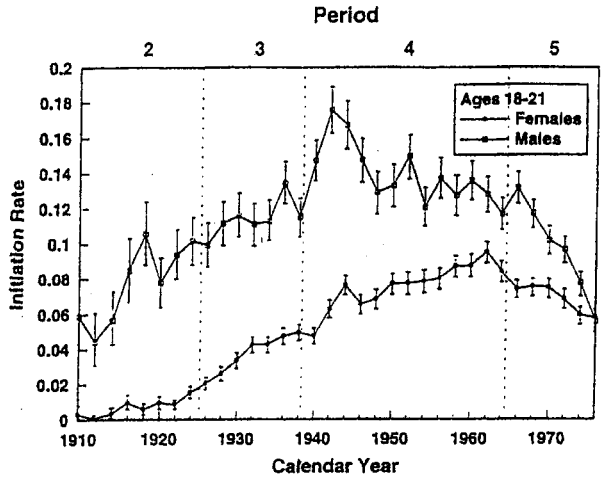


Figure 5. Incidence of initiation by calendar year among young adults aged 18 to 21 years. Data obtained from the National Health Interview Survey for 1970, 1978, 1979, 1980, 1987, and 1988 (U.S. Department of Health and Human Services, 1979, 1981a, 1981b, 1988, 1989a; U.S. Department of Health, Education, and Welfare, 1972).

indicates that no discernible trend in the rates is present during that period. The p values for the comparison of males to females for each age group within each time period are given in braces. Finally, p values for within-gender comparisons for the slope in one time period to the slope in the immediately preceding period are shown in brackets.

In Period 2, initiation rates for 10- to 13-year-old males and females remained well under 3% per year (Figure 3). Males appeared to be increasing initiation faster than females, but the computed slopes were not statistically different ($p = .09$, Table 1). Males 14 to 17 years old showed a marked increase in initiation, with females only increasing slightly (Figure 4); the computed slopes for males and females were significantly different ($p < .01$, Table 1). The same general pattern was observed among those aged 18 to 21 years (Figure 5), with the slopes for males and females again significantly different ($p = .01$, Table 1). Although the initiation rate slope among males aged 22 to 25 years appeared greater than that of females (Figure 6), it was not different from zero ($p = .45$, Table 1), and the gender difference was not significant ($p = .60$, Table 1).

Trends in Initiation Rates From the NHIS in Period 3 (1926–1939)

In Period 3, 10- to 13-year-old males showed a decline in initiation rate (negative slope), whereas females showed no trend (slope not different from zero); the gender comparison was significant ($p < .01$). Among 14- to 17-year-olds, males showed no change in initiation, whereas females exhibited an increase (significant positive slope); however, the gender difference was not significant ($p = .16$). For the 18- to 21-year-old age group, males showed no significant increase in initiation rate (slope not different from zero), whereas females showed a pronounced and significant increase, but again, the gender difference was not significant ($p = .27$). Among 22- to 25-year-olds, the slopes were similar for males and females.

Compared with Period 2, during Period 3, males aged 17 and younger showed a significant decrease in initiation rate (smaller slope, $p < .01$), and females aged 18 and over showed a significant increase (greater slope, $p < .01$ for females 18–21 years and $p = .05$ for females 22–25 years, Table 1). Trends (slopes) in other age–gender groups for Period 3 were not significantly different from those in Period 2.

Trends in Initiation Rates From the NHIS in Period 4 (1940–1967)

Males in all four age groups showed declining initiation rates (negative slopes) during Period 4, whereas females in the younger three age groups showed increases (positive slopes). Females aged 22 to 25 years, the oldest age group studied, showed no change in initiation rate (slope not different from zero). The slopes for males and females were statistically significant in all age groups (Table 1), emphasizing the different behavior for males and females during this period.

Compared with Period 3, during Period 4, males aged 10 to 13 years showed a slowed rate of decrease in initiation (smaller negative slope), whereas initiation among males over 13 years old changed from a positive slope to a negative one. All these slopes were significantly different for Period 4 compared with Period 3 ($p < .01$, Table 1). Females under 18 years old showed no significant difference in rate of initiation in Period 4 compared with Period 3. Among females aged 18 to 21 years, the rate of increase slowed significantly (slope less positive) in Period 4 compared with Period 3 ($p < .01$, Table 1). Among females aged 22 to 25 years, initiation was stable during Period 4 (no trend), compared with the increase (positive slope) observed in Period 3 ($p < .01$, Table 1).

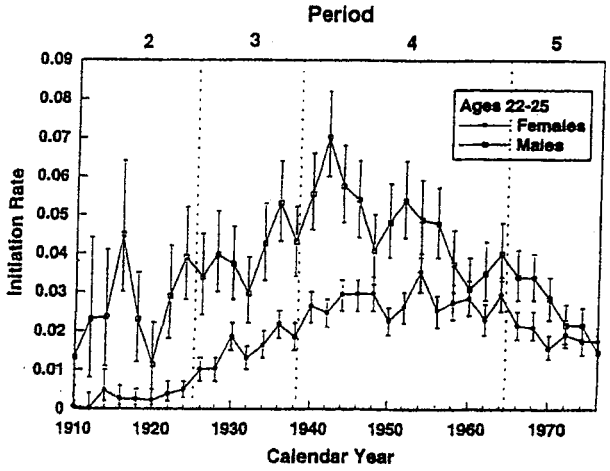


Figure 6. Incidence of initiation by calendar year among young adults aged 22 to 25 years. Data obtained from the National Health Interview Survey for 1970, 1978, 1979, 1980, 1987, and 1988 (U.S. Department of Health and Human Services, 1979, 1981a, 1981b, 1988, 1989a; U.S. Department of Health, Education, and Welfare, 1972).

Table 1
Results of Periodwise Regression Analyses

Age group	Period 2 Slope (p_0)	[p_{23}]	Period 3 Slope (p_0)	[p_{34}]	Period 4 Slope (p_0)	[p_{45}]	Period 5 Slope (p_0)
10–13 years							
Male	.05 (.08)	[**<.01**]	−.05 (**<.01**)	[**<.01**]	−.03 (**<.01**)	[**<.01**]	.01 (.39)
Female	.01 (**.02**)	[.29]	.00 (.89)	[.11]	.01 (**<.01**)	[.28]	.05 (.47)
$p_{M\ vs.\ F}$	{.09}		{**<.01**}		{**<.01**}		{.53}
14–17 years							
Male	.26 (**<.01**)	[**<.01**]	.01 (.85)	[**.04**]	−.09 (**<.01**)	[.53]	.05 (.54)
Female	.05 (**<.01**)	[.23]	.08 (**.03**)	[.80]	.07 (**<.01**)	[**<.01**]	.35 (.06)
$p_{M\ vs.\ F}$	{**<.01**}		{.16}		{**<.01**}		{**.03**}
18–21 years							
Male	.38 (**.01**)	[.10]	.16 (.11)	[**<.01**]	−.14 (**<.01**)	[**<.01**]	−.75 (**<.01**)
Female	.09 (**<.01**)	[<<.01]	.25 (**<.01**)	[**<.01**]	.11 (**<.01**)	[**<.01**]	−.25 (**<.01**)
$p_{M\ vs.\ F}$	{**.01**}		{.27}		{**<.01**}		{**<.01**}
22–25 years							
Male	.08 (.45)	[.83]	.10 (.16)	[**<.01**]	−.11 (**<.01**)	[**<.01**]	−.22 (**<.01**)
Female	.03 (**.03**)	[**.05**]	.08 (**.03**)	[**<.01**]	−.01 (.49)	[.64]	−.02 (.59)
$p_{M\ vs.\ F}$	{.60}		{.77}		{**<.01**}		{**<.01**}

Note. The p values for the linear slopes are in parentheses; the p values for comparison of males to females are in braces, { }; the p values for within-gender comparisons for slope in one time period to slope in the immediately preceding time period are in brackets, [ ]; the p values $\leq .05$ are shown in boldface type. (p_0) = p value for test of slope = 0; $p_{M\ vs.\ F}$ = p value for test of $\text{slope}_{Male} = \text{slope}_{Female}$; [$p_{ij}$] = p value of test of $\text{slope}_{Period\ i} = \text{slope}_j$.

Trends in Initiation Rates From the NHIS in Period 5 (1968–1977)

Females aged 10 to 13 years showed an increase in initiation, which peaked in 1972 to 1973. Thus, the slope for Period 5 was only slightly positive and not different from the slope for males ($p = .53$). Females aged 14 to 17 years showed a considerable increase in initiation (positive slope), whereas the rate among males remained essentially stable; the difference in these slopes was significant ($p = .03$). Males and females 18 years of age and older showed declining initiation rates (significantly negative slopes), although the decreases were steeper (slope more negative) among males than among females ($p < .01$).

Compared with Period 4, during Period 5, males aged 10 to 13 years ceased their decline in initiation; the slope had been negative in Period 4 but was not different from zero in Period 5 ($p < .01$). Males aged 14 to 17 years showed about the same rate of decline; and males over 17 years increased their rate of decline substantially (slope more negative). Slopes for males in these older age groups were significantly different in Period 5 compared with Period 4 ($p < .01$). Females aged 14 to 17 years had a significantly increased rate of initiation in Period 5 compared with Period 4 ($p < .01$); and those aged 18 to 21 years showed a decrease (negative slope) in Period 5, whereas initiation had shown an increase during Period 4 ($p < .01$). Older females maintained about the same stable rate of initiation in Period 5 as they exhibited in Period 4.

Discussion

Throughout the history of the cigarette industry we have distinguished four distinct periods in which we could relate the impact of marketing strategies to the uptake of smoking. Cigarette marketing during the first two of these periods (Periods 1 and 2) focused exclusively on males. Periods 3 and 5 were characterized by innovative marketing aimed at females. Our initiation rate trend (slope) analyses clearly show that marked increases in the rate of smoking uptake in the particular gender group targeted by these campaigns were coincident with the beginning of each. Such an effect was not observed among the nontargeted gender. The following historical review describes these campaigns in more detail and relates their onset to the changes in trends in smoking initiation rates.

The early growth of the industry following the Philadelphia Exposition in 1876 included a major advertising war that preceded the formation of the monopoly, American Tobacco Company Trust, in 1889. This advertising war pitted industry leaders, whose promotion practice was to include a picture of a scantily dressed female inside each packet of cigarettes, against James Duke, who was one of the first to experiment on a large scale with a broad spectrum marketing strategy. Duke used his competitive cost advantage to seriously outspend his rivals; he has been quoted as saying he spent an unheard of $800,000 on marketing in 1889 (Robert, 1967; Wagner, 1971). During the period from 1880 to 1896, tobacco consumption increased sixfold, most of which was attributable to cigarette consumption (Haenszel et al., 1955).

There was a strong public reaction to this rapid growth in the tobacco industry. The early use of "soft pornography" as the basis for product promotion was reported to have had young boys scrambling after cigarette packs. There was widespread consternation with what was perceived to be a powerful corrupting influence of the cigarette industry on young boys. The first editorial that focused attention on this appeared in the New York Times in 1879, and as concern grew, public

statements were issued by eminent educational leaders of the day, such as the President of Stanford University and the President of the New York Board of Education. In the early 1890s, this public concern led to the formation of the popular anticigarette league. By 1910, this anticigarette league had introduced laws banning the sale of cigarettes to minors in many states. Such efforts did not prevent smoking initiation among the cohort of males born before 1890, who were adolescents during this period; 13% of males in this cohort had started smoking regularly before the age of 18 years (Figure 1), compared with less than 0.5% in females (Figure 2).

Shortly after the court-ordered break-up of the tobacco industry monopoly in 1911, the R. J. Reynolds Tobacco Company introduced the Camel brand of cigarettes, which contained a sweeter blend of tobaccos than other brands of the time. The marketing campaign that launched this brand was undertaken with an expensive town-by-town promotional approach. The teaser ("Camels Are Coming!") was followed by unprecedented advertising of the brand in print and billboard media. In 1913, the R. J. Reynolds Tobacco Company spent nearly $800,000 on advertising and promotion; this amount increased to $2.2 million by 1916 and to $8.7 million by 1921 (Figure 7; Tilley, 1985). The money spent on marketing leveled off at about 60% of total profits. From 1913 to 1921, the R. J. Reynolds Tobacco Company's market share rose from 0.2%, representing the sale of 1.5 million Camel cigarettes, to 50% of all cigarette sales, or 18.3 billion Camel cigarettes (Tilley, 1985).

In 1915, Reynolds was interviewed on how he came by his strong beliefs in advertising. He responded that he started with a small advertising budget for plug tobacco in 1894 and observed that his sales rose considerably. A fourfold increase in his advertising budget in the following year was associated with a doubling of his sales. According to the *Winston-Salem Journal* in 1915, he said that, after that, he did not need any more proof of the power of advertising (Tilley, 1985).

The further increase in smoking uptake among adolescent males in Period 2 coincided with this intensive marketing campaign. Males in the 1890–1899 birth cohort who were adolescents during Period 2 showed a marked increase in initiation compared with those born before 1890 (Figure 1), but initiation was still low in this cohort of females (Figure 2). In addition, Figures 3–5 indicate that the initiation rates for young males in Period 2 were increasing much more rapidly than for females, and the statistical comparisons in Table 1 support this observation. The sale of Camel cigarettes was boosted (Figure 7) by the changing image of cigarettes in the latter part of the decade, during World War I. Cigarettes were viewed as an aide to help soldiers endure the strain at the front. In the words of a Lynn, Massachusetts, Evening Post reporter, a narcotic was needed to "soothe the nerves somewhat, to deaden the loneliness" (Sobel, 1978).

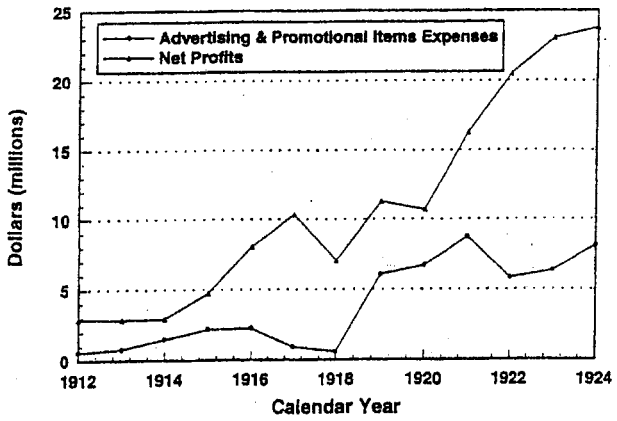


Figure 7. Sales of Camel cigarettes and amount spent by R. J. Reynolds to market Camel cigarettes by calendar year. Data obtained from Tilley (1985).

The Red Cross became one of many associations raising money to dispatch cigarettes to allied soldiers. Across the United States, there appeared canteens at which soldiers received free chewing gum, toothpaste, and cigarettes (Kennett, 1987). During this period, the rate of smoking initiation among females remained low and fairly steady.

In the 1920s, the cigarette industry was dominated by three brands (Camel, Chesterfield, and Lucky Strikes) that appeared indistinguishable from each other on blindfolded consumer testing (Tennant, 1950). Furthermore, the industry maintained a price equivalence between these brands, focusing competition only in their marketing strategies. In the first 40 years of the cigarette industry, cigarette smoking had been characterized as a habit to be pursued only by men. In 1919, the Lorillard Company produced a cigarette ad aimed specifically at women, but public outcry led to its prompt withdrawal. Apparently the public was not yet ready to accept the idea of women smoking.

This situation had changed by the mid-1920s when Chesterfield cigarettes produced an acceptable and effective marketing campaign aimed at women with the "Blow Some My Way" message in 1926. The conduct of this campaign was associated with a 40% increase in sales over the 2-year period (Tennant, 1950). However, the major success story was the marketing campaign for Lucky Strike cigarettes developed by Albert Lasker for the American Tobacco Company. Lasker's selection as campaign director was based on his track record of successful promotion to women (Gunther, 1960). This "Reach for a Lucky Instead of a Sweet" campaign focused very pointedly on women's fear of gaining weight and was associated with a rapid rise in sales, taking the brand from sales of 13.7 billion cigarettes in 1925 (third-ranked brand) to over 40 billion and market leadership by 1930. Importantly, the R. J. Reynolds Tobacco Company, the heaviest user of cigarette marketing, did not change its marketing format to include women as a target group until 1929, the year in which it lost the market leadership. Through the early 1930s, women continued to be a major target group of cigarette marketing, and many advertising messages suggested possible health benefits of smoking.

Similar to the findings among adolescent males in Period 2, a major increase in smoking initiation among females took place during these years of Period 3. Although the slope of the initiation rates among females aged 10 to 13 years was not different from zero in Period 3, the absolute rates were much higher than in Period 2 (Figure 3). Males aged 10 to 13 years

actually changed from a state of increasing initiation (positive slope) to one of decreasing initiation (negative slope) in Period 3. Again, among females aged 14 to 17 years the magnitude of the initiation rates also increased (Figure 4) even though the rate of increase (slope) was not different from Period 2; males in this age group did not change their initiation rate during this period. Smoking uptake in underaged girls tripled over the decade, the majority of the increase occurring during the successful Lucky Strike marketing campaign. Females 18 years and older (Figures 5 and 6) increased the slope of their initiation rate compared with Period 2, demonstrating that this women's campaign also had a major impact on the uptake of smoking in older females. Older males exhibited stable rates during this period, and slopes for Period 3 were not different from those of Period 2. The specificity of major increases to females suggests that the Lucky Strike and Chesterfield marketing campaigns were successful in reaching their target audience.

Data from both the CPS and NHIS are consistent regarding these early trends. The major surge in uptake occurred among males in the decade from 1910 through 1919. Among females, however, substantial uptake occurred in the second half of the decade from 1920 through 1929, when females born from 1910 through 1919 reached late adolescence. Data on cigarette consumption also show these surges (Figure 8). Consumption rose dramatically between 1915 and 1919, when males began smoking in large numbers, and then leveled off before showing another increase in the second half of the 1920s, when more females became smokers (USDHHS, 1989b).

Consistent with what occurred during World War I, and for the same reasons, smoking initiation in males also showed a major surge during World War II (beginning of Period 4). Cigarettes were free or cheap for military personnel, and many men began to smoke while in the military (Kennett, 1987). The cigarette industry had changed since the 1930s, when a single cigarette was expected to meet all consumer tastes; companies were developing "niche" brands to complement their general brands. The proliferation of cigarette brands during this period resulted in a constant stream of advertising. In addition to print media and billboards, cigarettes were heavily advertised on radio and later on television. So much was going on that it is impossible to sort out the effects of any major advertising target emphases during Period 4 (USDHHS, 1994).

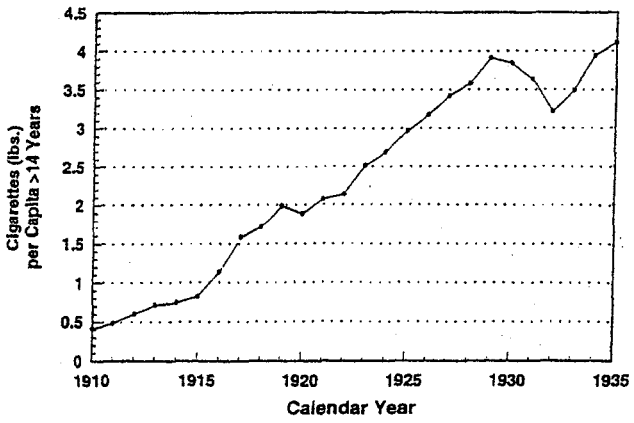


Figure 8. Per capita cigarette consumption in pounds for persons over 14 years by calendar year. Data obtained from Haenszel et al. (1955).

Beginning in 1950, there was a continuous progression of scientific studies linking smoking with disease. These studies, subjects of which were predominately men, led to the historic 1964 Surgeon General's report, which committed the government to take action against smoking to protect the public health of the population. Initiation began to decline in all age groups of males following the war, but at a much steeper rate in the older age groups. We have previously reported that initiation rates of adult males and females dropped below 1% per year by the mid-1980s (Gilpin et al., 1994). Females under 22 showed modest increases in initiation during this period (Figures 3–5).

Beginning in 1967, the Fairness Doctrine was applied to cigarette advertising on television, which resulted in the free provision of 1 community service antismoking commercial for approximately every 12 cigarette commercials (H. Geller, personal communication, September 24, 1993). This represented the first major antismoking advertising campaign, and it continued until cigarette advertising was withdrawn from the broadcast media in 1971. This campaign was associated with a major decline in per capita cigarette consumption (USDHHS, 1989b; Warner, 1977).

Throughout the 1960s, the cigarette advertising dollar was underrepresented among the print media targeted at women. Starting in 1967, the level of cigarette advertising placed in these targeted media increased to the levels expected if women were a priority target market for the cigarette industry (Warner & Goldenhar, 1992). Between 1967 and 1970, four different women's cigarette brands were launched with major marketing campaigns. However, the brands with advertising that emphasized femininity did not survive. Very quickly, the Virginia Slims brand became the "niche" market leader and its advertising stressed autonomy, glamour, and thinness. The Philip Morris Company announced that the Virginia Slims launching included the biggest introductory marketing program ever in the history of the company (Jones, 1987). The advertising theme was "You've Come a Long Way Baby," which was very successful in capturing the women's liberation zeitgeist. By the early 1970s, women's brands had reached $16 billion in sales (Jones, 1987). However, this sales level was not sustained through the general downturn of cigarette consumption that started in 1973, possibly as a lagged result of the broadcast media advertising ban.

Consequently, Period 5 contained two opposite influences that could have affected the rate of smoking uptake. The first large-scale antismoking campaign on national television could be expected to discourage nonsmokers from starting to smoke. Alternatively, the successful launching of women's brands could be expected to promote smoking initiation among females. We can study the impact of these two competing influences on adolescents and young adults by examining the initiation trends for Period 5 (Figures 3 and 4). The initiation rate among adolescent males (10 to 17 years old) remained fairly steady in this period. However, smoking initiation rates among female adolescents aged 10 to 17 years, particularly 14- to 17-year-olds, increased rapidly until 1974 to 1976. In

another study, we demonstrated this to be the case, especially for females who did not eventually attend college (Pierce et al., 1994). In contrast, initiation among 18- to 21-year-old females declined rapidly, compared with the continued slow increase during Period 4 (Figure 5). The decline among males in this age group accelerated (slope more negative than in Period 4), as it did for males aged 22 to 25 years (Figure 6). Females aged 22 to 25 years of age continued to decrease initiation at about the same rate as for Period 4 (Figure 6). Thus, the public health campaign appeared to successfully reach adults, with little apparent impact on adolescents, whereas the campaign for women's cigarette brands influenced only the adolescent component of its target audience.

Thus, it would appear that the effectiveness of tobacco marketing practices in encouraging nonsmokers to start smoking may now be limited to the adolescent population. However, every state has laws that ban the sale of cigarettes to minors (USDHHS, 1989b). These laws are blatantly disregarded by many vendors (Klonoff, Fritz, Landrine, Riddle, & Tully-Payne, 1994) who appear to be responding to adolescent demand. Tobacco marketing builds adolescent demand, and, hence, urgent public policy action is needed to extend the broadcast advertising ban to all tobacco marketing practices, including print and billboard advertising, sponsorships, sale or give-away of promotional merchandise, and point-of-sale advertising displays.

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1996 APA Convention *Call for Programs*

The *Call for Programs* for the 1996 APA annual convention appears in the September issue of the *APA Monitor.* The 1996 convention will be held in Toronto, Ontario, Canada, from August 9 through August 13. The deadline for receipt of program and presentation proposals is December 1, 1995. Additional copies of the *Call* are available from the APA Convention Office, effective in September. As a reminder, agreement to participate in the APA convention is now presumed to convey permission for the presentation to be audiotaped if selected for taping. Any speaker or participant who does not wish his or her presentation to be audiotaped must notify the person submitting the program either at the time the invitation is extended or before the December 1 deadline for proposal receipt.

Does Tobacco Advertising Target Young People to Start Smoking?

Evidence From California

John P. Pierce, PhD; Elizabeth Gilpin, MS; David M. Burns, MD; Elizabeth Whalen, MA; Bradley Rosbrook, MS; Donald Shopland; Michael Johnson, PhD

Objective.—To evaluate whether tobacco advertising encourages teenagers younger than 18 years to start smoking.

Design.—Comparison of 1990 California telephone survey data with data from a 1986 national telephone survey (both used a random-digit dialing system); 95% confidence intervals were calculated. To test our hypothesis, we considered whether the perception of advertising was related to age, whether the pattern of market share across age and sex groups followed the pattern of perceived advertising, and whether changes in market share paralleled changes in advertising as perceived by the youngest age group.

Participants.—There were 24 296 adults and 5040 teenagers.

Results.—The most advertised brands of cigarettes were Marlboro, according to 33.6% of adults and 41.8% of teenagers, and Camel, according to 13.7% of adults and 28.5% of teenagers—named most often by 12- to 13-year-olds (34.2%). The brands that were purchased most often were Marlboro and Camel. Together these were the brands of choice of 79.9% of males and 85% of females aged 12 through 17 years. Marlboro's market share increased in youths and young adults up to age 24 years and then decreased gradually with age; Camel's market share decreased abruptly with age: it was the brand of choice of 24.5%±5.8% of males aged 12 through 17 years but was chosen by only 12.7%±3.6% of males aged 18 through 24 years; for females, 21.7%±13.7% aged 12 through 17 years chose Camels, while only 5.5%±3.2% aged 18 through 24 years preferred this brand. Both Marlboro and Camel brands had a higher market share in California in 1990 compared with that for the United States in 1986. Of interest is that the market share for Camel increased among the younger smokers but was more evenly distributed for Marlboro.

Conclusions.—Perception of advertising is higher among young smokers; market-share patterns across age and sex groups follow the perceived advertising patterns; and changes in market share resulting from advertising occur mainly in younger smokers. Cigarette advertising encourages youth to smoke and should be banned.

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CIGARETTES are one of the most heavily marketed consumer products in the United States.[1,2] For nearly two decades, public health advocates and representatives of the tobacco industry have hotly debated whether cigarette advertising encourages children to start smoking.[3,4] The central concern of the public health community is that the themes and images used in tobacco advertising are attractive to children and inspire them to experiment with smoking, which is highly addictive.[1,5-7] The tobacco industry has argued that advertising is necessary for tobacco companies to maintain market shares of this legal product and has claimed that advertising by individual tobacco companies targets adults only and encourages regular smokers to switch brands or to maintain brand loyalty.[8-10] Despite evidence that 90% of recent adult smokers started smoking regularly before the age of 18 years,[2,11] both tobacco product manufacturers and representatives of the major association of advertisers have consistently denied that cigarette advertising targets adolescents or encourages them to smoke or to use other tobacco products.[2]

The effects of tobacco advertising have become increasingly important and relevant issues, as can be seen by recent events in Canada. In that country, public health advocates successfully used the argument that advertising promotes smoking by minors to convince the national legislature to ban all tobacco advertising. The tobacco industry appealed, and in the first round of appeal, the judge overturned the law (although the law remains in effect pending the next round of appeal). This judicial decision was based on acceptance of the tobacco industry's argument on the purpose of its advertising.[12] This decision demonstrates the need to document further the evidence that tobacco advertising does target young people to smoke.

See also pp 3145, 3149, and 3185.

We hypothesized that credible evidence against tobacco advertising would include (1) recent survey data that showed that heavily advertised tobacco brands were noticed more by minors than by older adults; (2) market share of cigarette brands in minors that reflected the pattern of recognition of advertising; and (3) the market share of a cigarette brand that only recently has targeted young people has increased disproportionately in the young. To address this third issue, it would be important to choose a brand for which there has been a major new advertising campaign in recent years and compare its performance with a brand that has been heavily advertised for years.

One brand that has undergone a major new advertising campaign is Camel.[13] Camel cigarettes were first introduced in 1913 by RJ Reynolds (RJR), and their advertising approach remained unchanged until 1988, with such themes as "Camel. Where a man belongs." However, in February 1988, RJR decided to update the Camel image and introduced

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the "smooth character" multimedia advertising campaign, which features a cartoon camel. It has been claimed that, since the introduction of this campaign in 1988, "the character has reversed the fortunes of Camel cigarettes, now the No. 6 brand in the $40 billion market" and that the "smooth character is proving just how much a well-executed image blitz can do for a decrepit brand."[13] *The Tobacco Reporter*[14] also indicated how this campaign halted slumping sales, "contributing to a hefty 14 percent change in the brand's market share during 1990."

Several public health professionals have claimed that this advertising campaign targets children in particular. Even within the tobacco industry, one hears some suggestions that the new Camel campaign does just that. Bird[13] quotes a "source close to Marlboro" as having said: "When you see teenage boys—people the cigarette companies aren't supposed to be targeting in the first place—going crazy for this guy [the cartoon camel], you know they're [RJR] hitting their target." The RJR company has countered by claiming that "Camel smokers are principally white males over the age of 21 years."[15]

Camel is a brand that has undergone a change in its marketing strategy from one clearly targeted at adult men to one that is now accused of aiming its heavy advertising at minors. In this article, we compare the performance of Camel with that of Marlboro, which has had the largest advertising budget for many years and has been the consistent market leader in recent times. We present evidence that Camel and Marlboro cigarettes are perceived by minors as being heavily advertised; that minors when compared with adults differentially smoke heavily advertised brands; and that the market share of minors and young adults has increased disproportionately for Camel cigarettes compared with Marlboro over the past 5 years.

METHODS

Data Sources

In 1990, the California Department of Health commissioned a series of California Tobacco Surveys (CTS). Herein we report data from in-depth telephone interviews of 24 296 adults and 5040 teenagers. These interviews were obtained after a stratified Waksberg random-digit dialing method[16] was used to screen 32<>135 households to recruit participants (J. Waksberg, unpublished data, December 17, 1984).

Response Rates and Survey Methods

All adult smokers and former smokers who had quit within the last 5 years were interviewed; a random 28% of all other adults were interviewed. The survey team interviewed all adolescents between the ages of 12 and 17 years in the screened households. The response rates were 75.3% and 78.4% for the adult and teenage surveys, respectively. The aforementioned sampling probabilities were used as part of the design effect to develop an initial weighting formula to provide population estimates. Poststratification weighting ensured that the sample was representative of the state population by age, sex, county-region, education, and race-ethnicity.

We compared data from the CTS with data collected in a similarly designed national survey, the Adult Use of Tobacco Survey (AUTS).[17] The AUTS was a national sample of 13 031 adults older than 17 years. The response rates for the AUTS and for the in-depth surveys were 85.5% and 86.9%, respectively. Poststratification weighting was undertaken in this survey to ensure that the population was representative of the adult population of the United States by age, sex, education, and race-ethnicity.

Definitions of Smoking Status

The definitions of current smoking were those standards that are used in all national surveys in the United States.[2,18] Adults were asked whether they had smoked 100 cigarettes in their lifetime and whether they smoked now. Former smokers were those who had smoked 100 cigarettes but did not currently smoke, and those who smoked fewer than 100 cigarettes were considered to have never smoked. Teenagers were classified as current smokers if they reported smoking a cigarette within the previous 30 days. We further classified teenagers who were not current smokers as follows: respondents who had smoked (but not within the 30-day time frame) were considered to have experimented with smoking or to be former smokers; those who had never smoked but indicated that they might smoke in the future were categorized as adolescents contemplating smoking; and, finally, teenagers who said they would never smoke were placed in a "never" category.

Survey Questions

In both the adult and the teenage CTS, information on brand smoked was obtained by asking current smokers, "What brand do you usually buy?" In the 1986 AUTS, current smokers were asked, "What brand of cigarette do you usually smoke now?" In the 1990 CTS, all respondents were asked the following question about cigarette advertising: "Think back to the cigarette advertisements you have *recently* seen on billboards or in magazines. What brand of cigarette was advertised the most?"

Calculation of Confidence Intervals (CIs)

For all percentages in the figures and tables, we have provided 95% CIs. In the CTS, these were derived by a variant of the jackknife procedure, in which 33 subsamples were taken from the full survey file, and sample weights were computed according to the same procedure as for the full sample.[19] Variances were estimated on the basis of the deviations of the subsample percentages and the percentage for the full sample. The variances were then used to compute the 95% CIs on the basis of the critical value from Student's t distribution. For the 1986 data, a design effect (1.5), which represents the cost in lack of precision for choosing a sampling design other than a simple random sample, published with the survey results,[16] was used to inflate the initial variance, which was computed as if the study sample were a simple random sample.

RESULTS

Naming of the Most Advertised Cigarette Brand

One third (33.6%) of all adults (≥18 years old) identified Marlboro as the most advertised brand; Camel was identified by 13.7% of adults as the most advertised brand. Among teenagers (aged 12 through 17 years), 41.8% identified Marlboro and 28.5% identified Camel as the most advertised brand. No more than 3% of either the adult or teenage respondents named any other single brand.

In each age group (except the youngest, in which the 95% CIs overlapped), Marlboro was the brand most often named as the most advertised cigarette, and both Camel and Marlboro were named more often by adolescents than by adults (Fig 1). However, the pattern of recognition for Marlboro advertising across age groups was somewhat different from the pattern for Camel advertising. The percentage who named Marlboro as being the most advertised increased with age among adolescents, peaking at 48.1% among the 16- through 17-year-old age group before declining among adults. However, the youngest respondents (aged 12 through 13 years) most often named Camel as the most advertised brand, with 34.2% of this age group identifying Camel as the most advertised brand of cigarettes. Moreover, the percentage of respondents who named Camel steadily declined by age to 22.7% for 16- through 17-year-olds, 19.8% for 18- through 24-year-olds, and less than 10% for all respondents aged 45 years and older.

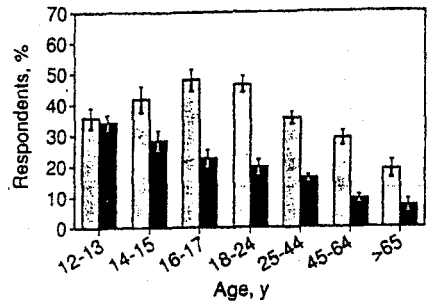


Fig 1.—Percentage of respondents who identified Marlboro (shaded bars) or Camel (solid bars) as the most advertised brand of cigarettes, by age of respondent. Straight lines on top of bars indicate 95% confidence intervals.

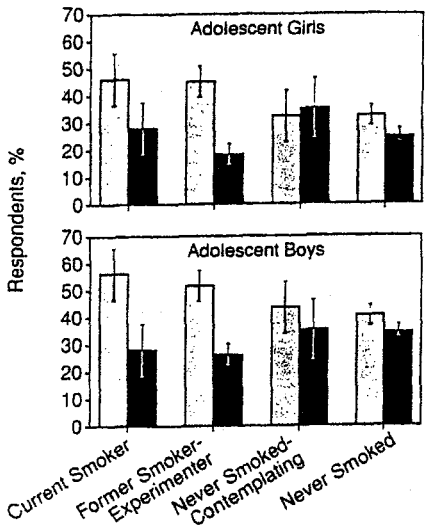


Fig 2.—Percentage of adolescent respondents who identified Marlboro (shaded bars) or Camel (solid bars) as the most advertised brand of cigarettes, by smoking status of respondent. Straight lines on top of bars indicate 95% confidence intervals.

Identification of Brand in Adolescents by Smoking Status and Sex

Among teenagers, the brand that was named the most advertised varied by smoking status among boys (Fig 2, bottom) and girls (Fig 2, top). Among boys who had smoked in the month before the survey, 56.7% named Marlboro and 28.4% named Camel (95% CIs did not overlap). Among boys who had never smoked but who were contemplating smoking, 44.5% identified Marlboro and 36.7% identified Camel as the most advertised. Thus, Marlboro was most frequently named the most advertised brand in all male adolescent groups; more than 40% of all boys named it, and the current smokers named it more often than did respondents from the other groups. Camel cigarettes were named particularly often by boys who were contemplating starting to smoke (about 36%), although 95% CIs for the different smoking status groups overlapped.

Among girls (Fig 2, top), Marlboro was identified as the most advertised brand by more than one third of each smoking status group. As among boys, girls who reported some experience with smoking were the ones who most often named Marlboro. In all but one group (95% CIs did not overlap), Camel cigarettes were named less frequently than Marlboro; among the group of teenage girls who were contemplating starting to smoke, the percentage who identified Camel as the most advertised brand (35%) was slightly higher (95% CIs overlapped) than the percentage who identified Marlboro.

Reported Preference for Cigarette Brands, California 1990

The pattern of cigarette brands purchased by California smokers paralleled the reported perception of advertising (Table 1).

Marlboro and Camel dominated the adolescent male market: 79.9% of the 12- through 17-year-old male smokers reported purchasing these brands (Table 1, top). The market share controlled by the two brands declined steadily with the increasing age of the smoker: 84% of the 18- through 24-year-old market; 75.5% of the 25- through 29-year-old market; and 58.2% of the 30- through 44-year-old market (Table 1, top). In contrast to a relatively gradual decline in market share across the different age groups for Marlboro, the decline in Camel's market share occurred abruptly between adolescent and adult groups. Market share decreased from 24.5% among male adolescents to about 12% among men between the ages of 18 and 44 years; 95% CIs between the teenage and first adult group did not overlap.

The market-share pattern for females for Marlboro and Camel was somewhat similar to that for males (Table 1, bottom). The two brands shared 85% of the adolescent female market and 74.9% of the 18- through 24-year-old market; the market-share again declined rapidly with age. Marlboro was the most often purchased brand: 63.3% of teenage female smokers and 69.4% of 18- through 24-year-old female smokers reported pur-

Table 1.—Brands Purchased by Smokers in California

Age, y†	Brand Purchased, %* Marlboro	Camel	Other	Sample Size, n
Males				
12-17	55.4±12.6	24.5±8.0	18.0±13.4	131
18-24	71.3±5.1	12.7±3.6	16.0±4.5	567
25-29	61.7±7.6	13.8±6.9	24.5±5.8	470
30-44	47.7±2.9	10.5±2.1	41.8±3.3	1579
≥45	21.1±2.7	8.1±2.8	70.8±3.3	1316
Females				
12-17	63.3±15.7	21.7±13.7	13.4±9.6	102
18-24	69.4±7.1	5.5±3.2	25.1±7.3	461
25-29	49.5±7.2	3.6±2.5	46.9±8.3	467
30-44	33.0±4.0	2.3±0.9	64.7±4.2	1500
≥45	12.7±3.1	2.2±1.2	85.1±3.6	1594

*Numbers given are percentages ± 95% confidence intervals.
†In the youngest age group of both sexes, a small percentage did not purchase cigarettes but obtained them by other means.

Table 2.—Differences in Marlboro and Camel Brands Purchased by Smokers in California in 1990 Compared With Smokers in the United States in 1986

Age, y	Market Share* 1986 n	1986 Marlboro	1986 Camel	1990 n	1990 Marlboro	1990 Camel	Rate Ratio Marlboro	Rate Ratio Camel
Males								
18-29	571	49.6±5.2	5.8±2.4	1037	66.8±5.0	13.2±3.7	1.4	2.3
30-44	950	26.4±3.6	6.8±2.0	1579	47.7±2.9	10.5±2.1	1.8	1.5
≥45	799	11.7±2.8	7.0±2.2	1316	21.1±2.7	8.1±2.8	1.8	1.2
Females								
18-29	619	39.4±4.9	1.0±1.0	928	59.0±4.8	4.5±2.1	1.5	4.5
30-44	830	17.0±3.2	1.0±0.9	1500	33.0±4.0	2.3±0.9	1.9	2.3
≥45	879	4.5±1.7	1.5±1.0	1594	12.7±3.1	2.2±1.2	2.8	1.5

*Numbers given are percentages ± 95% confidence intervals.

chasing that brand. For Camel, the step-function decline in the postadolescent market share was even more dramatic among female smokers than among male smokers. Camel cigarettes reached a market share of 21.7% in 12- through 17-year-old girls who smoked; market share then decreased to under 6% in all older age groups (95% CIs barely overlapped).

Increases in Camel Market Share Between 1986 and 1990

We examined whether the preference for Camel cigarettes by California smokers in 1990 was recent by comparing the brand preference of California smokers in 1990 to the preferences of all US smokers in 1986. Rate ratios compare the percentage of California smokers who bought Camel and Marlboro in 1990 with the percentage of US smokers who bought these two brands in 1986 (Table 2). The rate ratios greater than 1 indicate that the percentage of smokers who reported purchasing these brands of cigarettes was considerably higher in California in 1990 than it was in the United States in 1986 in each age and sex group. Rate ratios are given separately for three age groups and for males (top) and females (bottom).

The market share for Marlboro was 40% to 80% higher among males in California in 1990 compared with 1986 US data. The market-share increase for Camel was 230% in the youngest age group and was 50% and 20% in the two older age groups. The proportionate increases in market share of both brands were higher among females than among males for all age groups. Among females, the Camel brand had a low market base in 1986. The percentage of female smokers between the ages of 18 and 29 years who purchased Camel cigarettes in California in 1990 was 450% higher than that for the country as a whole in 1986.

In both males and females, Marlboro's rate ratio increased somewhat consistently across age groups. However, this was not the case for Camel: the major source of Camel's market-share increase appears to have come from the younger smokers.

COMMENT

The data in this article add to the evidence[2] that tobacco advertising differentially targets young people, particularly minors. We have considered some expected consequences should tobacco advertising target minors: first, the perception of the advertising would be inversely related to age; second, the pattern of market share across age and sex groups would follow the pattern of the perceived advertising; and third, changes in market share caused by increased targeting of advertising would occur differentially in the youngest age groups.

In California in 1990, people generally perceived Marlboro to be the most advertised brand of cigarettes, followed by Camel. These two brands were named most advertised by 70% of adolescents and 47% of adults. Some health professionals have suggested that the cartoon character advertising for the Camel brand preferentially targets and influences adolescents and even children.[13] This impression is bolstered by the fact that RJR spent $100 million in 1990 both on its advertising campaign and on promotional giveaways of items that are appealing to adolescents. Our data support these concerns. The greatest recognition of the Camel advertising campaign occurred in the youngest age group examined in this study (ages 12 through 13 years). Indeed, the level of recognition was inversely related to the age of the subject. This nearly linear inverse trend was not demonstrated with all cigarette advertising, as evidenced by our results for Marlboro. While Marlboro has enormous recognition as the most advertised brand in all age groups, peak recognition occurred at ages 16 through 17 years. Not only was the perception of Camel advertising highest among 12- to 13-year-olds, but it was also particularly high among those adolescents who were at considerable risk of starting to smoke. Although there is an electronic-media ban on tobacco advertising, tobacco companies have devised other means to promote their products to minors.[20]

Marlboro and Camel had the largest market shares of all cigarette brands in California in 1990. This was particularly the case in young smokers; these two brands had 80% of the market share among 12- through 17-year-old smokers and 84% among 18- through 24-year-old smokers. The pattern of market share for both brands was the same as the pattern for recognition of the advertising. In both males and females, the proportion of smokers who reported smoking Camel cigarettes decreased with age. Furthermore, the market share for Camel among 12- through 17-year-old boys was almost twice that among 18- to 24-year-old men. Similarly, the market share for Camel in 12- through 17-year-old girls was many times higher than in the next highest age group (18 through 24 years). The peak market share for Marlboro was in the 18- to 24-year-old age group for both males and females, and the age pattern of the market share was similar to the age pattern for identification of Marlboro as the most advertised brand. Thus, the pattern of market share for each brand is different and appears to mirror the pattern of recall of advertising for that particular brand.

A final purpose of our analysis was to relate changes in the market share of Camel compared with Marlboro since the start of the new smooth character Camel campaign. We were particularly interested in determining whether the estimated change in market share for the Camel brand occurred in the younger age groups to which the advertising appears to be targeted. Unfortunately, the data that we had for this assessment were less than optimal; the only brand data that we had available were for the whole nation in 1986 compared with California only in 1990. In addition, the 1986 data set included adults only (18 years and older) and so did not include the majority of teenagers. Accordingly, we examined the ratio of change across adult age groups between the Camel and Marlboro brands. We hypothesized that if Camel advertising more effectively targets younger people than does Marlboro advertising, then the increase in market share for Camel will disproportionately come from the younger age groups compared with the pattern of increase in market share for Marlboro.

The market share for both Marlboro and Camel appears to have increased between 1986 and 1990. The market share for Marlboro appears to have increased more in those older than 30 years than in those younger than 30 years in both men and women. In contrast, the market share for Camel has shown a marked increase among men and women younger than 30 years than among those older than 30 years.

We conclude that tobacco advertising, particularly of Camel cigarettes, has been effective in targeting adolescents in the United States. (Indeed, the 1990 CTS were undertaken during a major antismoking advertising campaign in California, so our results may actually underestimate the problem.) It was those in the 12- through 13-year age group who had the highest recall of the advertisements, and recall was particularly high among those who did not yet smoke but who were considering smoking. These advertisements appear to influence these prospective new smokers to start smoking the brand that is advertised. Our data suggest an association between the brands identified as most highly advertised and market share for the same brands. Not only is the market share of brands similar to recall of the most advertised brands, but the brand that appears to be aimed the most

at adolescents has demonstrated a differential increase in market share in the youngest adolescents over time. Resolving this issue will require a longitudinal study, which we hope to undertake in the near future.

Our results suggest that tobacco advertising is causally related to young people becoming addicted to cigarettes; the sum of this evidence is considerable although not yet complete. Also, there is strong evidence that most smokers become addicted when they are minors and do not understand the long-term consequences of smoking.[2,11] Overcoming this addiction is a lifelong struggle for many smokers,[21] and the failure rate for cessation attempts is extremely high.[22,23] Unless those responsible for protecting our young take action quickly, the declines that we have seen recently in the proportion of our youngsters who start to smoke[24,25] may be in jeopardy. Given the potential harm to the health of future generations, public policy should, as a matter of urgency, extend the ban on tobacco advertising to cover not only electronic media but also all other forms of cigarette advertising and promotion.[25-28]

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TOBACCO CONTROL IN CALIFORNIA: WHO'S WINNING THE WAR?

An Evaluation of the Tobacco Control Program, 1989-1996

FINAL REPORT

June 30, 1998

A Report to the
California Department of Health Services

Cancer Prevention and Control Program
University of California, San Diego

This report was prepared under contract #95-23211 between the University of California, San Diego and the California Department of Health Services, and the value of the contract was $1,800,000. The fieldwork for the 1996 California Tobacco Survey was subcontracted to Westat, Inc., and the value of the subcontract was $1,249,811.

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PREFACE

The California Department of Health Services contracted with the University of California, San Diego, to conduct a series of California Tobacco Surveys and to provide an independent and scientific assessment of the progress of the California Tobacco Control Program. Any interpretations of data or conclusions expressed in this report are those of the authors and may not represent the views of the State of California.

A primary goal of the Tobacco Control Program is to reduce smoking among California adults and adolescents. Assessment of Program progress in meeting this goal involves an examination of trends in per capita cigarette consumption and smoking prevalence. Program effects must be distinguished from differences resulting from changes in the demographic profile of the California population. Standardized prevalence estimates were computed to adjust for demographic changes. An effective program would lead to a more rapid decline in smoking than existed previously or that occurred in the rest of the United States. Moreover, the effect should persist over time.

The analysis considered two periods in the Tobacco Control Program, suggested by changes in per capita cigarette consumption trends, standardized adult smoking prevalence estimates from the California Tobacco Surveys, and the relative level of funding for the Program and what the tobacco industry spends to promote smoking. Before fiscal year 1992-1993, the ratio of spending was 5:1 in favor of the tobacco industry and subsequently it was 10:1. The higher ratio resulted from reduced funding for the Tobacco Control Program and increased tobacco industry expenditures.

The first part of this executive summary presents a brief overview of the main evaluative outcomes relative to the California Tobacco Control Program: smoking behavior and exposure to secondhand tobacco smoke. Following this brief overview, trends in smoking behavior are discussed in more detail. Finally, other important findings, including those relating to secondhand smoke, are summarized under the five main tobacco control strategies identified by the Tobacco Education, Research, and Oversight Committee (TEROC).

OVERVIEW

The trends in per capita cigarette consumption and adult smoking prevalence indicate that the introduction of the California Tobacco Control Program led to an acceleration of the rate of decline in smoking, but that this effect was not maintained between 1993 and 1996.

Over the course of the Program, there has been a continued major decline in the level of exposure to secondhand tobacco smoke among Californians.

TRENDS IN SMOKING BEHAVIOR

In Period 1, from the start of the Program in January 1989 through June 1993, adult (18+ years) smoking prevalence and per capita cigarette consumption declined over 50% faster than previously, and over 40% faster than in the rest of the United States.

In Period 2, July 1993 through December 1996, the rate of decline in per capita cigarette consumption and adult prevalence slowed, consumption to only 34% of the rate of decline in Period 1, and prevalence to only 15% of the Period 1 rate. In Period 2, California no longer showed a greater rate of decline in prevalence than the rest of the United States. However, per capita cigarette consumption was constant in the rest of the United States. The 1996 California Tobacco Survey estimated that adult smoking prevalence was 18.1%.[1]

Adolescent (12-17 years) smoking prevalence in California remained stable in Period 1, but it increased 26.3% during Period 2 to 12.0% in 1996.[2] A detailed analysis of California data suggests that adolescent smoking prevalence will continue to increase through 1999.

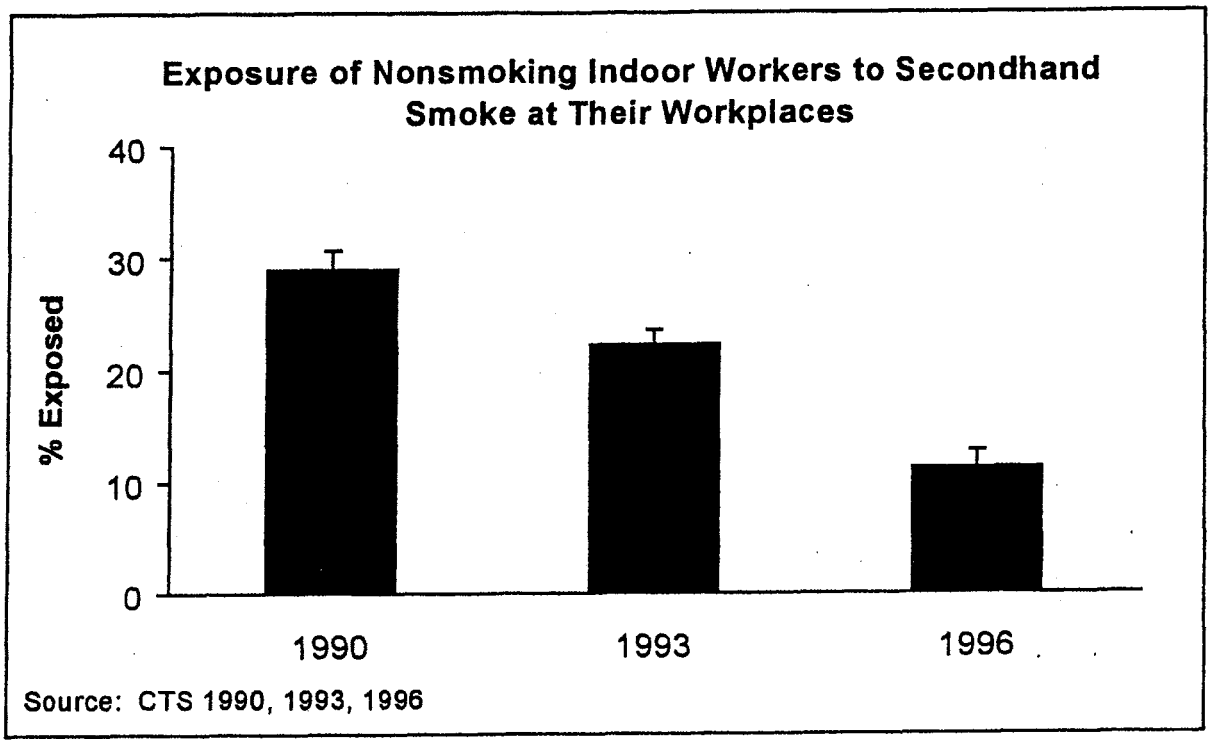
Between 1993 and 1996, California smokers made considerable progress towards future successful cessation by decreasing consumption levels and increasing their quitting activity. A strong motivational tobacco control program may produce another major reduction in smoking prevalence.

[1] The adult prevalence estimates from the California Tobacco Surveys were: 22.2% in 1990, 20.2% in 1993, and 18.1% in 1996. The standardized estimates were: 20.9% in 1990, 18.9% in 1993, and 18.1% in 1996.

[2] The adolescent smoking prevalence estimates from the surveys were: 9.2% in 1990 and 1993, and 12.0% in 1996. The standardized estimates were: 9.4% in 1990, 9.5% in 1993, and 12.0% in 1996.

EFFECTIVENESS OF CALIFORNIA TOBACCO CONTROL STRATEGIES

STRATEGY 1: PROTECT CALIFORNIANS FROM SECONDHAND SMOKE



- From 1990 to 1996, the proportion of indoor workers exposed to secondhand tobacco smoke at work decreased from 29% to 11.7%, a reduction by a factor of nearly 60%. (KF* 4.3)

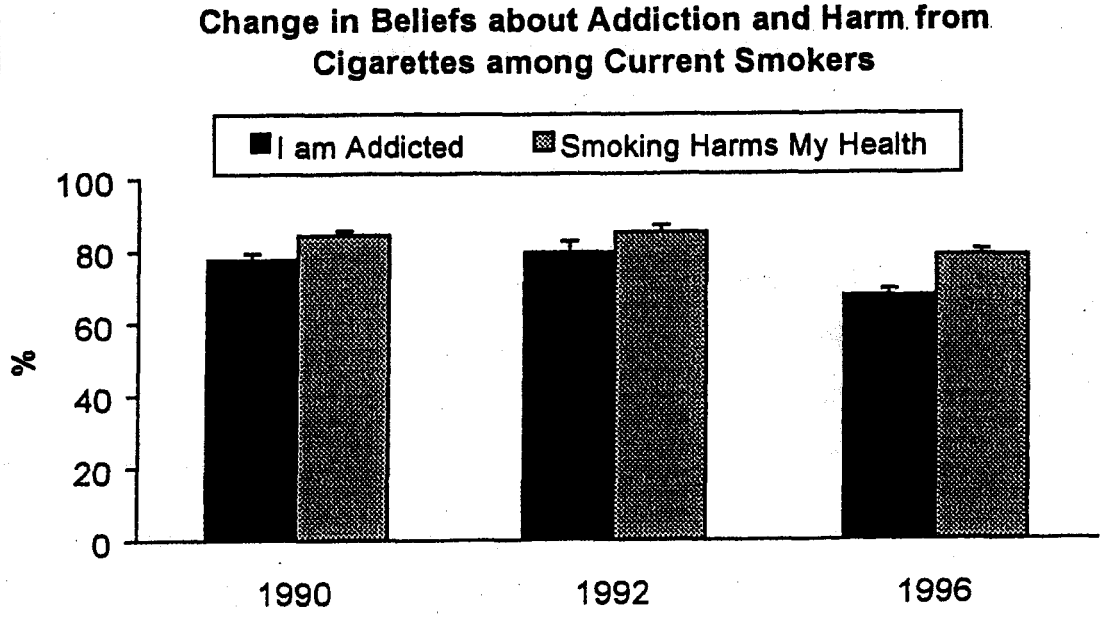
- By 1996, over 90% of indoor workers had a smokefree workplace, compared to 35% in 1990, an increase by a factor of nearly 160%. (KF* 4.2)

- Among California children and adolescents, exposure to secondhand tobacco smoke at home decreased from 29% in 1992 to 13% in 1996, a reduction by a factor of 55%. (KF* 2.11)

KF*= Key Findings, found on pages II-i to II-xvi.

EFFECTIVENESS OF CALIFORNIA TOBACCO CONTROL STRATEGIES

STRATEGY 2: TO EMPHASIZE THE ADDICTIVE NATURE OF TOBACCO, ITS HARMFUL HEALTH EFFECTS AND ITS UNATTRACTIVE FEATURES



Source: CTS 1990, 1992, 1996

- The percent of California smokers who believe they are addicted to smoking decreased significantly by a factor of 13% between 1990 and 1996, from 78% to 67%. The percent who agreed with the statement, "smoking is harming my own health," also decreased significantly, by a factor of 7%, from 84% in 1990 to 79% in 1996. (KF* 12.5a and 12.5b)

- However, the percent of California smokers who consume less than 15 cigarettes/day increased significantly by a factor of 26%, from 43.6% in 1990 to 55.1% in 1996. (KF* 6.5) Lighter smokers may be less likely to feel addicted or that they are harming their health.

- In 1996, 2.7% of California adults (>25 years) were "hard core" smokers; this represents less than 10% of all smokers. (KF* 6.1) This finding indicates that further significant decreases in smoking prevalence are possible.

KF*= Key Findings, found on pages II-i to II-xvi.

EFFECTIVENESS OF CALIFORNIA TOBACCO CONTROL STRATEGIES

STRATEGY 3: TO COUNTER EFFORTS OF THE TOBACCO INDUSTRY AND OTHERS TO PROMOTE TOBACCO USE

EFFECTIVENESS OF TOBACCO INDUSTRY ADVERTISING AND PROMOTION ACTIVITIES

- Between 1993 and 1996, receptivity to tobacco advertising and promotional activities increased among California teens. The percentage of teens owning a tobacco promotional item increased significantly, from 8.9% to 13.5%. (KF* 5.7)

- 34% of adolescent experimentation with cigarettes in California can be attributed to tobacco industry advertising and promotional activities. In 1996, over 200,000 California adolescents experimented with smoking; 68,000 did so because of tobacco industry advertising and promotions. (KF* 9.3)

- The marketing of cigars as symbols of sophistication and power is associated with significant increases in cigar use among California adults, from 2.5% in 1990 to 4.9% in 1996. Furthermore, in 1996, one in four teenage boys reported experimenting with cigars. (KF* 13.1 and 13.3)

EFFECTIVENESS OF THE TOBACCO CONTROL PROGRAM COUNTER-MARKETING

- In 1996, adults who recalled the media campaign were more likely to agree with messages used in the campaign. (KF* 9.9)

- Although inconsistently in the field, the mass media campaign was effective in getting smokers to seek help to quit. (KF* 9.6 and 9.7)

KF*= Key Findings, found on pages II-i to II-xvi.

KEY FINDINGS BY CHAPTER

KEY FINDINGS BY CHAPTER

Chapter 1: EXPENDITURES TO INFLUENCE SMOKING BEHAVIOR IN CALIFORNIA

1. In November 1988, California voters passed Proposition 99, which mandated the establishment of the California Tobacco Control Program. Between 1989 and mid 1993, the California Tobacco Control Program spent an average of $85.5 million each year to promote a smokefree society. During this same time period, the tobacco industry spent an average of $437 million annually to promote cigarette use (Section 1.1 and Table 1.1).

2. Between 1993 and 1996, the California Tobacco Control Program only spent an average of $53 million annually to promote a smokefree society. The funding levels during these years reflected diversions of $62.2 million from the spending mandated by Proposition 99 for tobacco control. During this same period, the tobacco industry spent an average of $525 million annually to promote cigarette use. In addition to the industry's direct expenditures on advertising and promotions, in April 1993 the tobacco industry announced an approximately 10% decrease in the price of its premium brands of cigarettes to promote sales. (Section 1.1, pages 1-4 to 1-6 and Table 1.1)

3. Expenditures to influence tobacco usage can be split into two distinct periods. In the early period (Period 1), from January 1989 to mid 1993, the tobacco industry's advertising and promotional expenditures were 5 times higher than those of the Tobacco Control Program. In the later period (Period 2), from mid 1993 through 1996, the expenditures of the tobacco industry were 10 times higher than were those of the Tobacco Control Program. (Section 1.1, page 1-6)

4. Spending on advertising and promotions and manipulating the price of cigarettes are not the only strategies the tobacco industry has used to influence tobacco use. Campaign contributions to candidates for the legislature and state office represent important and direct means of influencing the conduct of the California Tobacco Control Program. In 1993-1994, the tobacco industry spent over $841,000 on campaign contributions; by 1995-1996 these expenditures had increased by a factor of 78%, to $1.5 million. Some anti-smoking advocates have suggested that the diversion of funds from the Tobacco Control Program were a result of these contributions and other political activities of the tobacco industry. (Section 1.1, page 1-7)

5. To level the playing field between the Tobacco Control Program and the tobacco industry would require restoring the funding levels of the Tobacco Control Program to 100% of the available budget and implementing an additional $0.25

per pack excise tax with all of the proceeds going to the Tobacco Control Program to promote a smokefree society. (Section 1.1, page 1-6)

Chapter 2: TOBACCO CONTROL IN CALIFORNIA: AN OVERVIEW

During Period 1 (January 1989 through June 1993) of the California Tobacco Control Program:

1. The proportion of nonsmoking California indoor workers who were exposed to secondhand tobacco smoke at work decreased by almost one-fourth, from 29% in 1990 to 22.3% in 1993. (Section 2.1, pages 2-3 to 2-4 and Figure 2.2)

2. The rate of decline in per capita cigarette consumption increased by a factor of over 60%; at the end of Period 1, Californians were consuming a monthly average of 6.7 packs/person. The factor decline in per capita consumption was 1.9 times higher than in the rest of the United States. (Section 2.2, Table 2.1 and Figure 2.4)

3. The rate of decline in adult smoking prevalence in California increased by a factor of 56%. During this period, the rate of decline in adult smoking prevalence in California was greater by a factor of 65% than the rate observed in the rest of the United States. (Section 2.2, pages 2-10 to 2-15, Table 2.2 and Figure 2.7)

4. If the rates of decline in adult smoking prevalence and per capita cigarette consumption observed in this period had continued to the year 2000, the Tobacco Control Program would have been associated with a decline by a factor of 68% in per capita cigarette consumption and by a factor of 52% in adult smoking prevalence. This is less than the 75% reduction goal set by the legislature when it established the Tobacco Control Program. (Section 2.2, page 2-13)

5. During this period, the percentage of California adolescents (12-17 years of age) who were smokers (smoked in the last 30 days) remained constant at approximately 9%. (Section 2.3, pages 2-18 and 2-19)

During Period 2 (July 1993 through December 1996) of the California Tobacco Control Program:

6. Among indoor workers in California, the rate of exposure to secondhand tobacco at work decreased by a factor of nearly 50%, to only 11.7%. (Section 2.1 and Figure 2.2)

7. The rate of decline in per capita cigarette consumption slowed to only about one-third of the rate of decline observed during the early period of the Tobacco Control Program. At the end of 1996, Californians were consuming a monthly average of 6.0 packs per person. However, this rate of decline was still substantially higher than the rate observed in the rest of the United States, which

had a per capita consumption of 10.3 packs/person in December 1996. (Section 2.2, pages 2-5 to 2-8, Figure 2.4 and Table 2.1)

8. During this period, adult smoking prevalence in California declined by only a small amount, at 15% of the rate observed during Period 1 of the Tobacco Control Program. Over the same period, the decline in adult smoking prevalence was no longer greater in California than in the rest of the United States. In 1996, adult smoking prevalence in California was 18.1%[1] (Section 2.2, pages 2-10 to 2-15, Table 2.6 and Figure 2.7)

9. If the rates of decline in adult smoking prevalence observed in Period 2 are maintained to the year 2000, then an estimated 17.5% of California adults will be smokers in that year. This estimate is only 27% lower than prevalence in 1988 and about 2.5 times higher than the prevalence rate set as a goal for the Tobacco Control Program in the enabling legislation. (Section 2.2, page 2-13)

10. After adjusting for demographic changes in the adolescent population, the percentage of California adolescents who were smokers (smoked in the last 30 days) increased by a factor of 26.3% so that in 1996, an estimated 12% of California adolescents were smokers.[2] (Section 2.3, pages 2-18 and 2-19)

Other Findings:

11. Between 1992 and 1996, exposure levels to secondhand tobacco smoke among California children and adolescents decreased from 29% to 13%, a reduction by a factor of 55%. (Section 2-1, and Figure 2.1)

12. Between 1989 and 1996, there were few identifiable differences in the extent of decline in smoking among adult (18 years of age and older) California subgroups defined by gender, race/ethnicity, education, or geographic region. (Section 2.2, pages 2-16 to 2-17)

13. Between 1990 and 1996, the percentage of California smokers who consumed less than 15 cigarettes/day increased by a factor of 26.4%, from 43.6% in 1990 to 55.1% in 1996. The percentage of smokers who quit smoking for at least 7 days in the last year increased by a factor of 20.1%, from 36.3% in 1990 to 43.6% in 1996. These changes in smoking behavior suggest that more smokers will successfully quit in the near future. (Section 2.4 and Table 2.9)

---

[1] The adult prevalence estimates from the California Tobacco Surveys were: 22.2% in 1990, 20.2% in 1993, and 18.1% in 1996. The standardized estimates were: 20.9% in 1990, 18.9% in 1993, and 18.1% in 1996.

[2] The adolescent smoking prevalence estimates from the surveys were: 9.2% in 1990 and 1993, and 12.0% in 1996. The standardized estimates were: 9.4% in 1990, 9.5% in 1993, and 12.0% in 1996.

Chapter 3: UNDERSTANDING SMOKING BEHAVIOR

1. Smoking prevalence is a relatively insensitive tool to evaluate a tobacco control program in the short-term. Since smoking prevalence is dependent upon rates of smoking uptake and smoking cessation, it is important to consider these processes separately and evaluate the impact of the Tobacco Control Program on each one. (Section 3.1)

2. The development of a nicotine *addiction* occurs among adolescents and young adults. The process of becoming a smoker has been described as the Smoking Uptake Continuum, and includes the following: a period of susceptibility prior to any experimentation, early and advanced periods of experimentation, the development of an *addiction* and the building up of tolerance until the cigarette consumption level is stabilized. This process occurs mainly between the ages of 12 and 24 years. (Sections 3.2 to 3.3, and Table 3.1)

3. Individuals who have smoked at least 100 cigarettes in their lifetime typically meet the criteria that define dependence on an addictive substance according to the Diagnostic and Statistical Manual (DSM), the official nomenclature of the American Psychiatric Association (APA). Therefore, individuals are considered *addicted* to cigarettes if they have smoked at least 100 cigarettes. (Section 3.1)

4. The process of quitting smoking can take as long as 10 years. Studies of smoking behavior show that smokers can be classified by levels on the Quitting Continuum, based on their level of *addiction*, quitting history and intentions to quit smoking. The overall amount that is smoked is a major predictor of who can maintain a quit attempt. Previous success in overcoming withdrawal symptoms is another important predictor of who can maintain an attempt. Finally, a smoker must be motivated to quit before any quit attempt will be made. (Section 3.5)

5. The distinctive levels on the Quitting Continuum include those who are *precontemplators*, *contemplators*, those in *early preparation*, *intermediate preparation*, or *advanced preparation* for quitting, those in *action* and those in *early maintenance* or *advanced maintenance*. Each more advanced level corresponds to an increased likelihood of successful smoking cessation over the next 2 years. (Section 3.5 and Table 3.2)

6. To increase the probability of future successful quitting, a tobacco control program needs to motivate smokers to reduce consumption to a moderate level (less than 15 cigarettes/day) and motivate and assist them to make quit attempts that last at least through the worst period of withdrawal symptoms (7 days). (Section 3.5)

7. To rapidly reduce the per capita consumption of cigarettes, a tobacco control program needs to focus on the smoking behavior of adults, particularly those over 25 years of age. (Section 3.4)

Chapter 4: PROTECTION OF NONSMOKERS

Involuntary Smoking in Workplaces

1. Approximately 80% of indoor workers are nonsmokers. (Table 4.1)

2. By 1996, over 90% of indoor workers had a smokefree workplace, compared to 35% in 1990, an increase by a factor of nearly 160%. (Section 4.1, page 4-4 and Figure 4.1)

3. Overall, exposure to secondhand smoke in the workplace decreased by a factor of 60%, from 29% of workers in 1990 to 11.7% in 1996. Exposure decreased greatly in all population subgroups. However, among Hispanics, young people, and workers with less than a high school education, exposure rates were higher by a factor of 50% than rates for other population subgroups. (Section 4.1 and Figure 4.2)

Involuntary Smoking at Home

4. In 1996, nearly 80% of all Californians reported having some type of smoking restrictions in their homes. (Section 4.2, page 4-7 and Figure 4.3)

5. Nearly 40% of smokers in California lived in homes with a complete ban on smoking. This represented an increase by a factor of 90% from 1993 levels. Another 25% of smokers lived with some smoking restrictions in their homes. Therefore, nearly two-thirds of all smokers in California lived with at least a partial restriction on smoking in their homes. (Section 4.2, page 4-8 and Figure 4.4)

6. In 1996, nearly 90% of all children and youth under 18 years of age were protected from secondhand smoke in the home. However, only three-fourths of African American children and adolescents were protected from involuntary smoking at home, compared to 90% of Hispanic and Asian children and adolescents and 82% of Non-Hispanic White children and adolescents. (Section 4.2, page 4-9 and Figure 4.6)

7. In 1996, nearly 30% of Californians reported no exposure to secondhand tobacco smoke in their routine day-to-day experience. (Section 4.3)

Chapter 5: TRENDS IN ADOLESCENT SMOKING

1. The proportion of 12-14 year olds categorized as *susceptible* to smoking increased significantly, from 34.5% in 1993 to 42.0% in 1996. (Section 5.2, Table 5.2)

2. The increases in *susceptibility* to smoking in 12-14 year olds were greatest among girls, African Americans, Hispanics and adolescents with higher self-reported school performance. These trends suggest that the number of *addicted* smokers in these groups will increase within the next 3 years. (Table 5.2)

3. Among 15-17 year olds, the percentage of *addicted* smokers remained stable from 1990 to 1993; however, by 1996 the percentage had increased by a factor of 22%, from 9.9% in 1993 to 12.1% in 1996. (Section 5.2, page 5-8 and Table 5.3)

4. Between 1993 and 1996, the trend for increasing numbers of 15-17 year old teens to become *addicted* to smoking was particularly marked for those with lower self-reported school performance. Among teens in this group, *addiction* increased by a factor of 41.8%, from 12.2% in 1993 to 17.3% in 1996. (Table 5.3)

5. Changes in family and personal influences on teens do not explain the increase in adolescent smoking in recent years. (Section 5.4, page 5-12 and Table 5.5)

6. In 1996, more teens (48%) believed that it is safe to experiment with cigarettes as held this belief in 1990 (43%). In addition, in 1996, tolerance for smoking was greater among teens than in earlier years: 56% of teens expressed strong attitudes against smoking in 1993, compared to only 49% in 1996. Across all ages of adolescents, significantly more teens in 1996 (19.0%) believed that most or all of their peers smoke than did in 1990 (9.4%) or 1993 (13.5%). These changing social norms about smoking reflect current increases in teen smoking prevalence and are early warning signs of increased smoking in the future. (Section 5.4, pages 5-13 to 5-14, Table 5.5 and Figure 5.5)

7. Owning a promotional item, such as a t-shirt or cap, with a cigarette company logo, is a predictor of future smoking. The percentage of teens who own a tobacco promotional item increased significantly, from 8.9% in 1993 to 13.6% in 1996. The increases in ownership of promotional items were greatest among *susceptible never smokers* and *early experimenters.* (Section 5.4, page 5-14 and Table 5.5)

8. The data suggest that the smoking uptake process may extend into the adult years for the Asian and Hispanic population subgroups. (Section 5.2 and Figure 5.2)

9. Most smokers do not reach a stable level of nicotine tolerance until they are well into adulthood. Among current *addicted* smokers, the percent of occasional smokers continues to decrease as age increases into the early thirties; one-half of

15-17 year old smokers are occasional smokers, while only one-third of smokers between the ages of 30 and 34 are occasional smokers. The mean daily consumption for daily smokers continues to increase into the early thirties; daily smokers in the 18-24 year old age group consume 13.5 cigarettes/day on average, while 30-34 year old smokers consume 15.5 cigarettes/day on average. (Section 5.3 and Table 5.4)

10. The vast majority of adolescents who smoke do not smoke daily. The prevalence of daily smoking among 15-17 year olds remained about 5% between 1990 and 1996. In California, changes in daily smoking rates among 15-17 year olds were not sufficiently sensitive to reflect the significant increases observed in current smoking behavior in this population. (Section 5.3 and Figure 5.4)

11. If the Legislature is interested in assessing punitive damages from the tobacco industry for promoting adolescents to smoke cigarettes, the smoking behavior measure of choice is the proportion of minors who are *addicted* to cigarettes (have smoked 100 cigarettes in their lifetime). Estimates predict that one in four teens who have reached the mark of 100 or more cigarettes will eventually die of a smoking-related disease. (Section 5.5)

12. It is projected that 14.2% of 15-17 year olds will be *addicted* to cigarettes in 1999, an increase by a factor of 17% from 1996. (Section 5.5 and Table 5.6)

Chapter 6: QUITTING AND PREDICTORS OF QUITTING

1. Hard core smokers were defined as those who had not tried to quit in the recent past and who stated that they have no intention of quitting at any time in the future. Overall, in 1996, 9.7% of California smokers (or 1.9% of the California population over 25 years of age) were classified as hard core smokers. This proportion varied significantly by age and by the smoking habit. (Figure 6.1 and Table 6.4)

2. Approximately 14% of smokers in California can be classified as *precontemplators*. These *precontemplaters* smoke at least 15 cigarettes/day, have no recent quit attempt, and no intention to quit in the near future (next 6 months). However, they do not necessarily expect to always remain a smoker. Approximately 3% of these smokers will successfully quit smoking within 2 years. The combination of *precontemplaters* with the hard core smokers represents those smokers who have so far been nonresponsive to the Tobacco Control Program. (Section 6.1, Table 6.1, Figure 6.1, and Table 6.4)

3. Smokers classified in *advanced preparation* for quitting are those who smoke less than 15 cigarettes/day and have made a quit attempt of at least 7 days in the 12 months prior to the California Tobacco Survey or have a life time quit of longer than 1 year. Approximately 20% of these smokers will successfully quit in the

next 2 years. Overall, approximately 27% of California smokers were classified in *advanced preparation* in 1996. (Section 6.1, pages 6-4 to 6-5 and Table 6.2)

4. Almost half of young adults (18-24 years old) who smoked were classified in *advanced preparation*. This proportion was markedly lower in older age groups. (Table 6.2)

5. Between 1990 and 1996, the proportion of California smokers who were light smokers (< 15 cigarettes/day) increased from 43.6% to 55.1%, a factor of over 26%. This increase was particularly noticed among Non-Hispanic Whites, and occurred about equally in all California smokers under 65 years of age. In other words, the increase in light smoking occurred primarily in the working population (Section 6.3 and Table 6.7).

6. Between 1990 and 1996, the proportion of California smokers who reported a quit attempt that lasted at least 7 days in the past year increased by a factor of 20.5%, from 41.4% to 49.9% of smokers. This increase was most marked in younger smokers, between the ages of 18 and 24 years old. This group showed an increase by a factor of 55.8%, from 43.4% who reported a 7+ day quit attempt in 1990 to 67.6% in 1996. African Americans were the only population subgroup that did not show a significant increase of greater than a factor of 20% in the percentage of smokers who reported a major quit attempt. In fact, the percent of African American smokers who reported a 7+ day quit attempt appeared to decrease between 1990 and 1996. (Table 6.8)

7. In 1996, over 60% of California smokers reported trying to quit smoking. About 80% of young adult smokers reported making a quit attempt that lasted at least 1 day during the last year. (Table 6.5)

8. A continuous quit attempt of at least 90 days is an early indication of successful quitting. In 1996, women smokers in California were significantly more likely than men to report that their most recent quit attempt lasted at least 90 days (21.9%, compared to 15.5% for men). Among men, the likelihood of success was strongly related to age: For men over 65 years of age, the rate of early success was 38%, whereas the rate of success for younger men ranged between 13% and 18%. There was no age effect among women. (Table 6.6)

9. Adolescent *addicted* smokers are also trying to quit smoking. In 1996, over three-fourths of these California teens reported that they had made a quit attempt in the past 12 months. (Section 6.4, pages 6-13 to 6-14)

10. Over 90% of adult smokers do not rule out quitting sometime in the future, and 77% of teen smokers have made a recent quit attempt. Therefore, there is no evidence that the smokers of California have "hit the wall," or reached their maximum potential for quitting. (Section 6.1, page 6-6 and Section 6.4)

Chapter 7: PROMOTING SMOKING CESSATION

1. Smokefree workplaces promote quitting by encouraging smokers to consume fewer cigarettes. Smokers who work in a smokefree environment are more likely to be light smokers (< 15 cigarettes/day), than are smokers without a smokefree workplace. (Section 7.1 and Figure 7.1)

2. Smokefree homes are associated with both higher rates of light smoking and more quit attempts. (Section 7.1 and Figure 7.2)

3. Among teens, strong parental norms against smoking were associated with behaviors that predict quitting. (Figure 7.5)

4. One-half of all smokers who visit a physician receive advice from the doctor to stop smoking. Often, however, this advice is limited to the suggestion without details about how to quit. (Section 7.2, page 7-7)

5. Although only 30% of smokers who receive advice from a physician to stop smoking actually attempt to quit, this advice may have helped motivate these smokers to make a quit attempt. (Section 7.2, page 7-7)

6. Approximately 20% of smokers who were trying to quit used some form of assistance. The majority reported using a combination of nicotine replacement therapy and counseling or self-help materials. (Section 7.3 and Figure 7.6)

7. Only 40% of recent quitters could name any program that helps smokers quit. Approximately one-half of those who identified a form of assistance named nicotine replacement treatment. (Table 7.1)

8. The California Smokers' Helpline has received calls from almost 60,000 smokers since its inception in 1992. (Section 7.4)

9. With the demonstrated clinical efficacy of the Smokers' Helpline, the number of referrals to the Helpline from insurance programs, such as MediCal, have increased. These programs often provide free nicotine replacement therapy on the condition that the smoker participates in a cessation program, such as the Smokers' Helpline. (Section 7.4, page 7-14)

Chapter 8: PRICES AND TAXES

1. The 1989 $0.25 tax increase produced a decline of about 12% in cigarette consumption. This decline in consumption was approximately equal to the decline that research on the price elasticity of demand predicts. (Section 8.1 and Figure 8.2)

2. In 1993, the tobacco industry acted in concert to reduce the price of cigarettes. In the absence of counterbalancing influences, this price reduction should have arrested the decline in cigarette consumption. The fact that consumption continued to decline between 1990 and 1994 and again in 1996, suggests that the California Tobacco Control Program counteracted the price effect. (Section 8.1, pages 8-4 to 8-5)

3. Price changes do not explain the only year (1995) in which there was no decline in per capita consumption. (Section 8.1)

4. Between 1993 and 1996, the price of cigarettes was not the major factor that determined the increase in teen smoking in California. (Section 8.1, pages 8-5 to 8-8)

5. Among all teens, the "image" of cigarette smoking was cited most as the determinant of brand choice among adolescents who smoked. (Section 8.2 and Figure 8.4)

6. Among teens experimenting with cigarettes, the brand choice of their friends was considered to be more important than the price of cigarettes, and was the second most important determinant of brand choice. (Section 8.2 and Figure 8.4)

7. In 1996, the majority (70%) of Californians favored an increase in the tobacco tax by at least $0.25. (Section 8.3 and Figure 8.5)

8. Support for a substantial increase in the cigarette excise tax was stronger among those who had recently quit smoking, suggesting that price is a significant motivator to maintain a successful quit attempt. (Section 8.3 and Figure 8.7)

9. Over one-third of current smokers supported at least a $0.50 increase in the cigarette excise tax, if the money was targeted to anti-smoking or other health programs. (Section 8.3 and Figure 8.6)

Chapter 9: ADVERTISING AND MEDIA

Relating to the Tobacco Industry

1. The tobacco industry continues to effectively target California adolescents with their advertising campaigns. Nearly 90% of 15-17 year olds could name a cigarette brand as most advertised, without prompting from the interviewer. Over 60% of 12-14 year olds, and nearly 70% of 15-17 year-old adolescents reported in 1996 that they had a favorite cigarette ad. (Section 9.1, pages 9-4 to 9-6)

2. The tobacco industry's effectiveness in penetrating the young adolescent market with their promotion items has increased rapidly. In 1996, 10.6% of 12-13 year olds possessed a tobacco industry item—over twice as many as possessed such an item in 1993. (Section 9.1, page 9-6)

3. There is strong evidence that the advertising and promotional activities of the tobacco industry are causally associated with the uptake of smoking in California adolescents. One-third of the 200,000 California adolescents who experimented with smoking between 1993 and 1996—approximately 68,000 per year—did so because of the influence of tobacco industry advertising and promotional practices. (Section 9.2, page 9-8)

Relating to the Tobacco Control Program

4. In 1996, 67% of adults and 82% of adolescents reported seeing an anti-smoking message on TV; 44% of adults and 50% of teens reported hearing an anti-smoking message on the radio; and 41% of adults and 58% of teens reported seeing an anti-smoking message on a billboard. (Section 9.3, page 9-9)

5. The Tobacco Control Program anti-smoking media messages were successful in catching the attention of adult smokers more than adult nonsmokers. These messages also achieved the goal of reaching all teens, regardless of smoking status. (Section 9.3, page 9-11 and Figures 9.1 and 9.2)

6. The Tobacco Control Program media campaign appears to be effective in promoting smokers to seek help to quit. However only 27% of smokers who had made a quit attempt in the last year had heard of the Smokers' Helpline telephone number, even with prompting. (Section 9.3, page 9-11)

7. It would appear that the Tobacco Control Program media campaign was not consistently in the field. During periods when the media campaign was broadcast and calling volume was high, proportionally more smokers noted that they had heard of the Helpline from a media message that included the 1-800 number. During other periods, calling volume was lower and proportionally fewer callers cited the mass media messages as a reason for their call. (Section 9.3 and Figure 9.3)

8. Detailed evaluation of the Tobacco Control Program's anti-smoking media campaign is hampered by lack of a tracking survey measuring Californians response to the media messages used. (Section 9.3, page 9-8)

9. Those who saw the Tobacco Control Program media campaign were more likely to take issue with the tobacco industry's claims about the harmful effects of secondhand tobacco smoke, the health risks of smoking and the addictiveness of cigarettes. (Section 9.3 and Table 9.2)

Chapter 9

ADVERTISING AND MEDIA

CHAPTER 9: ADVERTISING AND MEDIA

Introduction

Tobacco industry advertising and promotions are major social and economic forces aimed at promoting tobacco use. In recent years, the tobacco industry has allocated approximately equal expenditures for advertising outdoors, in magazines, and at the point-of-sale within retail stores, but these activities represent a smaller portion of the total industry budget for advertising and promotions than in earlier years (see Chapter 1). The distribution of specialty items, such as T-shirts, caps, sunglasses, lighters and sporting goods imprinted with a brand's logo represents another and a growing category of promotional expenditures. These items are often obtained from catalogs with coupons from cigarette packs or given to potential consumers at sporting or cultural events. In addition, the industry uses retail value-added strategies, which include multi-pack offers such as "buy one, get one free" programs, cents-off coupons, and offers that include non-cigarette items (such as key chains, etc.) that are given away with the purchase of cigarettes. Industry expenditures for these activities are much higher in recent years than previously.

The primary purpose of any advertising or promotional activity is to increase product sales. A business can achieve this objective by either increasing the total number of customers (smokers), or by increasing its market share at the expense of the other companies' market shares. The tobacco industry argues that its advertising and promotional expenditures are aimed solely at the latter objective. However, recent data provide evidence that these advertising and promotional activities are effective in achieving the former objective: enlisting new smokers.

This chapter explores the influences of the tobacco industry's advertising and promotional activities, as well as the California Tobacco Control Program (TCP)'s anti-tobacco media messages. It describes trends in both, and suggests what these trends imply about future smoking among adults and teens in California. The data used in this chapter come from the 1990, 1992, 1993, and 1996 California Tobacco Surveys (CTS) and the 1993-1996 Robert Wood Johnson (RWJ) longitudinal survey of adolescents in California.

Section 1 defines the concept of *receptivity* to an advertising or promotional message, and presents evidence that the tobacco industry's advertising and promotional activities effectively target California adolescents. Section 2 presents data linking adolescents' *receptivity* to tobacco advertising and promotional activities with the progression of *nonsusceptible never smokers* to levels of greater smoking experience and higher risk for future smoking, represented on the Uptake Continuum. Section 3 analyzes adults' and adolescents' exposure and responses to the TCP's mass media campaign, and Section 4 provides a summary of the chapter.

1. Teen Receptivity to Tobacco Industry Advertising and Promotion Strategies

Chapters 3 and 5 of this report outlined the evidence that the process of becoming a smoker begins in the pre-adolescent and early adolescent years, and is generally well advanced by the age of 18 years. This section explores the extent to which teens are *receptive* to tobacco industry advertising and promotional activities, and the linkage between this *receptivity* and progression in the process of becoming a smoker, as measured by changes in status on the Uptake Continuum.

Understanding Receptivity to Advertising

The most generally accepted conceptual framework for organizing ideas about *receptivity* identifies three elements of *receptivity*: (1) exposure to the message, (2) paying attention to and understanding of the message, and (3) the development of a cognitive/affective response to the message (McGuire, 1985). Accordingly, the first goal of any persuasive communication or advertisement is to ensure that a prospective audience is targeted and exposed to the communication. It is important to note that the audience is rarely passive during the course of this process, and must pay attention to the message and understand it before the message can have any persuasive impact. Therefore, in order to characterize individuals as receptive to the communication or advertisement, it is necessary to demonstrate that they have internalized positive associations related to that communication. While these internalized messages may encourage the purchase of the advertised product, an additional incentive (such as a promotional item or free sample) is often needed to maximize the likelihood that the persuasive communication will lead to actual consumer behavior—a purchase of the advertised product (Ray, 1982).

(1) Are adolescents exposed to cigarette advertising and promotion?

In recent years, the tobacco industry has spent an estimated $100 million a year advertising their products, and they have maintained massive levels of advertising expenditures throughout most of the twentieth century (Tilley, 1948; Tennant, 1950; Robert, 1967; Wagner, 1971; Sobel, 1978; Whelan, 1984; Ernster, 1985; Pierce & Gilpin, 1995). Therefore, it is reasonable to argue that all Californians have been exposed to "saturation" level advertising for cigarettes.

(2) Do adolescents pay attention to cigarette advertising and promotion?

To measure attention to this advertising, the 1990, 1993 and 1996 CTS asked all respondents the following:

> *Think back to the cigarette advertisements you have recently seen on billboards or in magazines. What brand of cigarettes was advertised the most?*

By naming a cigarette brand in response to this question without any cues or hints from the survey interviewer, respondents provided evidence that they had been exposed to a cigarette advertisement and paid attention to it. Consistently, Californians of all ages demonstrate little trouble naming a cigarette brand. In each survey year, almost 90% of California adults under the age of 45 named a cigarette brand in an unaided response. In each year, approximately 85% of young teens (12-14 year olds) and nearly 90% of the older teens (15-17 year olds) could provide an unaided response. Teens overwhelmingly named Marlboro and Camel as the most advertised brands. Hence, there is little doubt that Californians of all ages, including adolescents, are exposed to and pay attention to cigarette advertising.

(3) Have adolescents responded cognitively or affectively to these advertising messages?

A positive cognitive response to an advertising or promotional message is manifest when the individual has (a) understood the message and (b) accepted the message. Acceptance is demonstrated when the message is consistent with the individual's set of beliefs relating to the product of the communication or advertisement. A positive affective response is demonstrated if (c) the individual develops a liking for the advertisement or (d) if they have a promotional item related to the product that is the subject of the advertisement.

(a) Do adolescents understand the message?

The first level of cognitive response is understanding the message of an advertisement. To measure the extent to which adolescents in California understand the messages in cigarette advertisements, each of the youth CTS asked all teens whether they thought that cigarette advertising promoted any of the following ideas:

- *Smoking as an enjoyable experience*
- *Smoking helps people relax*
- *Smoking helps people to feel comfortable in social situations*
- *Smoking helps people to stay thin*
- *Smoking helps to reduce stress*
- *Smoking helps people when they are bored*
- *The idea that the "in" crowd are smokers*

Over 90% of 12-14 year old adolescents indicated that cigarette advertising promoted one of these messages. Over 75% indicated the message related to enjoyment, and over two thirds agreed that the messages were about relaxation and the advantage of smoking in social settings. Only for the boredom and weight control options did less than a majority agree that cigarette advertisements contained these messages. There was little difference in the perceptions of the cigarette advertising messages between adolescents in the 12-14 year old age group and those in the 15-17 year-old group.

(b) Do adolescents agree with, or internalize, the message?

In a separate section of the questionnaire from that exploring advertising, the youth CTS asked adolescents to agree or disagree with the following statements about smoking in 1990, 1993 and 1996:

- *Smoking helps people relax*
- *Smoking helps reduce stress*
- *Smoking helps people to feel comfortable at parties and in social situations*
- *Smoking can help people when they're bored*
- *Smoking helps people keep their weight down*

Responses to these questions indicate how well the teens' beliefs about the utility of cigarettes reflect what they think are the persuasive messages used by the tobacco industry.

Adolescents 12-14 years of age were much less likely to agree with the statements than were older teens in each survey. Additionally, agreement was significantly associated with the respondents' level on the Uptake Continuum (see Chapter 3).

Importantly, the pattern of responses for 12-14 year olds matched the pattern of responses to the questions about what they thought were the messages of the cigarette advertising. For example, in 1996, only 17% agreed with the idea that smoking helps keep weight down; as with the advertising question, this was the least supported statement. Similarly, the idea that smoking helps in social situations received the highest percent agreement for this question (38%), and the highest percent agreement for the advertising response.

Furthermore, this idea that smoking helps in social situations is associated with a decline in dislike for being around smokers. One outcome of many effective elementary school programs is that children internalize the idea that they strongly dislike being around smokers. The California surveys demonstrate that there is a marked decline with age in the adolescents who indicate this *strong dislike,* from a high of over 76% in 12-13 year olds to 58% in 16-17 year olds. This decline in *strong dislike for being around smokers* corresponds with the high level of agreement *that smoking helps people in social settings.*

(c) Are adolescents attracted to tobacco industry advertising?

A positive affective response to tobacco advertising occurs if adolescents indicate a liking for or an attraction to a cigarette advertisement. The 1992, 1993, and 1996 CTS asked the following question:

What is the name of the cigarette brand of your favorite advertisement?

Adolescents who hesitated on this question received the following verbal probe:

Of all the cigarette advertisements that you have seen, which do you think attracts your attention the most?

The large majority of adolescents did not need this probe. Hence, the discussion herein refers to this variable as "favorite advertisement." Between 1993 and 1996, the proportion of individuals in each age group who could name a favorite advertisement remained relatively constant. Among adolescents, approximately 60% of 12-14 year olds named a favorite cigarette advertisement. Teens in the 15-17 year old age group were the most likely of all respondents to nominate a favorite ad; close to 70% of this age group provided an unaided response in 1996 (see Appendix B, Table 15, for detailed demographic analysis).

(d) Do adolescents have a tobacco industry promotional item?

As discussed above, the tobacco industry spends a substantial proportion of its advertising and promotional budget on promotional items. Consumer behavior theory indicates that these items are important incentives that help maximize the probability that a potential consumer will purchase a given brand (Ray, 1982). Thus, possession of such an item strongly indicates a positive affective response to the advertisement or promotion. Between 1993 and 1996, the percentage of teens who possessed a tobacco industry promotional item increased from 8.9% to 13.6% (a factor of 53%). Similar increases in possession were observed for both boys and girls. The greatest increase occurred among the youngest teens: 4.7% of 12-13 year olds possessed a promotional item in 1993, compared to 10.6% in 1996 (an increase by a factor of over 200%). (See Appendix B, Table 6, for a further demographic breakdown of adolescent possession of promotional items).

The material presented above demonstrates that some adolescents reveal *receptivity* to the tobacco industry's advertisements and promotions. They are exposed to these communications, they pay attention to them, they understand the messages and some develop a positive affective response to the messages. The next section explains the relationship between *receptivity* to tobacco industry advertising and promotions and smoking uptake.

2. Does Cigarette Advertising and Promotion Encourage Adolescents to Become Smokers?

A number of studies have linked the effectiveness of tobacco industry promotional activities over the past 10 years with the recent increases in adolescent smoking behavior (Pierce et al., 1991; Pollay & Lavack, 1993; Pierce et al., 1994; Pierce & Gilpin, 1995; Evans et al., 1995).

Using the Robert Wood Johnson longitudinal study of California adolescents, a logistic regression analysis of the likelihood of *nonsusceptible never smokers'* progression along the Uptake Continuum (described in detail in Chapter 3) between 1993 and 1996 was performed. This model included variables measuring the teens' *receptivity* to advertising

and promotional activities, as well as peer and parental smoking behaviors. The model also controlled for demographic variables and self-rated school performance.

In this model, *receptivity* was measured using a four-level scale. Teens were categorized as minimally receptive to tobacco industry advertising and promotions if they could not name a brand of cigarette advertising as being most advertised, had no favorite ad, and indicated they were unwilling to use or own a tobacco-related promotional item. A teen who could name a cigarette advertisement as being most advertised but who had no favorite and who was unwilling to use or possess a promotional item was classified as having a low level of *receptivity* to tobacco advertising and promotion. A moderate level of *receptivity* was defined as having a favorite cigarette advertisement, but not having and being unwilling to use a promotional item. Finally, high *receptivity* indicated that the teens owned or were willing to use a promotional item.

Table 9.1 presents the results of this analysis of predictors of which adolescents progressed toward smoking.

Table 9.1
Progression Along the Smoking Uptake Continuum From Nonsusceptible in 1993 to Susceptible or Experimenter in 1996*

Receptivity to Tobacco Promotions/Advertising	% Progressing on Uptake Continuum (±CI***)	Adjusted Odds Ratios** (±CI***)
Minimal (No Brand, Not Willing)	37.7 (±11.9)	1.00
Low (Brand, Not Willing)	43.9 (±6.7)	1.32 (0.73-2.41)
Moderate (Favorite Ad, Not Willing)	51.7 (±5.4)	1.82 (1.04-3.20)
High (Willing/Has Item)	62.1 (±9.5)	2.89 (1.47-5.68)

*N=1,752
**Adjusted for family smoking, peer smoking, age, gender, race/ethnicity, and school performance
***CI = 95% Confidence Interval
Source: Pierce JP et al., *JAMA* Feb. 18, 1998;279:511-515.
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Baseline *receptivity* to tobacco industry promotional activities was strongly related to which adolescents progressed toward smoking. Among those who were assessed as having a minimal level of receptivity, 37.7% progressed toward smoking. Compared to this group, those with moderate receptivity were 82% more likely to progress toward smoking after adjusting for the demographic variables and the influence of exposure to other smokers. This difference in likelihood of progression was statistically significant. Those with a high level of receptivity were almost three times more likely than teens with minimal receptivity to progress toward smoking, which was highly statistically significant.[1]

[1] Preliminary analysis showed no significant interactions between the receptivity index and the exposure to smoking variables and these were not retained in the final model.

Amount of Experimentation Attributable to Tobacco Promotional Activities

Data from the 1993 Robert Wood Johnson longitudinal representative sample indicate that in 1993, there were approximately 1.18 million *nonsusceptible never smokers* in the 12-14 year old age group in California. Furthermore, it was estimated that 1,078,812 (91%) of these *nonsusceptible never smokers* exhibited greater than minimal levels of *receptivity* at baseline. Of these youths who were *receptive nonsusceptible never smokers* in 1993, 367,907 (34%) became *experimenters* by 1996. Similarly, it was estimated that approximately 104,696 *nonsusceptible* teens in 1993 were also minimally *receptive* to cigarette advertising and promotions. Of these teens, 23,476 (22%) progressed to *experimentation* by 1996. Thus, the percentage of excess risk of experimentation with cigarettes that is influenced by tobacco promotional activities is 34.3%, using the standard attributable risk methodology. In other words, 34% of the progression from *nonsusceptible never smoker* status to *experimentation* between 1993 and 1996 among California teens is attributable to tobacco industry advertising and promotional activities. Therefore, among the approximately 200,000[2] teens who experiment with cigarettes each year, 34% (approximately 68,000) do so because of the influence of tobacco industry advertising and promotional activities.

3. 1996 Anti-Tobacco Media Exposure Among Adults and Youth

Since the beginning of the California Tobacco Control Program (TCP), the state's anti-smoking media campaigns have been a prominent component of the program's overall strategy. Over the past 6 years, Californians of all ages and sociodemographic groups have been exposed to these messages about the dangers of smoking on television, radio, and billboards. In a previous report, it was noted that the conduct of the early mass media campaigns was coincident with a decline in per capita cigarette consumption (Pierce et al., 1994). However, the evaluation of the media campaign component of the TCP does not include a tracking survey, which can assess public response to a media message or messages in an ongoing manner. Only a few, very general questions were included in the California Tobacco Surveys to assess response to the media campaign. Therefore, a detailed evaluation of the anti-smoking media campaign is hampered by the lack of appropriate data to measure Californians' responses to these media messages.

[2] From the 1993-96 Robert Wood Johnson California Teenage Longitudinal Survey, it was determined that over the course of the 3 years, there were 600,000 new experimenters or 200,000 new experimenters per year.

In 1996, all respondents were asked the following three questions:

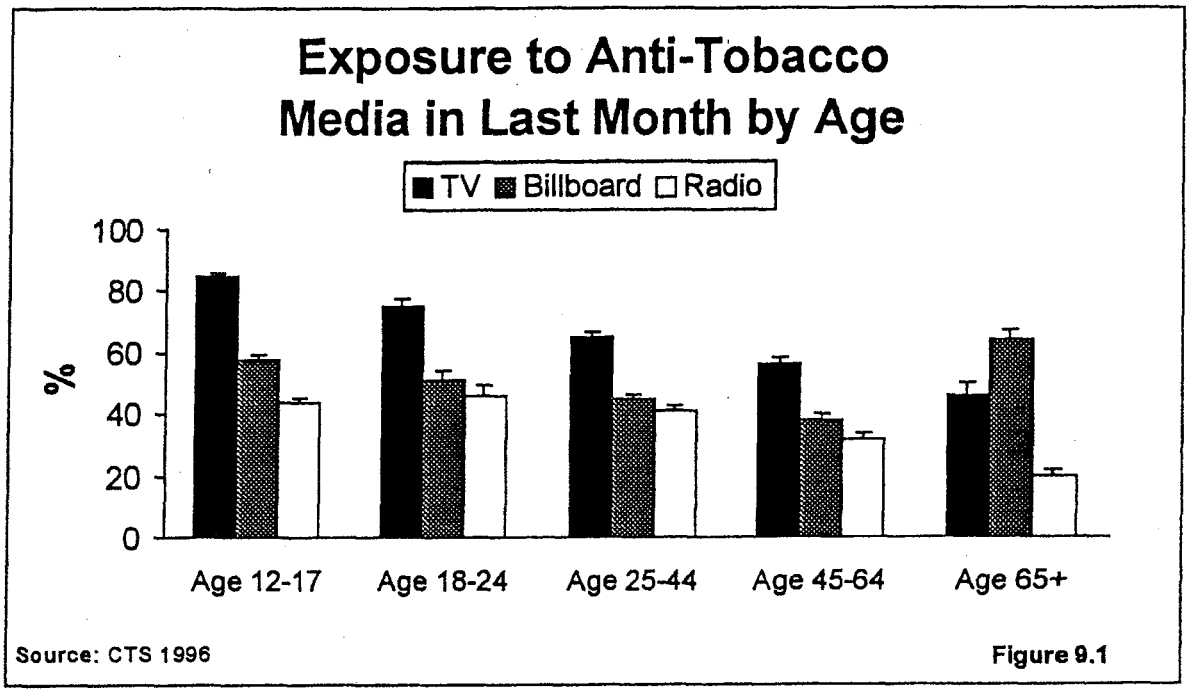
1. *In the last month, have you seen anything on TV against smoking?*	• *A lot of commercials* • *A few commercials* • *No commercials, but saw something in a program* • *Saw nothing against smoking, or* • *You rarely watch TV*
2. *In the last month, have you heard anything on the radio against smoking?*	• *A lot of commercials* • *A few commercials* • *No commercials, but heard something in a program* • *Heard nothing against smoking, or* • *You rarely listen to the radio*
3. *In the last month, have you seen a billboard with a message against smoking?*	• *A lot of billboards* • *A few billboards* • *No billboards against smoking*

Overall, 67% of adults and 82% of adolescents saw an antismoking message on TV, 44% of adults and 50% of adolescents heard such a message on radio, and 41% of adults and 58% of teens saw an anti-smoking billboard. It is important to note that in addition to capturing recall of the TCP media campaign, answers to the above questions may have also included respondents' recall of media messages against smoking other than the ones that were part of the TCP media campaign. For instance, advertisements on television for nicotine gum or the patch may have been what the respondent recalled. Also, there was some news coverage of the tobacco industry litigation during this period.

Demographics

The younger the respondent, the more likely they were to recall exposure to at least a few TV, radio, or billboard anti-tobacco messages. Similarly, the older the respondent, the more likely they were to recall *no* anti-tobacco messages on TV, radio, or billboards. The 1996 TCP media spots were placed on stations and/or programs that attract young adult viewers. Also, more young people watch TV and listen to the radio than older people. It is notable that these trends are similar to those representing *receptivity* to tobacco industry advertising and promotional activities.

Figure 9.1 illustrates the trends for recall of anti-tobacco messages on television, radio and billboards, by age group. The figure shows that, for all age groups except adults age 65 and older, recall is highest for television messages, followed by billboard and radio messages. Comprehensive demographic information on who saw anti-smoking media messages are presented in Appendix B, Table 16.



Source: CTS 1996

Figure 9.1

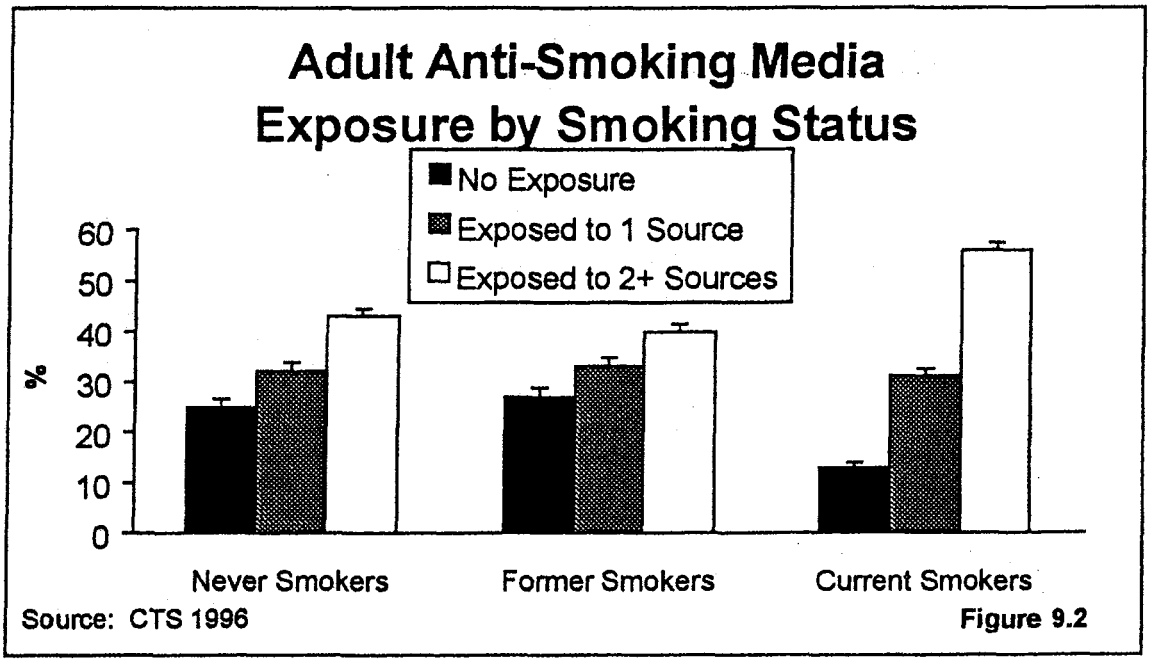
For analytical purposes, exposure to television, radio, and billboard messages were combined into a single binary variable indicating exposure. If respondents did not report seeing or hearing anti-tobacco messages on any of these three media, they were considered *not exposed*; otherwise, they were grouped into the *exposed* category.

Although there was no difference in the rates of recall between gender for adolescents (94% for boys and 93% for girls), adult men were significantly more likely (86%) to report seeing a message than adult women (79%). Also, among youth, there was little difference in rates of exposure across racial/ethnic groups. Among adults, however, exposure varied significantly; African-American (84%) and Hispanic adults (84%) reported higher rates of exposure than Asian (77%) or Non-Hispanic White adults (82%).

Education levels and exposure were also significantly related. Overall, 78% of adults with at least a high school education recalled at least one TV, radio, or billboard anti-tobacco message in the past month, compared to 74% of adults without a high school diploma, and the education gap widened with age. In fact, virtually no educational difference existed among 18-24 year olds, and the difference remained insignificant among 25-44 year olds. However, among adult 45-64 year olds, those with at least a high school education were significantly more likely (75%) to report some exposure than those without a high school diploma (69%). Approximately 64% of adults age 65 and older, who had at least a high school education recalled anti-tobacco media messages, while only 55% of older adults who had not completed high school reported any exposure, also a significant difference. Among youth, school performance was unrelated to exposure rates.

Anti-Tobacco Media Exposure and Smoking Status

Figure 9.2 shows that among adults, smoking status and exposure to anti-tobacco media were related.



Source: CTS 1996

Figure 9.2

The figure shows that adult current smokers recalled ads more often than nonsmokers or former smokers. This trend suggests that TCP media campaigns were successful in their strategy to target adult smokers.

Among teens, this relationship did not exist: addicted smokers recalled ads at about the same rate as never smokers and experimenters. However, for teens this result is desirable; it is important that all teens be exposed to anti-smoking media messages.

Anti-Tobacco Media Exposure and Quitting Behavior Among Adult Current Smokers

Many of the Tobacco Control Program's television, radio, and billboard ads display the toll-free telephone number for the state-funded California Smokers' Helpline. The 1996 CTS asked adult smokers who had a quit attempt in the last year if they had ever heard of the 1-800-7NOBUTTS telephone numbers for the Smokers' Helpline. Approximately 27% of smokers with a recent quit attempt had heard of the toll-free number (with aided recall).

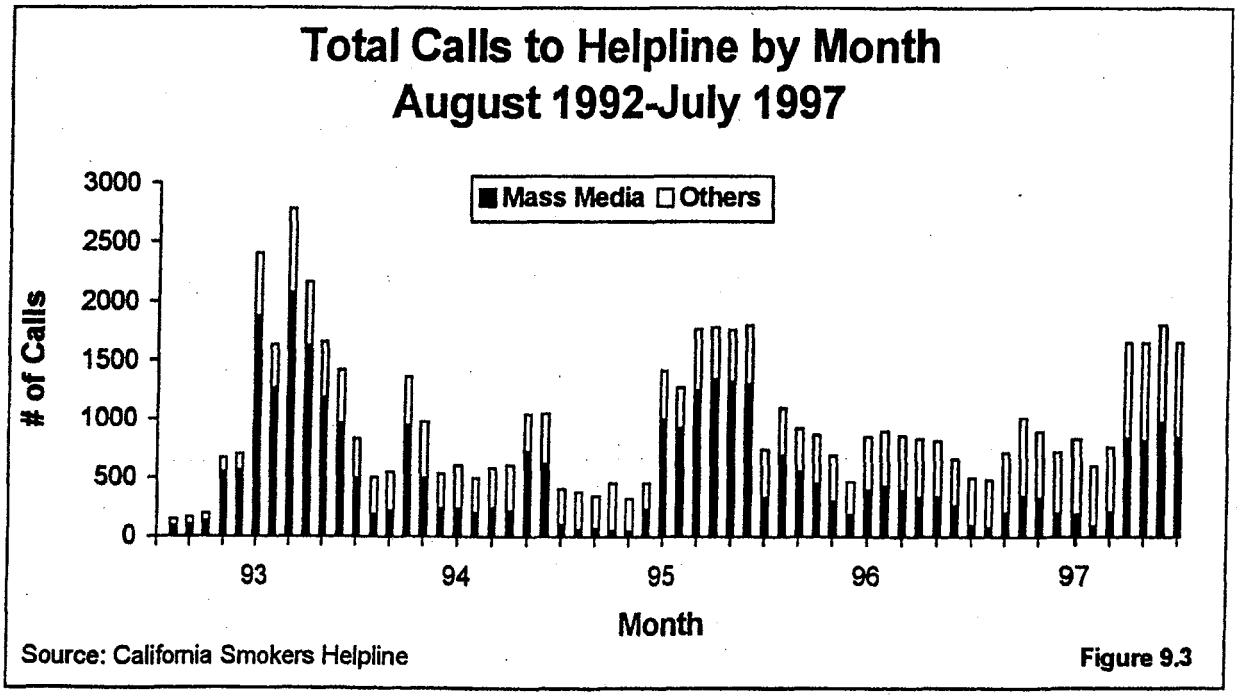
Current smokers who were exposed to anti-smoking media were more likely to attempt to quit smoking.

Current smokers who had made a quit attempt in the past year and were *exposed* in the last month to anti-tobacco media messages were significantly more likely to have heard of the Smokers' Helpline telephone numbers than were those who were *not exposed* (28.2% vs. 16.4%). Current smokers who were *exposed* to anti-tobacco media were also significantly more likely to have attempted to quit smoking within the last 12 months than were current smokers who were *not exposed* (48.2% vs. 39.1%).

To sort out which factors were related to the probability that a current smoker attempted to quit smoking, a logistic regression analysis—which simultaneously controlled for previous quitting history, cigarette consumption level, intention to quit, age, gender, race/ethnicity and educational level—was conducted. After adjusting for other factors known to be related to quitting, the analysis showed that smokers who were *exposed* to all three types of anti-tobacco media were significantly more likely (60.1%) to attempt to quit smoking than were smokers who said they had not seen or heard any of the three types of media messages (43.2%). This result implies that either the TCP media program has been effective in encouraging smokers to quit, or that those smokers who are in the midst of the quitting process are more likely to notice the anti-tobacco media.

Calls to the Helpline for Assistance to Quit

One of the goals of the California Tobacco Control Program (TCP) is to encourage smokers to seek help to quit. As mentioned above, many of the TCP anti-smoking media messages display the telephone number for the California Smokers' Helpline. Figure 9.3 presents the monthly calls to the Helpline from August 1992 through July 1997, and it demonstrates that the media campaign plays a crucial role in getting smokers to call the Helpline for assistance to quit.



Source: California Smokers Helpline

Figure 9.3

In Figure 9.3, the dark portion of the bar represents the number of calls in each month from callers who cited the TCP mass media campaign as one of their motivations to call the Smokers' Helpline. The unshaded portion of each bar represents those smokers who did not directly attribute their awareness of the Helpline to the mass media campaign. The figure shows that the periods during which there were increased calls to the Helpline correspond to times when there was an intensive media campaign in the field. In the first half of 1993, a period of intensive media activity, the monthly average for the number of Helpline calls was over three times that observed from the second half of that year through 1995. Again in the early half of 1995, monthly calls averaged about 3 times the level for the second half of that year through 1996. These data confirm previous reports (Pierce et al., 1986; Pierce et al., 1992) indicating that calls to the Helpline may be a reasonable measure of the effectiveness of the Mass Media Campaign.

Anti-Tobacco Media Exposure and Perceptions of the Tobacco Industry Among Adults

One media strategy outlined in an early report of the Tobacco Education and Research Oversight Committee (TEROC) was to educate Californians about the motives behind the tobacco industry's marketing. Specifically, the mass media program contested the tobacco industry's claims that it does not encourage young people to smoke, its products are not addictive, and that tobacco does not kill people (TEROC, 1997). To assess the effectiveness of the anti-tobacco media messages in this educational process, the 1996 CTS asked respondents whether they believed a series of statements about smoking, which reflected the tobacco industry's positions.

Anti-tobacco media exposure appears to have significantly increased the percentage of smokers who *did not* believe the tobacco industry messages.

Adult current smokers who were exposed to anti-tobacco media were slightly, but significantly, more likely to report that they *did not* believe tobacco company messages about industry advertising practices or the health consequences of smoking and secondhand smoke. Table 9.2 presents the percentages of adult current smokers exposed and not exposed to anti-tobacco messages who responded that they *did not* believe six specific tobacco industry messages.

Table 9.2 Percent of Current Smokers Who Did Not Believe the Tobacco Industry Claims			
Tobacco Industry Claim	**Exposed to Anti-Tobacco Messages (%)**	**Not Exposed to Anti-Tobacco Messages (%)**	**P-value**
They do not manipulate the level of nicotine in cigarettes	79.7	74.5	0.002*
They do not target advertising to encourage kids to smoke	71.7	67.5	0.047*
Advertising is only aimed at getting adult smokers to change brands	70.9	66.6	0.051
Nicotine is not addictive	93.1	89.9	0.007*
Secondhand smoke is not harmful to health	82.7	78.4	0.001*
Tobacco is not harmful to health	92.0	88.6	0.005*

*Indicates a statistically significant difference between the percentage of exposed and not-exposed smokers who do not believe the statements.
Source: CTS 1996

Impact of Anti-Tobacco Media Exposure on Adolescents

The 1996 media campaign was not explicitly aimed at adolescents but rather at young adults. Since adolescents often emulate young adults and are interested in the same things, such a focus for the campaign should reach adolescents as well. Indeed, adolescent respondents were more likely than adult respondents to see or hear anti-tobacco messages, but there was no difference in their beliefs about tobacco industry claims depending on whether they were exposed to anti-tobacco media messages. Because there was no difference, the data are not presented here.

One of the most powerful television spots of the 1996 media campaign showed a woman smoking through a hole in her throat. Such an emotional appeal would be expected to influence teens' views on the health consequences of smoking and possibly discourage *never smokers* from thinking about smoking or encourage smokers to quit. However, the data collected cannot isolate this media message from the others aired during this time.

Table 9.3 shows that, overall, the media campaign had no association with teens' beliefs about the health consequences of smoking or *susceptibility* to smoking (see Chapter 3). The table shows a trend for teen smokers exposed to anti-smoking media to be more likely to seriously have thought about quitting, but the sample of smokers is too small for the difference to be statistically significant.

Table 9.3
Association Between Media Exposure Among California Teens and Beliefs About the Health Consequences of Smoking, Susceptibility to Smoking, and Quitting Behavior

	Exposed (%)	Not Exposed (%)	P-value
Health Consequences (n=6,252)			
Believe it's safe to smoke for a year or two	9.2	10.3	0.452
Believe there is not any harm to having an occasional cigarette	67.4	66.9	0.823
Susceptible to Smoking (n=4,339)	31.1	29.3	0.467
Seriously Thought of Quitting			
All smokers (n=2,174)	40.2	34.4	0.155
Addicted smokers (n=446)	85.1	76.2	0.291

Source: CTS 1996

4. Summary

The tobacco industry and the state of California each use the media extensively to convey their respective messages. This chapter explained that receptivity to advertising and promotions consists of three components: (1) exposure to the message, (2) paying attention to or recognizing the message, and (3) developing a cognitive or positive affective response to the message as demonstrated by understanding of, interest in, and agreement with the message.

Section 1 presented strong evidence that California teens are highly exposed to tobacco industry advertising and promotional activities. Approximately 90% of teens reported exposure to these pro-smoking messages in each CTS, based on their answers to a question about whether they could name a brand of cigarettes they saw advertised most on billboards and in magazines. The analyses presented in this section also showed that teens understand and agree with the messages in cigarette advertisements. Finally, this section demonstrated that the percent of teens who are willing to use or own a cigarette promotional item, another important indicator of receptivity, increased significantly between 1993 and 1996.

Section 2 of this chapter presented evidence that cigarette advertisements and promotional activities independently contribute to the likelihood that a teen will progress from a *nonsusceptible never smoker* to riskier levels of the Uptake Continuum. Using the Robert Wood Johnson longitudinal data, it was shown that approximately 34% of the risk of future experimentation among *nonsusceptible never smokers* could be attributed to these activities. Thus, at least 68,000 new experimenters are recruited from the ranks of never smokers each year by tobacco industry advertising and promotions.

Section 3 suggests that the California Tobacco Control Program (TCP)'s media campaign has produced mixed results. Just as with the tobacco industry messages, younger respondents, women, African Americans and Hispanics were more likely to report recall of anti-tobacco media messages. The media campaign appears to have had some impact with adults. Adults exposed to the anti-tobacco messages were less likely to believe the messages of the tobacco industry; smokers who recalled radio, television and billboard messages were more likely to have made a recent quit attempt. Although more adolescents reported exposure to media antismoking messages than did adults, the messages had little impact on the teens' beliefs or behavior.

The evidence presented in this chapter suggests that the tobacco companies have been quite effective in their strategies to influence and attract new smokers. The TCP Mass Media Campaign showed some effect with adults but had little impact on youth. A fully funded and intensive media campaign that reaches a large proportion of California smokers should stimulate quitting and calls to the California Smokers' Helpline for assistance.

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