CONSIDER THE SOURCE: YOUTH PERCEPTIONS OF INDUSTRY VS. TOBACCO CONTROL GROUPS ANTISMOKING TELEVISION ADS

by

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A thesis submitted in partial fulfillment of the
requirements for the degree of

MASTER OF PUBLIC HEALTH
in
HEALTH EDUCATION AND HEALTH PROMOTION

Portland State University
2002

Dedication

Joseph Weller (1950 – 2001)

He drove down tobacco use and saved lives.

Acknowledgments

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Introduction

Each and every day in the United States more than 3,000 adolescents younger than 18 become daily cigarette smokers, more than 1.2 million each year (Gilpin, 1999). The rate of initiation of regular daily smoking among adolescents in the United States rose by 50% from 1988 to 1996. Most teenage smokers vastly underestimate the addictiveness of nicotine and the difficulty of quitting cigarettes. Among teens who say they will quit smoking, more than 75% are still smoking five years later (Crump, 1998). The consequences of smoking create a global health crisis of staggering proportions. The current estimate of 3-million deaths worldwide is expected to rise to 10-million tobacco-related deaths a year by the time today's adolescents reach middle age (Peto, 1994). The smokers with the most difficulty quitting and the most health problems in adulthood appear to be those who started smoking at the youngest ages (Lando, 1999).

In 1998, Philip Morris USA embarked on a campaign produced by a new youth smoking prevention department. The Philip Morris department produced and began airing several television spots with the slogan: "Think. Don't

Smoke." The department also oversees youth access enforcement programs, and materials and funding for school and community groups. The youth smoking prevention program has as its stated goal "to help reduce underage use of tobacco" (Levy, 1999, p. 1268). Antismoking advocates greeted the corporate effort with skepticism, which Levy acknowledged, "We accept the fact that many people question our commitment to do the right thing. Our hope is that in the long term reasonable people will judge us by our actions," (p. 1268). This study attempts to provide just such an evaluation by comparing the perceptions middle school students report after viewing ads produced by Philip Morris as well as ads produced by tobacco control groups, including state agencies and the American Legacy Foundation.

While the largest health-related media campaigns in recent years have been the products of governmental agencies or foundations, with funding provided by taxes or the proceeds of state lawsuits against the tobacco industry (IOM, 2000), Philip Morris is by no means the first corporation to embark on a mass media campaign on a health issue. Not surprisingly, the messages in privately-funded campaigns are usually compatible with the marketing interests of the industry sources. For example, a series of "responsible drinking" campaigns produced by brewers do not argue against drinking alcoholic beverages, instead they merely warn against hazardous behaviors (such as driving while intoxicated) associated with alcoholic beverage consumption

(DeJong, 1992). What's more, the researchers found that the messages and images in these campaigns are essentially consistent with those used in ads promoting the sponsor's brands. In another case, when aspirin use by children was first linked with Reyes syndrome, aspirin producers used media campaigns to discredit the research, until the accumulating weight of the evidence of a causal association (along with federal regulatory pressure) compelled them to warn against giving aspirin to children (Soumerai, 1992). As these examples illustrate, corporations are likely to follow their primary function of maximizing return to shareholders, even when the public health is at stake.

Although media campaigns concerned with the health risks of smoking are generally thought to be a recent phenomenon, the tobacco industry has a decades-long history of using mass media to "talk" to the public about health issues. A review of cigarette advertising in one national magazine found that during a period spanning six decades, the industry-sponsored health communications appeared almost always in response to adverse publicity, including key announcements of research findings on the health hazards of tobacco (Warner, 1985). The industry has also used "smokers' rights" publications to publicize critiques of research findings on the health consequences of smoking and environmental tobacco smoke (Cardador, 1995).

Television advertising, in particular, is an integral part of comprehensive campaigns to change cigarette smoking prevalence and initiation rates, both as

antismoking efforts (Goldman, 1998; Siegel, 2000; Lantz, 2000) and as tobacco promotion marketing (Evans, 1995; Biener & Siegel, 2000). California, Massachusetts, Florida and Oregon all saw reductions in cigarette smoking that exceeded national trends after they instituted tobacco control campaigns that featured strong television advertising components (Balbach, 1998; Harris, 1996; Bauer, 1999; Pizacani, 1999). A controlled trial of media exposure and school-based antismoking education demonstrated that the combination was more effective than either component separately, particularly with youth at high-risk for smoking (Flynn, 1994; Flynn, 1997). As a result of these and other reports, antismoking media campaigns are recommended as one component of comprehensive approaches to tobacco control (CDC, 1999; IOM, 2000).

Media campaigns directed toward dissuading youth from initiating smoking incorporate strategies and messages based on several models and theories of health behavior, including Social Learning Theory, Stages of Change, and Expectancy Theory. In accord with these theories, antismoking ads frequently include model individuals who either demonstrate the desirable qualities of nonsmokers (such as physical endurance) or the undesirable qualities of smokers (such as higher rates of impotence). The visual vignettes incorporate anecdotes about the consequences of tobacco use and encourage viewers to adopt a particular conclusion about the pros and cons of smoking.

However, while theoretical foundations can suggest broad outlines for antismoking media messages, current media campaign theories have only a limited ability to predict the effects of specific advertisements (Logan, 1999). Indeed, media plans that seem to exhibit all the right features can still fail to evoke the desired responses from adolescents (McKenna, 1993). The key to success for antismoking advertising campaigns is in the details of design and execution, which are largely determined by experience and testing. Lantz (2000, p. 52) summarized the literature on youth smoking prevention as suggesting that "messages for specific target groups are based on empirical findings regarding the needs and interests of the group." Therefore any analysis of these campaigns must be guided by empirical findings; that is, the measurement of perceptions, attitudes and, ultimately, behavior change in the intended audience.

Documenting behavior change, in this case the reduction of future smoking rates in a youth cohort, requires a great deal of time and a large commitment of resources. So, like the use of biomarkers to predict the likely outcomes of medical therapies, this study looked at the first element, the perceptions of young viewers, as a marker to link the findings into the larger body of knowledge about the effects of smoking prevention programs.

With respect to youth smoking prevention, Lantz (2000) noted that mass media campaigns increase their chance of having an effect if messages aimed at specific target groups are based on empirical findings regarding the needs and

interests of that group. Goldman (1998) and colleagues rated the expected effectiveness of a variety of antismoking messages based on the reactions of 1500 children and adults in a series of focus groups. Youth responses indicated that the messages most likely to be effective were

1) smoking behavior is influenced by industry manipulation,
2) secondhand smoke means that smoking is a health threat to others besides the smoker,
3) smoking is an addiction.

The messages considered least likely to be effective included those that focused on

1) long-term health effects of smoking,
2) the availability of cigarettes to minors.

Contrary to common assumptions, the adolescents considered messages about romantic rejection of smokers to be ineffective. Indeed, respondents said the romantic rejection messages (that smoking would interfere with dating and social popularity) were offensive, superficial, and contrary to their own experiences.

Table 1

Effectiveness of Antismoking Messages

Component	Youth	Adults
Industry manipulation	Highly effective	Highly effective
Secondhand Smoke	Highly effective	Highly effective
Addiction	Effective	Effective
Cessation	Impact Unknown	Effective
Youth Access	Not effective	Moderately effective
Short-term effects	Moderately effective	Not effective
Long-term effects	Not effective	Moderately effective
Romantic rejection	Not effective	Not effective

Adapted from Goldman, L.K. & Glantz, S.A. (1998) Evaluation of antismoking advertising campaigns. *Journal of the American Medical Association*. 279, p. 776.

In a test of antismoking ad mock-ups, specific warnings (such as "Smoking Causes Lung Cancer, Heart Disease, Emphysema, and May Complicate Pregnancy") were considered more believable than a more general warning ("Smoking Kills") by children and adolescents in Chicago-area schools (Duffy, 2000). The survey respondents also rated warnings that incorporated cartoon characters as more believable than warnings that used text only. Antismoking ads that elicited strong negative emotions (sadness and fear) were perceived to be more effective than humorous or entertaining ads by Massachusetts television viewers (Biener, McCallum-Keeler & Nyman, 2000). Conversely, the telephone survey of 1544 smokers and non-smokers found that both groups considered funny or entertaining ads to be less effective. As these reports indicate, empirical findings about the responses of audience and research

subjects to antismoking materials provide a framework for evaluating antismoking television advertisements now in use.

Just as "responsible drinking" campaigns share content with alcoholic beverage brand promotions, some messages that appear, at first glance, to discourage smoking may actually overlap with messages tobacco companies use to promote their products. For example, Philip Morris says one goal of its youth smoking prevention advertising is "reinforcing their (youth's) ability to think independently and to make their own decisions" (Philip Morris, 2000). However, "independent thinking" does not necessarily lead to a rejection of tobacco. Indeed, a marketing analysis performed by a competitor noted that Philip Morris shaped an advertising campaign for its dominant Marlboro brand to be in tune with young smokers' "enduring want to express their maturity and independence *through smoking*" (Burrows, 1984, p. 16, italics added). DiFranza (1992) noted that messages about decision-making may have the perverse effect of encouraging some teens to decide to smoke.

It is crucial that the potential effectiveness of antismoking advertising be judged primarily by its impact on those most likely to smoke. In other words, the reactions of high-risk youth are more important than the opinions of youth who are unlikely to smoke in any case. It is possible to identify youth who are more likely to increase their cigarette consumption (Pierce, 1996). Tobacco marketers have long recognized that "social pressures tend to isolate younger adult

smokers from their nonsmoking peers" (Burrows, 1984, p. 19). These high-risk youth also tend to be in societal groups that are heavy consumers of mass media (Gfroerer, 1997; Baranowski, 1997). Indeed, it has been shown that mass media are effective at reaching those youth at highest risk of smoking (Jason, 1998; Macaskill, 1992). And when an intervention that combined mass media with school-based anti-tobacco education was analyzed for sub-group effects, a significant effect was found only among high-risk youth (Flynn, 1997). Burt, et al. (2000) found that psychological measures of rebelliousness and risk taking were the most significant predictors of smoking, and they urged prevention program designers to address the needs and expectations of these youth. McKenna and Williams (1993) noted the importance of this point in their review of a "failed" tobacco counter-advertising campaign. They identified one likely misstep in the fact that during much of the design phase "decisions about the campaign were made entirely by adults." Dalton, et al. (1999) noted that while the designers of anti-tobacco media campaigns are primarily motivated by their wish to prevent death and disease caused by tobacco, these negative outcomes are not the factors of greatest significance to susceptible youth. The survey of adolescents found no significant association between concerns about addiction or health effects and susceptibility to smoking. The strongest association was between susceptibility and agreement with the statement "I think I would enjoy smoking."

Tobacco industry marketers recognized this distinction long ago. The importance of designing media messages that appeal to specific social groups was highlighted in an R. J. Reynolds marketing report that examined social subgroups and noted that Camel's "realm of appeal" among young smokers included "Rockers," "Party Parties" and "Punkers," but not "Goody Goodies" or "Preps" (Martin, 1984). Another R.J. Reynolds report summarized youth attitudes including the observations that "Preps don't' smoke" and "cigarette trends would start with Rockers and Punkers" (R.J. Reynolds, 1984, p. 62). That report underscored the importance of using media messages that appeal specifically to the target audience and not to other youth or older people. "Keep in mind that SQUEAKY CLEAN looks good to us but is out-of-sync with (their) viewpoint. It is likely to be seen by them as NOT speaking to them, NOT understanding them, NOT relevant to their lifestyle" (emphasis in original) (p. 50).

Philip Morris USA (2000) has posted statements on its web site that its Youth Smoking Prevention advertisements were evaluated through a series of focus groups involving 6,800 youth and parents in 40 cities. The company statement said, "The results demonstrated that the seven advertisements currently on air were believable, attention getting, memorable and – most important – generated nearly universal understanding of the main message of "Don't Smoke" among kids. Both youth and parents found them to be as

effective as virtually all comparative commercials in their ability to communicate not to smoke" (Appendix C). However, Philip Morris has since removed references to the results of its research, although the web site stated that over 13,000 teens and parents had been surveyed as of the summer of 2002.

Previous independent studies and observations of responses to the Philip Morris antismoking ads indicate that they fail to strongly portray the dangers of smoking and emphasize that youth have a choice about smoking (TRU, 1999), that the Philip Morris ads may confuse viewers who are also see public agencies ads (Mitchell, 1999), and that exposure to the Philip Morris ads were associated with an increase in the odds of youths' intending to smoke in the next year (Farrelly, 2002). The first report presented the results of a series of focus groups performed for the states of Arizona, California and Massachusetts that gathered responses to a variety of antismoking advertisements (including several produced by state agencies involved and two from the Philip Morris series.) In these focus groups, youth aged 12 to 16 told facilitators that the Philip Morris spots lacked substance, failed to explain the negative consequences of smoking, put the responsibility for smoking on teens (rather than on tobacco industry marketing,) and did not offer realistic portrayals of teens. The authors note their "study was qualitative in nature and intended to provide insights and direction, not absolute measures nor a quantitative assessment projectable to a larger population" (TRU, 1999, p. 4).

Researchers in Florida who surveyed youth for reactions to government sponsored anti-tobacco media also encountered a negative reaction to the Philip Morris advertisements. Many survey respondents apparently confused the Philip Morris spots with Florida's intensive antismoking "Truth" media campaign, asking why the state television ads had "gone lame." Program evaluators in Florida raised the concern that the Philip Morris advertisements might undermine the state campaign (Mitchell, 1999).

A before-and-after telephone survey of youths aged 12 to 17 by researchers affiliated with the American Legacy Foundation (ALF) found that while exposure to ads produced by the ALF "truth" campaign was associated with increased anti-tobacco attitudes and beliefs, there was no such association with exposure to the Philip Morris "Think. Don't Smoke" ads. While exposure to both the ALF and Philip Morris ads increased the odds that youth would agree that "not smoking is a way to express independence" and disagree that smoking makes youths "look cool or fit in;" exposure to the Philip Morris ads increased the odds that youth would say they intended to smoke in the next year (Farrelly, 2002).

While earlier studies used focus groups or telephone surveys, this study attempted to more closely approximate the experience of watching ads on television by using an Internet-based survey tool that displayed a selection of antismoking ad videos from state agencies, the American Legacy Foundation

and the Philip Morris Youth Smoking Prevention department (Appendix A). By allowing middle school students to give immediate and anonymous responses to the ads, this survey offers a different perspective on viewer impressions. The research objectives of this study were to:

1. Compare student perceptions of Philip Morris ads to those of ads from tobacco control groups along four parameters:

    a. Emotional strength

    Television is a medium that conveys emotion. Focus group research and surveys assessing tobacco counter-advertising consistently report that the most highly regarded spots are those with powerfully emotional stories and images (TRU, 1999; Peracchio, 1998; Joe Weller, personal communication).

    b. Explicit portrayal of the consequences of smoking

    Admonitions to refrain from a behavior appear to be less persuasive if they fail to provide clear and compelling reasons (DeJong, 1992). Notably, warnings that smokers risk romantic rejection were not considered persuasive according to the results of focus groups involving 1500 children and adults (Goldman, 1998). On the other hand, youth respondents react favorably to the portrayal of useful facts and information about the consequences of tobacco use (TRU, 1999; DeJong, 1992; McKenna, 1993). Youth are generally aware of the long-term health

effects of tobacco, so advertisements that merely restate familiar warnings about eventual cancer or heart disease or other distant risks usually fail to make a strong impression (Peracchio, 1998; McKenna, 1993; Goldman, 1998). However, stories of people suffering health consequences in the present can strike a chord, even with young viewers (Peracchio, 1998; TRU, 1999).

c. Whether smoking is portrayed as "forbidden fruit"

Adolescents yearn to be adults. Tobacco industry marketers have long recognized that portraying tobacco use as an adult activity (and inappropriate for "children") is one of the surest means to increase the appeal of tobacco to adolescents (Burrows, 1984; DiFranza, 1992; Glantz, 1996; Fox, 1998). In a like manner, the portrayal of a risk as thrilling can entice viewers to minimize the hazards, just as many "sports car" commercials transform aggressive and high-speed driving from an anti-social, dangerous (and often illegal) activity into a strongly positive marketing appeal.

d. Where the ad places the responsibility for smoking

Does the advertisement emphasize individual decision-making or external forces (including tobacco industry marketing)? In California and in Florida, media campaigns highlighting tobacco marketing practices and the influence of the tobacco industry provoked a strong response among

youth (Goldman, 1998; Bauer, 1999; TRU, 1999). On the other hand, an emphasis on individual responsibility may actually promote smoking as legitimate choice. As DiFranza (1992, p. 695-6) put it: “programs with an emphasis on decision-making stimulate tobacco use among children… Children who might never have considered tobacco use to be an option are taught that they must make a decision about using tobacco. Not surprisingly, some decide to try it.”

2. Compare the responses of subgroups within the student sample, with primary attention to differences between students at lower risk for smoking to those at higher risk and smokers
3. Explore the feasibility of web-based survey methods for the evaluation of televised health messages.

In order to assess the antismoking programs of industry and tobacco control groups, it is important for the public and policy makers to understand the differences in perceptions of antismoking ads created by different sponsors.

Methods

Sample

In order to determine what young viewers see in the ads, a convenience sample of middle school students in the Portland, Oregon metropolitan area was recruited to connect to an Internet site where students could watch digitized versions of antismoking advertisements and then respond to a web-based questionnaire. Respondents also provided demographic information and answered questions about smoking attitudes and behavior.

Administrators at 19 school districts in the Portland, Oregon metropolitan area (all the districts listed in the local telephone directory) were approached with requests for help recruiting volunteers from among their middle school students (grades 6 through 8.) Officials with the majority of districts declined to participate, citing an overload of requests to survey students. The two largest school districts, Portland Public Schools, with a middle school student enrollment of 11,076 (Portland Public Schools, 2002), and the Beaverton School District, with a middle school student enrollment of 7,580 (Beaverton School District, 2001), approved requests to approach individual middle school principals.

In the Portland Public Schools, 19 of 20 middle school principals were contacted by e-mail, telephone and in person for permission to recruit students.

(The 20th middle school was closed for building maintenance.) Of the 19 principals, 6 agreed to distribute survey information to teachers and students. No students responded from three schools. Students from Gregory Heights Middle School provided 93 sets of video viewing response data. Students from Kellogg Middle School provided 50 sets of video viewing response data. Students from DaVinci Middle School provided 8 sets of video viewing response data.

Although officials at the Beaverton School District approved the survey research project and staff at one middle school agreed to distribute survey information, no students responded to the survey. Unlike the Portland district, Beaverton officials required signed consent slips from parents or guardians before allowing students to receive information about the survey, thus placing an additional burden on school staff and participants.

All the responses came from students at three Portland middle schools: Gregory Heights, Kellogg and DaVinci. The bulk of the responses (94.7%) were collected from Gregory Heights and Kellogg Middle Schools, which are both on the eastern side of the city. Both schools have a larger proportion of students eligible for subsidized meals than the Portland district as a whole.

Protection of Human Subjects

An application was submitted to the Portland State University Human Subjects Research Review Committee (HSRRC) in the spring of 2000. Based on the plan to use an anonymous survey, the initial application sought a waiver of

full review. However, since possession and use of tobacco by minors is illegal in the state of Oregon, the HSRRC chair determined that expedited review would be necessary. The application was approved in the fall of 2000 on condition that during in-class pilot testing of the survey no questions would be asked about smoking behavior and that signed parental consent would be obtained before providing students with the password to access the Internet survey.

According to staff of the Youth Tobacco Survey team at the Centers for Disease Control and Prevention, CDC surveys, and other important tobacco surveys of youth, routinely employ passive permission in schools (Leah Zinner, personal communication, October 2001). What's more, Zinner said she was not aware of any successful tobacco-related survey of school students that used active consent. Based on CDC experience, passive permission for surveys of youth on tobacco issues is not only accepted, it is critical to the successful collection of this important health data.

In October 2001, requests were submitted for permission to drop the active consent form requirement; based on the fact that questions about smoking behavior are already part of the routine experience of middle school students and that an anonymous survey would not subject participants to grater than minimal risk.

The Beaverton School District denied the request. The Portland Public Schools approved the use of flyers and informational handouts, and agreed to drop the

active consent requirement. The Portland State University Human Subjects Research Review Committee (HSRRC) chair initially denied the request. However, after a staff member confirmed with the US Department of Health and Human Services Office of Human Research Protections that active consent was not required for anonymous survey research involving minors, the protocol modification was approved.

In November 2001, Portland school officials and teachers were sent updated information packets containing flyers and other informational handouts in place of active consent forms. Information about the purposes of the study and intended uses of the data were distributed through school staff (Appendix E). The informational packet told students that participation was entirely voluntary and anonymous, and that there would be no consequences for declining to take part. The students were not offered any material inducements to participate.

Web-based Questionnaire

There is a burgeoning use of new technologies to advance research methods in public health as well as other fields. In 1991, Saris outlined several advantages of using computers in social science data collection and analysis. He noted that computer-based questionnaires are more efficient than paper questionnaires, that computer presentations remove the variability of human

presentations, and that visual aids that can enhance the content of questionnaires presented via computer.

Web-based versions of standard questionnaires seem to perform as well or better than their paper-based antecedents. After using the Internet to invite participants to respond to a web-based version of the RAND 36-Item Health Survey 1.0 (RAND-36) regarding health status, Bell (1996) recommends using the web for such surveys. The respondents reported the web version to be quick and easy to use; and more importantly, the reliability of the web responses matched that obtained using the standard version. A comparison of the Ruminative Responses Scale in web and paper versions found internal consistency to be comparable (Davis, 1999). Similarly, a head-to-head trial of web and standard versions of Gangstead & Snyder's (1985) self monitoring questionnaire produced similar psychometric properties (Buchanan, 1999a). Buchanan (1999b) went on to perform two studies of web questionnaires in which he demonstrated their validity.

Buchanan (1999a) also noted that the web-based version garnered almost four times as many responses as the paper questionnaire. Jones (1999) found that performing a survey by postcard was twice as costly per reply as asking the same questions via a web site. The use of a web-based questionnaire to gather health information was received well by both college athletes and the physicians responsible for assessing their fitness (Peltz, 1999). Ninety percent of the

athletes said the web questionnaire was “easy” or “relatively easy” to use. Of the 16 physicians who interpreted the responses, 15 said the web-based method improved their ability to provide overall medical care and 13 noted time savings. These results point to the ability of web-based questionnaires to increase the efficiency of survey research, without compromising the quality of the results.

The anonymous web-based survey instrument offers privacy to young respondents. Youth know that they are not supposed to smoke (indeed they may be violating the law in some jurisdictions when they obtain or possess tobacco.) The fear of recrimination may discourage honest reporting by youth who smoke or are inclined toward smoking. As one would expect, when asking questions about socially unacceptable behavior, respondents are more likely to reveal such behavior in a questionnaire than in a face-to-face interview (McEwan, 1992). Furthermore, when the same questionnaire on self-consciousness, social anxiety, self-esteem, and social desirability was applied using either the Internet or pen-and-paper, (with respondents assigned to either anonymous or non-anonymous groups,) the respondents in the web-based anonymous group reported the lowest levels of social desirability (Joinson, 1999). These reports indicate that a web-based anonymous questionnaire is the format most likely to elicit accurate responses from youth who smoke or hold favorable attitudes toward tobacco. Davis (1999) and Buchanan (1999a) also reported that web-based versions of

standard psychological measurement questionnaires facilitated self-disclosure and compared favorably with their paper-based versions.

In summary, a web-based questionnaire that can display antismoking TV ads to youth and then collect anonymous responses is appropriate to a study of youth smoking prevention advertisements. It allows the collection of greater numbers of responses than focus groups, while also increasing the likelihood of honest responses to questions about tobacco use and attitudes towards tobacco. A web format can provide richer content than a paper questionnaire. Web-based questionnaires are more efficient than paper questionnaires for surveying large numbers of geographically dispersed respondents. Indeed, once the web site is designed and respondents are recruited, there is virtually no cost to collecting and collating the responses. Finally, the experience of other researchers shows that the results obtained by web questionnaires are as reliable and valid as are those from paper questionnaires.

The questionnaire used in this study was composed in HTML using Netscape Composer and then converted into Allaire ColdFusion 4.5 (now a Macromedia product) with Microsoft IIS 4 running on Microsoft Windows NT 4.0. The database management system was MySQL 3.23 running on Solaris 8.

Students from each of the subject schools were given a school-wide password, which they used to access the system. This allowed for simple authentication, while still providing some security to keep uninvited visitors

from taking the survey. Each student's progress was tracked individually throughout his or her survey session. Individual session tracking was needed, because each student entered demographic information one time, and that information needed to be associated with one to eight video response sets. As each video response set was generated, a copy of the demographic information was combined with it to create a 'complete' survey response without any ties to an individual. This process could be repeated as many times as needed.

The output was a collection of data results (one to eight per individual) each comprised of all demographic information, and all video response information. This procedure ensured that responses to the videos could not be linked to an individual, while remaining linked to the demographic and school information.

At the end of a student's session all individualized information was discarded. The three ways for a session to end were:

- Complete viewing of all eight videos, leading to automatic sign-out,
- Voluntary departure by the student,
- Inactivity for more than half an hour.

Videos

The videos were digitized into the RealMedia file format for use with the RealPlayer software. This software was chosen because of its popularity and the availability of free software downloads from the www.real.com website.

Although offering the videos in multiple video file formats might have facilitated participation of individuals or schools who did not already have RealPlayer software installed, the conversion software and equipment necessary to produce a full set of videos in multiple formats was not available.

The videos were obtained from the tobacco counter-advertising contractor for the state of Oregon (Pac/West Communications), the web site of the American Legacy Foundation Truth media campaign (www.thetruth.com), and from Philip Morris USA's Youth Smoking Prevention Department. (For descriptions of ad content see Appendix D.)

Table 2
Videos Presented

Group 1 (Tobacco Control Groups)		Group 2 (Philip Morris)	
Video Name	Source	Video Name	Source
Voicebox	Pac/West	Bus	Philip Morris USA
Cowboy	Pac/West	Being Different	
Parachute	www.thetruth.com	Karate Girl	
Beach	www.thetruth.com	My Reasons	

The first video presented to a student was taken randomly from one of the two groups of four (eight total). After viewing an ad and then responding to the survey questions about that ad, a student could continue on to another video

until he or she had seen and responded to all eight ads, or the student could end the session at any time. Since participation was entirely voluntary, there was no attempt to require that a student watch a specific number of ads. If a student continued on, subsequent videos were also taken randomly, from alternating groups without duplication. This was to ensure a fairly uniform distribution of student responses for all the videos. Ideally, we would have liked to programmatically ensure that all videos received an equal number of responses, but the increase in complexity made it unreasonable. The next student to begin the survey saw a video from the other group first, so if one student began with a Group 1 video, then the next student began with a Group 2 video. Thus even though students could quit the survey at any time and there was no control over how many videos each individual viewed, the system collected a relatively balanced number of responses for each video in each set, there was no duplicate viewing of an ad during a single survey session, and each respondent saw a balanced number of ads from each group (though a respondent who watched an odd number of ads would see one more from one group than from the other.) At the conclusion of the data collection period, the data from the database were exported to a Microsoft Excel spreadsheet file in the form of rows of data sets. Each data set contained the responses to an ad and the demographic and smoking status information on the individual who viewed the ad.

Measured Parameters

Each of the questions presented following the presentation of a video was linked to one of the four parameters being measured:

Emotional strength

§ Did this ad grab your attention or was it dull?

Grabbed Attention, In Between, Dull

§ Are the people in this ad believable? 5-point scale from

"Definitely Believable" to "Definitely Not Believable"

§ Did this ad make you stop and think about avoiding tobacco?

5-point scale from "A Lot" to "Not at All"

§ Did this ad affect you emotionally? (Did it get to your feelings?)

Frightened, Sad, Happy, Laugh, "It didn't get to my feelings."

Explicit consequences

§ Did this ad mention a specific reason not to smoke or something bad that could happen if you do smoke? Yes, No, Don't Remember

Students answering "Yes" were given the option of entering a brief description.

Forbidden Fruit

§ Pick the line that best matches what you saw or heard in the ad you just watched:

"Nobody at all should smoke," "Kids shouldn't smoke, it's an adult choice," or Neither/Not Sure

Responsibility

§ Pick the line that best matches what you saw or heard in the ad you just watched:

- Individual people are responsible for choosing whether or not to smoke.
- Individual people are mostly responsible for choosing whether or not to smoke.
- Individual people and tobacco companies are equally responsible.
- Tobacco companies are mostly responsible for making people want to smoke.
- Tobacco companies are responsible for making people want to smoke.

Sample Characteristics and Smoking Susceptibility

Before viewing the first video, the respondents were asked for demographic information, including age, grade, sex, ethnicity and meal subsidy eligibility (as a proxy for household income.) This information allowed the characteristics of the respondents to be compared to demographic data reported by the schools.

Following a procedure validated by Pierce (1996) through longitudinal study, respondents were categorized as nonsmokers nonsusceptible to smoking, nonsmokers susceptible to smoking, or smokers. Nonsmokers nonsusceptible to smoking were respondents who reported never smoking or smoking only one

cigarette in their lifetimes and who answered “No” or “Definitely Not” to the following questions:

- Do you think you will try a cigarette soon?
- If one of your best friends offered you a cigarette, would you smoke it?
- At any time during the next 12 months do you think you will smoke a cigarette?

Nonsmokers susceptible to smoking were respondents who, despite having smoked one or fewer cigarettes in their lifetimes, gave any response other than “No” or “Definitely Not” to the three questions about smoking intentions. Smokers were respondents who reported smoking two or more cigarettes in their lifetimes.

Recruitment and Execution

The recruitment process began in the spring of 2000, with initial contacts by telephone and letter (see Appendix F) with school districts and individual schools to identify decision makers and procedures for distributing information to students. At this early stage, most district and school officials expressed general support and interest in reviewing the research proposal.

In October 2000, the survey was pilot tested with three classes of students at Twality Middle School in Tigard, Oregon. Students viewed videos of antismoking ads and then filled out a paper version of the survey. Discussions

with students identified questions that were unclear or confusing. Following pilot testing, the survey was revised. During the fall of 2000, officials at the Portland Public Schools and the Beaverton School District approved requests to approach individual middle school principals for permission to recruit students.

Conversion of the paper-based version of the survey into a web-based form was accomplished with the assistance of staff at the Portland State University Office of Information Technologies Instruction & Research Services. Work was begun in October 2000. When the individual given primary responsibility for converting the survey left the university in June 2001 without completing a working web site, the project was reassigned to Barney Boisvert. Mr. Boisvert produced the working version of the web-based survey in July 2001.

In August 2001, school officials in the Portland metro area were re-contacted and given instructions on how to review the final form of the web-based survey. In addition, the schools were sent copies of a 3-page packet for teachers. The teacher packet contained background information on the project, consent form and instructions for students. Over the next two months, repeated contacts with dozens of schools garnered only one agreement to participate. Most principals and teachers who responded said the paperwork burden involved in gathering parental consent was too great. After receiving permission

to change the study protocol to use passive notification, the teacher packet was revised (Appendix E).

On November 26, 2001 the first student responses appeared in the survey web site data base. Students at Gregory Heights Middle School responded to 47 video viewings. The data base collected up to 11 completed surveys per minute. The pattern of responses indicated that the survey was being undertaken as a class activity. More responses arrived later in the day and on the next day, totaling 94 viewing viewings from the school.

On December 4, 2001 a set of eight responses using the DaVinci Middle School login password was submitted during the evening, indicating a small number of students took the survey outside of school.

In all, 151 useable video viewing survey response sets were submitted to the data base, between November 26, 2001 and January 16, 2002.

Statistical Analysis

Based on the categorical nature of the questionnaire responses, chi-squared analyses of the patterns of responses were performed. The pivot data procedure within Microsoft Excel was used to generate summary tables of categorical responses. Minitab (Minitab Inc., State College, PA) was used to run Chi-square analyses to test if responses were independent of groups. The data were analyzed to compare all responses to tobacco control groups ads to all responses to Philip Morris ads, subgroup analyses were performed compare response patterns based on smoking susceptibility, ethnicity, sex, and meal subsidy eligibility.

Results

Data on 151 video viewings were collected from students at three Portland Public School district middle schools. The characteristics of the sample are shown in Table 3. Compared to district data, the responses were more likely to come from girls, members of a minority ethnic group or students who receive meal subsidies. The sample contains a higher proportion of responses from minority students than is found in either the general district population (58.9%

vs. 38.5% minority) or in the individual schools which produced the bulk of the responses (Gregory Heights: 58.2% vs. 42.9%; Kellogg: 68.0% vs. 35.5%). The survey responses also include many more from girls than are in the general population (58.3 % vs. 48.1% for all Portland Public Schools middle schools.) A somewhat higher percentage of responses came from students reporting eligibility for free or reduced price meals than are in the district records (49.7% vs. 41.2%). All but two responses listed an age that matches the expected range for middle school students (ages 11-14).

Perceptions

Viewers were more likely to perceive a message of individual responsibility regarding smoking in ads from the Philip Morris company than in ads from tobacco control groups, as shown in Table 4. Nine out of ten responses to ads produced by Philip Morris said the ad placed all or most of the responsibility for smoking decisions on individuals, as opposed to less than 4 percent saying the ad held tobacco companies responsible. By contrast, 71 percent of responses to ads from tobacco control organizations perceived an individual responsibility message, with almost 15 percent saying the ad placed the burden of responsibility on tobacco companies ($p<.05$).

Viewers were more likely to say ads from the tobacco control groups grabbed their attention, had believable characters, and made them “stop and think” about using tobacco, but the differences between the tobacco control

group responses and those to Philip Morris ads were not statistically significant. A large majority of viewers of both groups of ads said the ads not grab their attention.

Viewers were asked whether the ad they just watched made them "frightened," "sad," "happy," "laugh," or did not get to their feelings. There were insufficient responses to analyze the patterns of each type of negative or positive emotional reaction. After combining the data on all four types of emotional reactions, there was almost no difference between the groups of ads, with just over half the responses noting any emotional reaction to an ad.

A majority of viewers of ads from both groups said the ad failed to note any mention of a specific reason not to smoke. Of the responses that reported an ad mentioned a reason not to smoke, about half (49.2%) listed the reason (Appendix G). The reasons listed included that smoking is deadly, it causes lung cancer, and it interferes with goals and social life.

When asked whether an ad espoused the position that "Nobody should smoke" or "Kids shouldn't smoke," viewers of tobacco control groups ads were more likely to select "Nobody," while viewers of Philip Morris ads were evenly split. However, the difference in perceptions was not statistically significant.

Sample Characteristics

The demographic data collected prior to video viewing allowed responses to be analyzed by smoking status and risk, sex, ethnicity, and meal

subsidy eligibility (a proxy for household income). Twenty-two of 151 responses (15%) came from students who reported lifetime smoking of more than one cigarette. As shown in Table 5, these students and nonsmoking students who are at higher risk for smoking rated all ads less favorably than did nonsmoking students who are at lower risk for smoking.

In general, ethnicity, sex and household income were not associated with ad responses, though some statistically significant differences were seen (data not presented in tables). White students were more likely than non-white students to say that an ad made them "stop and think" about avoiding tobacco (65.6% vs. 38.3%, $p<.01$), to report seeing a reason not to smoke mentioned in an ad (49.2% vs. 32.1%, $p<.05$), and to report that an ad took the view that "nobody should smoke" (44.8% vs. 25.0%) as opposed to "kids shouldn't smoke, it's an adult choice" (22.4% vs. 36.8%) or perceiving neither message (32.8% vs. 38.2%) ($p=.05$ for the differences in the overall pattern of responses). Students eligible for meal subsidies were much more likely than students from higher income households to report an emotional response to an ad (69.4% vs. 41.7%; $p<.01$).

Discussion

The results of this study suggest that antismoking advertisements produced by Philip Morris U.S.A. convey a message of individual responsibility that is in conflict with the objectives of major tobacco control programs. The emphasis on individual choice and decision-making communicated by the Philip Morris ads runs counter to the "industry manipulation" theme credited with much of the success of the Florida "truth" campaign (Sly, 2001) and the California and Massachusetts antitobacco media campaigns (Goldman, 1998.) This result is in general agreement with the reported findings of earlier studies which questioned the ability of the Philip Morris ads to appeal to youth (TRU, 1999) or to dissuade them from smoking (Farrelly, 2002). However, in contrast with those comparisons, this survey failed to detect a significant difference between Philip Morris ads and those from tobacco control groups in terms of emotional strength, portrayal of smoking as "forbidden fruit," and depiction of the consequences of smoking.

While Philip Morris has released public statements that almost all viewers in private studies of their antismoking ads said the ad contained a "Don't Smoke/Not to Smoke" message, somewhat less than half the viewers of Philip Morris ads in this survey reported that the ad made them "stop and think" about avoiding tobacco. In addition, although there was no apparent difference

between the tobacco control groups ads and the Philip Morris ad in the types of reasons students reported seeing, it is interesting to note that only two of 18 viewers reported seeing any reason not to smoke mentioned in the ad that Philip Morris titled “My Reasons” (and described on the Philip Morris web site as “Children from different backgrounds and areas, giving reasons why they don't smoke.”) Indeed, one of those two respondents said the reason (“What you live for and love is at stake if you smoke”) was “not explained directly.”

The perceptions reported by students in this study match the stated viewpoints of the producers of the ads. Tobacco control organizations seek to draw attention to tobacco marketing and promotion (American Legacy Foundation, 2002). As the mission statement on the www.thetruth.com website of the American Legacy Foundation puts it, “Our main goal is to alert everyone to the lies and hidden practices of the cigarette companies, while giving people the tools to have a voice in changing that,” (thetruth.com, 2002, Mission). By contrast, the Philip Morris tobacco company emphasizes the responsibility of children to make decisions about smoking, “Mass media campaigns should raise general awareness among youth, change youth perceptions about smoking, and give youth credit for making good decisions.” (Philip Morris USA, 2002b). While this finding may seem self-evident, it is important to document the perception of young viewers given the numerous examples of discrepancies between what adults intend for an ad to communicate and the impressions that

youth actually report (McKenna, 1993; Logan, 1999; Peracchio, 1998). What's more, the divergent messages about responsibility raise important questions that extend beyond mere calculations of the technical efficacy of antismoking ads and range into matters of public values; that is, rather than just predicting how these messages may influence youth smoking rates, we need to decide: what lessons about the roles of individuals and corporations in society do we want to teach our children?

The results of this survey highlight important differences within the audience that must be taken into account when developing antismoking ads. Smokers and higher-risk nonsmokers had a less favorable view of all the antismoking ads than did lower-risk nonsmokers, which suggests that all antismoking ad sponsors may miss the key audience if they fail to heed the tobacco marketing advice to ignore the "Goody Goodies" and focus on the "Rockers," "Party Parties" and "Punkers" (Martin, 1984).

Even when youth smoking rates peaked during the 1990s and before sustained antismoking media campaigns aimed at youth were introduced, most teenagers were not regular cigarette smokers (Office on Smoking and Health, 2000). The proportion of students who reported lifetime smoking of more than one cigarette (15%) can be compared with estimates that 13% of 8th graders in Multnomah County (which contains Portland) are smokers (Oregon Health Division, 2001). Since most middle school students are unlikely to become

smokers, reports of favorable responses in focus groups or other ad tests that include a broad cross-section of youth should be viewed with caution. The results of this survey suggest that favorable responses of the lower-risk youth may be masking skepticism among the youth who are at elevated risk for smoking. The producers of antismoking ads should determine the smoking status and susceptibility of study subjects and clearly state how their ads are perceived by the most vulnerable youth.

Even though the tobacco control groups ads emphasized tobacco industry responsibility, a substantial majority of viewers of these ads nevertheless left the burden for choosing whether or not to smoke on individuals. This result should be seen in the context of the pervasive American belief in freedom of choice and the power of the individual to determine his or her destiny. This study did not assess pre-existing attitudes regarding individual vs. industry responsibility, so there are three possible scenarios that could explain the difference between the reported perceptions of the ads: the Philip Morris ads promoted an increased sense of individual responsibility, the tobacco control groups ads promoted an increased sense of tobacco industry responsibility, or both effects were at work.

As for the other message parameters measured in this survey, it is not clear whether the failure to detect significant differences between the groups of

antismoking ads means that there are indeed no real differences or merely that the study method or sample size obscured underlying differences.

The web-based survey approach was chosen in part because it seemed to offer an efficient way of reaching a large number of students that did not require visiting each classroom with a television-videoplayer to display the antismoking advertisements. While the project experience confirmed the workability of the concept and the data-processing advantages of a computer-based questionnaire, it also demonstrated that student recruitment cannot be automated. Nearly 400 individual contacts were made with personnel in several dozen area schools using a combination of e-mail, telephone, regular mail and personal visits; yet only two schools participated in a substantial manner.

Two features of the video viewing environment make it difficult to equate the web-based experience to watching these antismoking ads on television. First, the digital compression necessary to offer reasonable download times on standard modems means the picture is much smaller and less detailed than on television. Second, the ads are intended to be viewed in the context of a program geared to a youth audience. As is the case with focus groups and in-person surveys, this web-based survey displayed the ads outside of their intended television program context.

Because of the high priority placed on protecting the anonymity of students, at the end of each survey session the information that tracked an open

survey session was discarded at the end of the session. During the session, this tracking allowed students to view multiple videos without re-entering their responses to demographic and smoking status questions, and it prevented repeat viewings of a video during the survey session. While discarding the information helped guarantee the anonymity of students, it also limited the ability to characterize the sample and the experience of individual students. Like Internet "hits" that count how many times a particular web page has been viewed, but do not reveal how many unique visitors have come to a web site, the data collected during this study do not reveal precisely how many individual students participated or how many videos an individual student viewed and responded to (respondents could end their survey sessions at any time.) The data retained the link between the demographic/smoking questions and the set of responses to a video, but no link was retained between the video response sets. For example, a data set can show that a 13-year-old male nonsmoker viewed the "Bus" video and responded that the characters in the ad were "mostly believable," but the data do not say whether this respondent is the same as a 13-year-old male nonsmoker who responded that the characters in the "Parachute" video were also "mostly believable." In other words, the data from this survey cannot offer the usual comparison of responses from a fixed and known number of individuals in a sample. What is presented is an analysis of an aggregation of responses. Taken to an extreme, the analysis assumes that there would be no

important difference between 50 students each viewing one video from each group, producing a total of 100 data sets, and 25 students each viewing two videos from each group, also producing 100 data sets. Future versions of this type of web-based survey could include a tracking number that would provide a clearer view of the number and behavior of individuals in the sample without jeopardizing student anonymity.

Also, the anonymity of the respondents means it is not possible to guarantee that all the responses came from the target population. However, access to the survey required passwords that were distributed only through middle schools. What's more, it seems unlikely that a significant number of unsolicited respondents would take part in the survey, since access to the survey website required a password that was provided only through schools, there were no payments or other tangible inducements for participation, and the self-reported age and grade data did not indicate any pattern of respondents who came from outside the intended population. Similarly, although there was no mechanism to prevent students from logging into the survey more than once, there was no incentive to repeat the survey, and the number and timing of responses do not indicate any pattern of repeat logins.

The sample was not scientifically designed to produce data that could be generalized to all middle school students in Portland, Oregon or elsewhere. The selection of students was left to school administrators and teachers who

volunteered to participate in the survey. It is not known how teachers selected the students who took the survey, or what instructions or background the students were given.

Based on self-reported demographic data, the sample had a higher proportion of girls, ethnic minority students and students from lower income households than either the Portland Public School district as a whole or the schools from which most of the responses came. If the data accurately reflect the demographic characteristics of the sample, the sample differs in these respects from the population. Nevertheless, the lack of statistically significant differences between demographic subgroups on almost all the measure of ad responses suggests that variations in the demographic makeup of the sample would not affect the study results.

During the design of this project it was recognized that a web-based survey that uses video downloads could be more likely to attract respondents from higher income households who have computers and higher bandwidth Internet connections at home. However, since almost all the survey responses were received during school hours, from what appear to be in-class activities, it seems that socioeconomic differences in home computer access did not affect participation.

While this project achieved some of its goals, future efforts could improve on the execution of a web-based survey of youth, and thereby

complement other methods of assessing responses to health campaigns that use television. Lacking incentives or mandates to gain broad access to students in middle schools, this study did not achieve its potential in terms of sample size. Under different conditions, including broad participation and backing of school administrations or by using web sites that attract a large volume of young visitors, the web-based survey method offers researchers a technique for rapid and efficient collection of responses to video messages.

Despite its limitations, this study demonstrated advantages of web-based surveys and produced data that complement previous reports. This web-based system handled as many as 11 completed surveys per minute. The technology allowed for almost complete automation of the data-gathering process. Future versions of this technique could also incorporate software to provide real-time analysis of subject responses. Unlike focus groups, where participants may shape their responses to conform to those of peers or session leaders, anonymous computer-based video viewing is closer to the experience of television viewing; and in contrast to telephone surveys which depend on subjects recalling or being reminded of an ad they may have seen on television, the computer-based survey collects the immediate reactions of participants. The anonymous survey method is particularly well-suited to investigations of socially unpopular attitudes and behaviors and illegal activities, including underage tobacco use. The simultaneous use of web-based and telephone

surveys to evaluate media campaigns could provide a perspective that far more complete than either method alone.

In addition to evaluating media campaigns that are already underway, the web-based survey technique could be used by health educators to help design ads. Members of the intended audience could offer instant feedback on draft versions of video or multimedia presentations that would help keep the media development process on track. As computer capabilities and broadband web access increase, the experience of watching videos on a computer will more closely approach that of seeing ads on television. Indeed, television and the Internet are becoming increasingly intertwined. Commercial marketers are already using use web-based surveys and online focus groups to gauge the effects of their television advertisements (Carvell, 2000; Survey Company, 2002; SurveySite, 2002). Health researchers should do the same. This study is a step in that direction.

All sponsors of antismoking ads aimed at young television viewers say that their intent is to discourage cigarette smoking. Levy (1999, p. 1268) wrote that the Philip Morris Youth Smoking Prevention program's "sole goal is to help reduce underage use of tobacco." However, the perspectives of tobacco companies and those of tobacco control groups are frequently incompatible. This survey illustrates that the differing perspectives held by ad producers about the causes and circumstances of youth smoking are communicated through the

ads and perceived by middle school students. In other words, the source does matter.

Table 3
Characteristics of the Sample (n=151)

	Study Sample	PPS Middle Schools [a]
	% (n)	%
Age (years)		
• 11	1.3 (2)	[b]
12	29.8 (45)	
13	48.3 (73)	
14	13.2 (20)	
• 15	0.7 (1)	
Sex		
Boys	39.1 (59)	51.5
Girls	58.3 (88)	48.4
No response	2.6 (4)	
Ethnicity		
American Indian	13.9 (21)	2.3
White	41.1 (62)	61.5
African American	11.3 (17)	16.6
Asian American or Pacific Islander	14.6 (22)	9.6
Hispanic	4.6 (7)	10
Mixed Race or Other	13.2 (20)	[c]
No response	1.3 (2)	
Household Income [d]		
No lunch subsidy	49.0 (74)	58.8
Reduced or free lunch	49.7 (75)	41.2
No response	1.3 (2)	

[a] Comparable statistics reported by the Portland Public Schools, Enrollment Report October 2001 and Oregon Department of Education web site downloaded 5/23/02 from http://dbi.ode.state.or.us/r0061Select.asp
[b] Portland Public Schools district does not report ages of middle school students.
[c] Portland Public Schools did not report statistics on mixed race/other ethnicity.
[d] Households of four individuals with annual incomes below $32,653 are eligible for subsidized meals. Income eligibility guidelines are available at http://www.ode.state.or.us/news/releases/2001/082101b.htm

Table 4
Perceptions of Antismoking Television Advertisements by Middle School Students

	Tobacco Control Groups [a] % (n)	**Philip Morris** [b] % (n)	X^2 (*df*)	p
Ad grabbed attention:				
Yes	38.4 (28)	26.5 (18)	2.26 (1)	0.133
No	61.6 (45)	73.5 (50)		
Ad characters believable:				
Yes	61.3 (46)	54.4 (37)		
Not Sure	16.0 (12)	17.7 (12)	0.971 (2)	0.615
No	22.7 (17)	27.9 (19)		
"Stop and think" effect:				
Yes	52.6 (40)	45.6 (31)		
Not sure	17.1 (13)	20.6 (14)	0.736 (2)	0.692
No	30.3 (23)	33.8 (23)		
Emotional reaction:				
Yes	56.6 (43)	55.7 (39)	0.011 (1)	0.916
No	43.4 (33)	44.2 (31)		
Ad mentioned consequences:				
Yes	40.3 (31)	40.0 (28)	0.001 (1)	0.974
No or don't know	59.7 (46)	60.0 (42)		
Ad message:				
Nobody should smoke	37.5 (24)	32.8 (21)		
Kids shouldn't smoke	25.0 (16)	34.4 (22)	1.347 (2)	0.510
Neither or Not Sure	37.5 (24)	32.8 (21)		
Ad viewpoint on responsibility:				
Individuals	70.5 (43)	89.7 (52)		
Equal	14.8 (9)	6.9 (4)	7.16 (2)	0.028
Tobacco companies	14.8 (9)	3.5 (2)		

[a] Television ads sponsored or produced by the Oregon Department of Human Services Tobacco Prevention and Education Program, California Department of Health Service Tobacco Control Section, and the American Legacy Foundation.
[b] Television ads sponsored by Philip Morris USA Youth Smoking Prevention department.

Table 5
Perceptions of Anti-Smoking Television Advertisements by Smoking Status and Susceptibility

	Lower-risk nonsmokers % (n)	Smokers & Higher-risk nonsmokers % (n)	X^2 (*df*)	p
Ad grabbed attention:				
Yes	45.5 (25)	24.7 (20)	6.379 (1)	0.012
No	54.5 (30)	75.3 (61)		
Ad characters believable:				
Definitely	41.4 (24)	12.5 (10)		
Mostly	22.4 (13)	40.0 (32)		
Not Sure	15.5 (9)	17.5 (14)	18.46 (4)	0.001
Mostly Not	17.2 (10)	16.3 (13)		
Definitely Not	3.5 (2)	13.7 (11)		
"Stop and think" effect:				
Yes	60.4 (35)	39.5 (32)		
Not sure	17.2 (10)	19.8 (16)	6.589 (2)	0.037
No	22.4 (13)	40.7 (33)		
Emotional reaction:				
Yes	68.3 (41)	45.7 (37)	7.157 (1)	0.007
No	31.7 (19)	54.3 (44)		
Ad mentioned consequences:				
Yes	61.0 (36)	26.5 (22)	17.00 (1)	<0.001
No or don't know	39.0 (23)	73.5 (61)		
Ad message:				
Nobody should smoke	44.9 (22)	28.4 (21)		
Kids shouldn't smoke	18.4 (9)	36.5 (27)	5.629 (2)	0.060
Neither or Not Sure	36.7 (18)	35.1 (26)		
Ad viewpoint on responsibility:				
Individuals	77.6 (38)	81.8 (54)		
Equal	8.2 (4)	12.1 (8)	2.475 (2)	0.290
Tobacco companies	14.3 (7)	6.1 (4)		

Note: Smokers are students who reported lifetime smoking of more than one cigarette. Lower-risk nonsmokers are students who reported lifetime smoking of less than two cigarettes and indicated no intention to try smoking according to a set of questions validated by Pierce (1996). All other students were classified as higher-risk.

References

American Legacy Foundation. (2002). *About Legacy*. Retrieved June 23, 2002, from http://www.americanlegacy.org/section.asp?Page=7

Balbach, E. D., & Glantz, S. A. (1995). Tobacco information in two grade school newsweeklies: a content analysis. *American Journal of Public Health, 85,* 1650-1653.

Balbach, E. D., & Glantz, S. A. (1998). Tobacco control advocates must demand high-quality media campaigns: the California experience. *Tobacco Control, 7,* 397-408.

Baranowski, T., Cullen, K. W., Basen-Engquist, K., Wetter, D. W., Cummings, S., Martineau, D. S., Prokhorov, A. V., Chorley, J., Beech, B., & Hergenroeder, A. C., (1997). Transitions out of high school: time of increased cancer risk? *Preventive Medicine, 26,* 694-703.

Bauer, U., Johnson, T., Pallentino, J., Hopkins, R., McDaniel, W., & Brooks, R. G. (1999). Tobacco use among middle and high school students – Florida, 1998 and 1999. *Morbidity and Mortality Weekly Report, 48,* 248-253.

Beaverton School District. (2001). *Quick Facts. Last updated: 11/19/01*. Retrieved June 19, 2002, from http://www.beavton.k12.or.us/ci/quickfacts.htm

Bell, D. S., & Kahn, C. E. Jr. (1996). Health status assessment via the World Wide Web. *Proceedings, American Medical Informatics Association Annual Fall Symposium,* 338-42.

Biener, L., & Siegel, M. (2000). Tobacco marketing and adolescent smoking: more support for a causal inference. *American Journal of Public Health, 90,* 407-411.

Biener, L., McCallum-Keeler, G., & Nyman, A. L. (2000). Adults' response to Massachusetts anti-tobacco television advertisements: impact of viewer and advertisement characteristics. *Tobacco Control, 9,* 401-407.

Buchanan, T. & Smith, J. L. (1999a). Using the Internet for psychological research: personality testing on the World Wide Web. *British Journal of Psychology, 90,* 125-44.

Buchanan, T. & Smith, J. L. (1999b). Research on the Internet: validation of a World-Wide Web mediated personality scale. *Behavior Research Methods, Instruments, and Computers, 31,* 565-71.

Burrows, D. S. (1984). Strategic research report. *Younger adult smokers: Strategies and Opportunities. R.J. Reynolds Tobacco Company.* Bates numbers 502411168-502411262. Retrieved July 5, 2002 from http://legacy.library.ucsf.edu/tid/clb19d00

Burt, R. D., Dinh, K. T., Peterson, A. V., & Sarason, I. G. (2000). Predicting adolescent smoking: a prospective study of personality variables. *Preventive Medicine, 30,* 115-125.

Cardador, M. T., Hazan, A. R., & Glantz, S. A. (1995). Tobacco industry smokers' rights publications: a content analysis. *American Journal of Public Health, 85,* 1212-1217.

Carvell, T. (2000). "Wassssup!" (And Other TV Delights) As seen on TV! *Business 2.0.* Retrieved June 22, 2002 from http://www.business2.com/articles/mag/0,1640,6836,00.html

Centers for Disease Control and Prevention. (1999). *Best Practices for Comprehensive Tobacco Control Programs.* Retrieved June 15, 2000 from http://www.cdc.gov/tobacco/bestprac.pdf

Crump, C., Packer, L., & Gfroerer, J. (1998). Incidence of initiation of cigarette smoking among U.S. teens. *Morbidity and Mortality Weekly Report, 47,* 837-8.

Dalton, M. A., Sargent, J. D., Beach, M. L., Bernhardt, A. M., & Stevens M. (1999). Positive and negative outcome expectations of smoking: implications for prevention. *Preventive Medicine, 29,* 460-465.

Davis, R.N. (1999). Web-based administration of a personality questionnaire: comparison with traditional methods. *Behavior Research Methods, Instruments, and Computers, 31,* 572-7.

DeJong, W., Atkin, C. K., & Wallack, L. (1992). A critical analysis of "moderation" advertising sponsored by the beer industry: are "responsible drinking" commercials done responsibly? *Milbank Quarterly, 70,* 661-677.

DiFranza, J. R., & McAfee, T. (1992). The Tobacco Institute: Helping youth say "Yes" to tobacco. *Journal of Family Practice, 34,* 694-6.

Duffy, S. A., & Burton, D. (2000). *Archives of Pediatrics & Adolescent Medicine, 154,* 1230-1236.

Evans, N., Farkas, A., Gilpin, E., Berry, C., & Pierce, J. P. (1995). Influence of tobacco marketing and exposure to smokers on adolescent susceptibility to smoking. *Journal of the National Cancer Institute, 87,* 1538-45.

Farrelly, M. C., Healton, C. G., Davis, K. C., Messeri, P., Hersey, J.C., & Haviland, M. L. (2002). Getting to the truth: evaluating national tobacco countermarketing campaigns. *American Journal of Public Health, 92,* 901-907.

Flynn, B. S., Worden, J. K., Secker-Walker, R. H., Pirie, P.L., Badger, G. J., & Carpenter, J. H. (1997). Long-term responses of higher and lower risk youths to smoking prevention interventions. *Preventive Medicine, 26,* 389-394.

Fox, R. J., Krugman, D. M., Fletcher, J. E., & Fischer, P. M. (1998). Adolescents' attention to beer and cigarette print ads and associated product warnings. *Journal of Advertising, 27,* 57-68.

Gfroerer, J. C., Greenblatt, J. C., & Wright, D. A., (1997). Substance use in the US college-age population: differences according to educational status and living arrangement. *American Journal of Public Health, 87,* 62-5.

Glantz, S. A. (1996). Preventing tobacco use: the youth access trap. *American Journal of Public Health, 86,* 156-158.

Goldman, L. K., & Glantz, S. A. (1998). Evaluation of antismoking advertising campaigns. *Journal of the American Medical Association, 279,* 772-777.

Harris, J. E., Connolly, G. N., Brooks, D., & Davis, B. (1996). Cigarette smoking before and after an excise tax increase and an antismoking campaign – Massachusetts, 1990 – 1996. *Morbidity and Mortality Weekly Report, 45,* 966-970.

Institute of Medicine. (2000). *State programs can reduce tobacco use*. Washington: National Cancer Policy Board.

Jason, L. A. (1998). Tobacco, drug and HIV preventive media interventions. *American Journal of Community Psychology, 26,* 151-187.

Joinson, A. (1999). Social desirability, anonymity, and Internet-based questionnaires. *Behavior Research Methods, Instruments, and Computers, 31,* 433-8.

Jones, R., & Pitt, N. (1999). Health surveys in the workplace: comparison of postal, email and World Wide Web methods. *Occupational Medicine, 49,* 556-8.

Lando, H. A., Thai, D.T., Murray, D. M., Robinson, L. A., Jeffery, R. W., Sherwood, N. E., & Hennrikus, D. J. (1999). Age of initiation, smoking patterns, and risk in a population of working adults. *Preventive Medicine, 29,* 590-598.

Lantz, P. M., Jacobsen, P. D., Warner, K. E., Wasserman, J., Pollack, H. A., Berson, J., & Ahlstrom, A. (2000). Investing in youth tobacco control: a review of smoking prevention and control strategies. *Tobacco Control, 9,* 47-63.

Levy, C. (1999). Smoking by young people. Philip Morris USA also wants to reduce incidence of smoking by young people. *BMJ, 319,* 1268.

Logan, R. A., & Longo, D. R. (1999). Rethinking antismoking media campaigns: two generations of research and issues for the next. *Journal of Health Care Finance, 25*, 77-90.

Macaskill, P., Pierce, J. P., Simpson, J. M., & Lyle, D. M. (1992). Mass media-led antismoking campaign can remove the education gap in quitting behavior. *American Journal of Public Health, 82,* 96-98.

Martin, C. A. (1984). *Younger adult smoker perceptions of Camel.* R.J. Reynolds Tobacco Company. Bates No. 503561565-503561570. Retrieved June 5, 2002 from http://legacy.library.ucsf.edu/tid/hzx85d00

McEwan, R. T., Harrington, B. E., Bhopal, R. S., Madhok, R., & McCallum, A. (1992). Social surveys in HIV/AIDS: telling or writing? A comparison of interview and postal methods. *Health Education Research, 7,* 195-202.

McKenna, J. W., & Williams, K. N. (1993). Crafting effective tobacco counteradvertisements: lessons from a failed campaign directed at teenagers. *Public Health Reports, 108,* 85-89.

Mitchell, P., Brooks, R. G., & Henderson, C. A. (1999). *Tobacco Pilot Program progress report. Second quarter fiscal year 1998-99. October 1, 1998 to December 31, 1998.* Tallahassee: Florida Department of Health.

Office on Smoking and Health, CDC. (2000). Trends in cigarette smoking among high school students — United States, 1991–1999. *Morbidity and Mortality Weekly Report, 49,* 755-758.

Oregon Health Division. (2002). *Tobacco Prevention and Education: County Fact Sheets. Multnomah County Fact Sheet.* Retrieved March 7, 2002 from http://www.ohd.hr.state.or.us/tobacco/fctsheet/mult.htm

Peltz, J. E., Haskell, W. L., & Matheson, G. O. (1999). A comprehensive and cost-effective preparticipation exam implemented on the World Wide Web. *Medicine and Science in Sports and Exercise, 31,* 1727-40.

Peracchio, L. A., & Luna, D. (1998). The development of an advertising campaign to discourage smoking initiation among children and youth. *Journal of Advertising, 27,* 49-56.

Peto, R., Lopez, A., Boreham, J., Thun, M., & Heath, C. Jr. (1994). *Mortality from smoking in developed countries, 1950–2000: indirect estimates from national vital statistics.* Oxford, England: Oxford University Press.

Philip Morris U.S.A. (2000). *Our Responsibility - Youth Smoking Prevention – Communication.* Retrieved March 18, 2000 from http://www.philipmorrisusa.com/DisplayPageWithTopic.asp?ID=76

Philip Morris U.S.A. (2002a). *Tobacco issues – Youth smoking prevention.* Retrieved July 7, 2002 from http://www.philipmorrisusa.com/DisplayPageWithTopicca50.asp

Philip Morris U.S.A. (2002b). *Philip Morris U.S.A. - Our Responsibility - Youth Smoking Prevention - Quotes from Select Experts.* Retrieved July 7, 2002 from http://www.philipmorrisusa.com/DisplayPageWithTopic92be.asp

Pierce, J. P., Choi, W. S., Gilpin, E. A., Farkas, A. J., & Merritt, R. K. (1996). Validation of susceptibility as a predictor of which adolescents take up smoking in the United States. *Health Psychology, 15,* 355-361.

Pizacani, B., Mosbaek, C., Hedberg, K., Bley, L., Stark, M., Moore, J., & Fleming, D. (1999). Decline in cigarette consumption following implementation of a comprehensive tobacco prevention and education program - Oregon, 1996 – 1998. *Morbidity and Mortality Weekly Report, 48,* 140-143.

Portland Public Schools. (2002). *Enrollment report, October 2001. A profile of current and historical enrollment trends in Portland Public Schools*. Portland: Portland Public Schools.

R. J. Reynolds. (1984). *Are young adult smokers important? How we can do it. Basic principles from history.* Bates numbers 503167524-503167592 Retrieved on June 5, 2002 from http://legacy.library.ucsf.edu/tid/rvf68d00

Saris, W. (1991). *Quantitative Applications in the Social Sciences*. Vol. 80. *Computer-Assisted Interviewing*. Newbury Park, Calif.: Sage Publications.

Siegel, M., & Biener, L. (2000). The impact of an antismoking media campaign on progression to established smoking: results of a longitudinal youth study. *American Journal of Public Health, 90,* 380-386.

Sly, D. F., Heald, G. R., & Ray, S. (2001). The Florida "truth" anti-tobacco media evaluation: design, first year results, and implications for planning future state media evaluations. *Tobacco Control, 10,* 9-15.

Soumerai, S. B., Ross-Degnan, D., & Spira Kahn, J. (1992). Effects of professional and media warnings about the association between aspirin use in children and Reye's Syndrome. *Milbank Quarterly, 70,* 155-182.

Survey Company, The (2002). *The Survey Company: Online focus groups.* Retrieved June 22, 2002 from http://www.surveycompany.com/onlinesurveys/focusgroup.html

SurveySite Inc. (2002). *Online focus groups.* Retrieved June 22, 2002 from http://www.surveysite.com/newsite/docs/onlinefocus.htm

Thetruth.com. (2002). *Mission.* Retrieved July 7, 2002 from http://www.thetruth.com/html/index.cfm?id=4

TRU. (1999). *Counter-tobacco advertising exploratory summary report January – March 1999. Prepared for the states of Arizona, California, and Massachusetts public health anti-tobacco media campaigns.* Northbrook, Ill.: Teenage Research Unlimited.

Warner, K. E. (1985). Tobacco industry response to public health concern: a content analysis of cigarette ads. *Health Education Quarterly, 12,* 115-127.

Weber, R. P. (1990). *Quantitative Applications in the Social Sciences. Vol. 49.Basic Content Analysis.* Second Edition. Newbury Park, Calif.: Sage Publications.

APPENDIX A QUESTIONNAIRE

Screen 1:

Welcome to the Anti-Smoking Ad Feedback Survey.

You've probably seen ads on TV that try to get people not to smoke.

What did you think of them? Cool... Scary... Lame?

This is your chance to watch some ads, and then tell us what you really think.

This web survey is part of a research project led by Portland State University graduate student Andrew Holtz. For more information or to contact the researchers, please click here.

Quit Next>

Screen 2:

This survey is anonymous. That means you don't give your name. In order to make sure you've entered a valid login password, the computer uses two "cookies" called CFID and CFTOKEN, but neither the password nor the cookies can identify you or link you to your survey answers. So please answer honestly. No one from your school or anywhere else will be able to identify you... so you can say what you really think.

This survey is voluntary. That means you can quit whenever you want. We really want to know what you think about these anti-smoking ads, but it's up to you whether you want to continue.

On the next page, there are some questions about cigarette smoking, and then you'll get to look at the first video.

If you are ready, click on the button that says you agree to take the survey. If not, click on the "Quit" button. If you are under 18, you need to have a parent's or guardian's permission.

Thanks!

<Back Quit I agree to take this survey.>
(and I have permission, if I am under 18.)

Screen 3:

Anti-Smoking Feedback Survey

A. How old are you? select from list

Note: When a respondent clicked on an age below 18, a screen appeared saying:
"If you are under age 18, you need to have your parent's or legal guardian's permission to take this survey. If you have permission, click here. If you haven't gotten permission yet, click here.

The "permission" button continued the survey. The "not" button ended the survey and instructed the respondent to obtain permission before taking the survey.

B. If you are a student, what grade are you in? select from list

C. Click one:

Male ○ Female ○

D. Which race/ethnic group describes you best? (optional) select from list

E. Do get free or reduced price lunch at school?

Free lunch ○ Reduced price lunch ○ No. (I pay the regular price or bring my lunch.) ○

F. Do either of your parents or close friends smoke cigarettes?

Yes No

G. How many cigarettes have you smoked in your lifetime?

0 1 More than 1 More than 100

If you answered "More than 1" or "More than 100," please Click Here to skip to the video viewing link below.

(Note: In the actual survey, the respondent was automatically taken to the appropriate next question.)

H. Do you think you will try a cigarette soon?

Yes No

I. If one of your best friends offered you a cigarette, would you smoke it?

Definitely Yes Probably Yes Not Sure Probably Not Definitely Not

J. At any time during the next 12 months do you think you will smoke a cigarette?

Definitely Yes Probably Yes Not Sure Probably Not Definitely Not

Screen 4:

Video Viewing

Please click on the image to view the first video:
(The video will open in "RealPlayer." After the video is done, return to this browser window.)

To download a free copy of RealPlayer, click here.

Screen 5:

The following questions are about the TV ad you just watched:

1. Have you ever seen this ad on TV before?

Yes	No	Don't remember
☐	☐	☐

2. Did this ad grab your attention or was it dull?

Grabbed Attention	In Between	Dull
☐	☐	☐

3. Are the people in this ad believable?

Definitely Believable	Mostly Believable	Not Sure	Mostly Not Believable	Definitely Not Believable
☐	☐	☐	☐	☐

4. Did this ad make you stop and think about avoiding tobacco?

- Ad made me think a lot about avoiding tobacco
- Ad made me think a little about avoiding tobacco
- Not Sure
- Ad did not make me think much about avoiding tobacco
- Ad did not make me think at all about avoiding tobacco

5. Did this ad affect you emotionally? (Did it get to your feelings?)
If the ad made you feel more than one emotion, pick the strongest feeling.

- Yes, it made me frightened
- Yes, it made me sad
- Yes, it made me happy
- Yes, it made me laugh
- No, it didn't get to my feelings

6. Did this ad mention a specific reason not to smoke or something bad that could happen if you do smoke?

- Yes, a specific reason not to smoke was mentioned
- No, no specific reason not to smoke was mentioned
- Don't remember whether or not a reason not to smoke was mentioned

If you answered "No" or "Don't remember," please Click Here to skip to question #9.
(In final version, answer to #6 automatically linked to the appropriate next question.)

7. What reason was mentioned in this ad not to smoke?
Type the reason in the text box:

8. Does the reason you just listed make you want to avoid smoking?

(Click here if you want to go back to change or add to the reason you just listed.)

- Definitely yes, it really makes me want to avoid smoking
- It sort of makes me want to avoid smoking
- Not Sure
- It does not have much effect on whether I want to avoid smoking
- No, it does not have any effect on whether I want to avoid smoking

(The following questions were seen by all viewers:)

9. Pick the line that best matches what you saw or heard in the ad you just watched:

- "Nobody at all should smoke"
- "Kids shouldn't smoke, it's an adult choice"
- Neither message was in this ad
- Not Sure

10. Pick the line that best matches what you saw or heard in the ad you just watched :

- Individual people are responsible for choosing whether or not to smoke.
- Individual people are mostly responsible for choosing whether or not to smoke.
- Individual people and tobacco companies are equally responsible.
- Tobacco companies are mostly responsible for making people want to smoke.
- Tobacco companies are responsible for making people want to smoke.

If you'd like to watch another video, CLICK HERE.
Otherwise, exit here.

Thank you for completing this survey!

Your responses can make a difference.

- To get a copy of the final report, send an e-mail to holtza@pdx.edu with the words "Report Request" in the subject line. Or contact the lead researcher, Andrew Holtz, at the address or phone number below.
- To see a summary of how what other people think of the ads, click here.

If you want more information or had any problems, please contact us:

Lead Researcher:
Andrew Holtz
MPH Student
e-mail: holtza@pdx.edu
address: 7260 NW Penridge Rd.
Portland, OR 97229
phone: (503) 292-1699

Faculty Supervisor:
Mark Kaplan, DrPH
Associate Professor of Community Health
e-mail: kaplanm@pdx.edu
address:
Portland State University
College of Urban and Public Affairs
PO Box 751
Portland, OR 97207
phone: (503) 725-4401

If have any questions, concerns, or comments about the study, you may also contact the Chair of the Human Subjects Committee of Portland State University about your rights as a research participant (someone who takes part in a study).

Chair, Human Subjects Committee
Portland State University
Cramer Hall, Room 111
1721 SW Broadway
Portland, OR 97201
telephone: (503) 725-8182
e-mail: kennedyc@pdx.edu

Click here
to return to the beginning of the survey.

Thanks again for completing this survey!

To get a copy of the final report, send an e-mail to holtza@pdx.edu with the words "Report Request" in the subject line. Or contact the lead researcher, Andrew Holtz.

Screen 6: (This screen was seen by respondents who hit the Quit button)

Thank you for taking a look at our survey.

Please come back later if you want to try it again. (Or click here to return to the beginning.)

If you want more information or had any problems, please contact us:

Lead Researcher:
Andrew Holtz
MPH Student
e-mail: holtza@pdx.edu
address: 7260 NW Penridge Rd.
Portland, OR 97229
phone: (503) 292-1699

Faculty Supervisor:
Mark Kaplan, DrPH
Associate Professor of Community Health
e-mail: kaplanm@pdx.edu
address:
Portland State University
College of Urban and Public Affairs
PO Box 751
Portland, OR 97207
phone: (503) 725-4401

If have any questions, concerns, or comments about the study, you may also contact the Chair of the Human Subjects Committee of Portland State University about your rights as a research participant (someone who takes part in a study).

Chair, Human Subjects Committee
Portland State University
Cramer Hall, Room 111
1721 SW Broadway
Portland, OR 97201
telephone: (503) 725-8182
e-mail: kennedyc@pdx.edu

APPENDIX B Message Parameters Associated with each Question

Parameter	Question
Emotional Strength	Did *this ad* grab your attention **or** was it dull? • Grabbed Attention • In Between • Dull
	Are the people in *this ad* believable? • Definitely Believable • Mostly Believable • Not Sure • Mostly Not Believable • Definitely Not Believable
Emotional Strength	Did *this ad* make you stop and think about avoiding tobacco? • Ad made me think a lot about avoiding tobacco • Ad made me think a little about avoiding tobacco • Not Sure • Ad did not make me think much about avoiding tobacco • Ad did not make me think at all about avoiding tobacco

Emotional Strength	Did *this ad* affect you emotionally? (Did it get to your feelings?) *If the ad made you feel more than one emotion, pick the strongest feeling.*
	• Yes, it made me frightened • Yes, it made me sad • Yes, it made me happy • Yes, it made me laugh • No, it didn't get to my feelings
Explicit and Serious Consequences	Did *this ad* mention a specific reason not to smoke or something bad that could happen if you do smoke?
	• Yes, a specific reason not to smoke was mentioned • No, no specific reason not to smoke was mentioned • Don't remember whether or not a reason not to smoke was mentioned
Explicit and Serious Consequences	What reason was mentioned in *this ad* not to smoke?
	(list reason, if one was mentioned)
Explicit and Serious Consequences	Does the reason you just listed make you want to avoid smoking?
	• Definitely yes, it really makes me want to avoid smoking • It sort of makes me want to avoid smoking • Not Sure • It does not have much effect on whether I want to avoid smoking • No, it does not have any effect on whether I want to avoid smoking

Forbidden Fruit	Pick the line that best matches what you saw or heard in the ad you just watched: • "Nobody at all should smoke" • "Kids shouldn't smoke, it's an adult choice" • Neither message was in this ad • Not Sure
Responsibility	Pick the line that best matches what you saw or heard *in the ad you just watched* : • Individual people are responsible for choosing whether or not to smoke. • Individual people are mostly responsible for choosing whether or not to smoke. • Individual people and tobacco companies are equally responsible. • Tobacco companies are mostly responsible for making people want to smoke. • Tobacco companies are responsible for making people want to smoke.

Appendix C Philip Morris USA Statement on Internal Ad Research

From Philip Morris U.S.A. – Our Responsibility – Youth Smoking Prevention – Communication retrieved March 6, 2000 from http://www.philipmorrisusa.com
Note: the information on quantitative results from Philip Morris research has been removed from the web site. The formatting of the hypertext original has been revised to fit this document.

We are developing and implementing communications directed at both youth and parent audiences through television and print advertisements, as well as exploring other communication vehicles including radio, direct mail, outdoor and Internet messages.

Communications directed at youth are designed to change youth perceptions about smoking and to convince them that smoking is not "cool," and they should not, and do not need to, smoke to define themselves. Communications directed at parents are designed to help them overcome barriers to engaging kids in a meaningful dialogue about not smoking and help them build self-esteem in young people.
In order to communicate youth smoking prevention messages to a diverse population of youth and parents, advertisements will be tailored for different ethnic groups.

"Tween" Ads "Think. Don't Smoke." Launch: December 1998

The YSP television ads directed at tweens (youth ages 10 to 14) use peer-to-peer communication to convey the message that smoking is not "cool" and that they do not need to smoke to define themselves. In "Bus," a boy riding a bus with his friends answers a series of questions to explain why he doesn't smoke – even if some of his friends do. In "Fish," which uses a humorous format, a girl turns into a smoking fish when she lights her cigarette and receives a surprised and disapproving look from a boy nearby. For research data about our Tween Ads, please click here.

Parenting Ads "Talk. They'll Listen." Launch: August 1999

The three ads directed at parents of tweens deliver the message that parents have an important role to play in addressing this issue with their kids. In "Ten O'Clock," a father and tween daughter share a warm and important moment as the daughter prepares to go out with friends. Remembering her father's advice, the girl later rejects a cigarette offered by one of her friends. In "Being There," an Asian tween discusses how far a mother's word can go, especially when it relates to not smoking.

Hispanic Tween Ads "Piensalo. No Fumes." Launch: September 1999

The two ads currently on air speak to the family values that are an important influence on Hispanic youth. In "Follow the Leader," a tween skateboarder explains that he is an important role model for his younger brother and therefore does not smoke. In "Father Knows Best," a tween girl preparing for school remembers the conversation she had with her father and reaffirms her decision to not smoke.

Tween Advertising Strategy

To convince "tweens" (youth ages 10 to 14) that smoking is not "cool" and that they do not need to smoke to define themselves.

***Tagline*: "Think. Don't Smoke."**

***Launch date*: December 1998**

We developed and implemented these smoking prevention advertisements directed at youth, based on extensive primary and secondary research. Noted health authorities recommend that a variety of messages from multiple sources be used to communicate with youth.

Secondary Research

Research and literature on adolescence and advertising to adolescents (referenced below) has led us to conclude that effective youth smoking prevention advertising should:

convey messages from peers not to smoke, because peer-to-peer communication is an effective means for youth to receive and process information

affirm that most kids do not smoke, because adolescents, particularly those who smoke, tend to overestimate the prevalence of smoking by their peers

convey negative perceptions of youth smoking, because self-image is so important to adolescents

depict socially attractive, non-smoking peers, because this is an effective way to make the advertising interesting and relevant to youth

celebrate the kids who don't smoke to reinforce their non-use of cigarettes

give kids some credit and not talk down to them, reinforcing their ability to think independently and to make their own decisions

Quantitative Research

In addition to an extensive review of the literature on advertising to adolescents, sixty-eight hundred tweens and their parents in 40 cities across the country were surveyed in face-to-face interviews to test the Philip Morris U.S.A. Youth Smoking Prevention advertisements before they went on the air in December 1998. Seventeen commercials were tested: eight YSP commercials and nine comparative commercials.

The results demonstrated that the seven advertisements currently on air were believable, attention getting, memorable and – most important – generated nearly universal understanding of the main message of "Don't Smoke" among kids. Both youth and parents found them to be as effective as virtually all comparative commercials in their ability to communicate not to smoke.

After viewing an execution, the participating youth (ages 10-14) were asked "What are the creators of this commercial trying to tell you?" Following is a topline summary of the kids' spontaneous, open-ended responses:

Q. What are the creators of this commercial trying to tell you? (Kids 10-14)

Execution Name		Bus	Parking Lot	Being Different	Who You Are	A Little Credit	Chimp	Fish
Number of Participants		(201)	(202)	(197)	(195)	(198)	(197)	(198)
Responses	Don't Smoke/Not to Smoke	99%	97%	98%	99%	93%	99%	99%
	Think before you decide	-	1%	2%	1%	3%	1%	1%
	Make your own decision	1%	-	-	-	4%	-	-

Media Exposure

Philip Morris U.S.A. Youth Smoking Prevention ads are airing on top network, syndication, and cable tween programs. Network programs include ABC's *TGIF* Friday night line-up, WB's *Dawson's Creek* and Fox's *The Simpsons*. Syndication programs include *Friends*, *Home Improvemen*t, *Sister Sister* and *Boy Meets World*. Popular tween cable networks will include Cartoon Network, TBS, USA and MTV. Ads are running during primetime, Saturday morning, weekend afternoon and after-school time periods. In-school exposure is achieved through Channel One's news broadcast in homeroom classes.

Appendix D Descriptions of Antismoking Ads

Tobacco Control Groups ads

“Voicebox”
Woman explains that she began smoking at age 13 and has been unable to quit. She then smokes a cigarette through a hole in her throat.

“Cowboy”
Man explains that the tobacco industry used his brother as a cowboy model to falsely associate cigarettes with an image of independence. Video shows brother dying in hospital ICU.

“Parachute”
Spoof of action-adventure oriented ads. Young people parachuting body bags out of an airplane. Sign at close says “What if cigarette ads told the truth?”

“Beach”
Spoof of fun-outdoors oriented ads. Young people drag body bags on to beach. Sign at close says “What if cigarette ads told the truth?”

Philip Morris USA Youth Smoking Prevention television ads
(Descriptions provided by Philip Morris.)

"My Reasons"
Children from different backgrounds and areas, giving reasons why they don't smoke.

"Karate Girl"
Illustrates how smoking can keep you from reaching your goals, such as attaining your karate black belt.

"Bus"
A boy riding a bus with his friends answers a series of questions to explain why he doesn't smoke - even if some of his friends do.

"Being Different"
Although a group of friends are different and individuals, they all agree on one thing. They don't need to smoke to stand out.

Appendix E Instruction Packet for Teachers and Students

Anti-Smoking Ad Feedback Survey.

Instructions for Teachers.

Thanks for helping with this important study. We hope to learn more about what students think about some of the anti-smoking ads airing on TV.

Attached are three sheets:
1. An Invitation and instructions.
2. A flyer to post in the classroom or other appropriate location.

If you would like to test the survey, please connect to http://brain.clas.pdx.edu/barney/smoking and enter the password: adm001
(Note: students should use the password on the student instruction sheet.)

The survey is designed to be completely anonymous. Please encourage your students to take it on their own. As the instructions suggest, they can take the survey at the library, at home, or at any computer where they can answer in privacy.

Be sure they understand that they don't have to take the survey if they don't want to and that it is not a school assignment.

Thank you again for your help. We will report back the results to your school. If you would like your own copy of the final report, please send an e-mail to Andrew Holtz at holtza@pdx.edu

If you have any questions, please contact me, my PSU faculty adviser, Mark Kaplan, DrPH, or the PSU Human Subjects committee. Full contact information is on the attached sheets.

Cheers,
Andrew Holtz
PSU graduate student in Public Health
holtza@pdx.edu
503-292-1699

An Invitation to take the

Anti-Smoking Ad Feedback Survey.

You've probably seen ads on TV that try to get people not to smoke.
What did you think of them? Cool... Scary... Lame?
Here's a chance to watch some ads, and then tell us what you think.

This survey is anonymous. That means you don't give your name. No one from your school or anywhere else will be able to identify you... so you can say what you really think... without having to worry about anyone knowing what you write.

This survey is voluntary. That means you don't have to take it if you don't want to and you won't get into any trouble. This is not a school assignment. We just want to know what you think of these anti-smoking ads. It's up to you whether you want to do it.

The survey is on the Internet.

Instructions for taking the

Anti-Smoking Ad Feedback Survey.

The survey is on the Internet. If you want to take it, here's what you do:

1) Make sure it's okay with your parent/guardian
2) Go to any computer that can connect to the Internet (at school, home, library.)
3) Connect to http://brain.clas.pdx.edu/barney/smoking
4) Enter the password: pht748
5) Follow the instructions on the screen.

- You'll be asked some questions about cigarette smoking. Remember, we won't ask your name, so please answer honestly.
- After you answer these questions, you'll get to look at the first video.
- Then you'll get the questions about the video, and you may continue by watching more videos.

Thanks!

If you want more information or have any problems, contact Lead Researcher Andrew Holtz, e-mail: holtza@pdx.edu address: 7260 NW Penridge Rd., Portland, OR 97229, phone: (503) 292-1699 or Faculty Supervisor: Mark Kaplan, DrPH; e-mail: kaplanm@pdx.edu; address: Portland State University, College of Urban and Public Affairs, PO Box 751, Portland, OR 97207; phone: 503-725-4401

If have any questions, concerns, or comments about the study, you may also contact the Chair of the Human Subjects Committee of Portland State University about your rights as a research participant (someone who takes part in a study). Chair, Human Subjects Committee, Portland State University, Cramer Hall, Room 111, 1721 SW Broadway, Portland, OR 97201 telephone: (503) 725-8182

What do YOU think about anti-smoking  TV ads?

Tell us...

on the Internet by taking the

Anti-Smoking Ad Feedback Survey.

You've probably seen ads on TV that try to get people not to smoke.
What did you think of them? Cool... Scary... Lame?
Here's a chance to watch some ads on the Internet, and then tell us what you think.

This survey is anonymous. That means you don't give your name. No one from your school or anywhere else will be able to identify you... so you can say what you really think.

This survey is voluntary. That means you don't have to take it if you don't want to and you won't get into any trouble. This is not a school assignment. We just want to know what you think of these anti-smoking ads. It's up to you whether you want to do it.

Instructions: The survey is on the Internet. If you want to take it, here's what you do:

1) Make sure it's okay with your parent/guardian
2) Go to any computer that can connect to the Internet (at school, home, library.)
3) Connect to http://brain.clas.pdx.edu/barney/smoking
4) Enter the password: pht748
5) Follow the instructions on the screen.

- You'll be asked some questions about cigarette smoking. Remember, we won't ask your name, so please answer honestly. Then you'll get to look at the first video.

Details: Volunteers who log on to the survey web site will watch computerized versions of anti-smoking ads that are airing or have aired on TV stations around the country. The survey asks about cigarette smoking, attitudes about smoking, and opinions about the ads. No names or other identifying information are collected. The Internet site uses two "cookies" to make sure a valid password was entered; but neither the password nor the cookies can identify your child. Your child's privacy is the top priority. Visitors to the web site may send a separate e-mail to request a copy of the study's final report, but these e-mails go to a different computer and are not connected to the survey.

If you want more information or have any problems, contact Lead Researcher Andrew Holtz, holtza@pdx.edu address: 7260 NW Penridge Rd., Portland, OR 97229, 503-292-1699 or Faculty Supervisor: Mark Kaplan, DrPH; kaplanm@pdx.edu; address: Portland State University, College of Urban and Public Affairs, PO Box 751, Portland, OR 97207; 503-725-4401.

If have any questions, concerns, or comments about the study, you may also contact the Chair of the Human Subjects Committee of Portland State University about your rights as a research participant (someone who takes part in a study) at 503-725-8182 or PSU Cramer Hall, Room 111

Appendix F Initial Contact Letter to Schools

15 May 2000

Mr./Ms. (name)
(title)
(district)
(address)

Dear Mr./Ms. (name),

We would like the assistance of the Portland Public Schools in recruiting student volunteers for an important research project on preventing tobacco use. The students will help evaluate the effectiveness of anti-smoking television advertisements. The project, set to take place this fall, is directed by Portland State University graduate student Andrew Holtz, under the supervision of Dr. Mark Kaplan, Associate Professor of Community Health.

As you well know, almost all smokers start by age 18, including 14,000 Oregon school children every year. Although most of the anti-smoking ads currently airing here are sponsored by the Oregon Health Division, some spots directed at youth come from the Philip Morris tobacco company. Our study will compare and contrast ads from these two very different sources.

We are not asking for class time. We would like teachers to distribute information on how students can take part in an anonymous web-based survey. Students who volunteer to participate would watch a sample of anti-smoking advertisements on a password-protected Internet site and then answer a few questions about each ad. Students will be able to access the survey outside of class from any computer connected to the Internet. The participants will not be asked for their names or other identifying information. Before proceeding, our study will obtain approval from the Portland State University Human Subjects Research Review Committee.

This study fulfills part of the requirements for Andrew Holtz's Master of Public Health degree and the results will be submitted for publication in a scientific journal. In addition, we would be delighted to report the findings to you, so that the fruits of this effort may be used to complement the District's work to prevent children from using tobacco.

Within the next two weeks, we will telephone you to discuss this research proposal. In the meantime, please feel free to contact either Andrew at 292-1699 or holtza@pdx.edu or Dr. Kaplan at 725-8588 or kaplanm@pdx.edu. We look forward to collaborating on this important project.

Sincerely,

Andrew S. Holtz
MPH student

Dr. Mark Kaplan
Assoc. Professor of Community Health

Appendix G Listed Reasons Not to Smoke

category	Video name	The reason
Tobacco Control Groups	Beach	§ Because other people do § It’s dumb though. § Lung cancer § You can fit in without smoking.
	Cowboy	§ Because I guess it is wrong and just because other people do doesn’t mean you have to § Because it was dumb to do something just because other people are doing it. § Lung cancer § The body bags suggested that if you smoke you can and end up in a body bag. § You can be individual without smoking § You can get lung cancer from cigarettes
	Parachute	§ Because they said that it was gross § Because if you smoke you’re trying to be someone you’re not § You can die
	Voicebox	§ It's dumb. § It's not cool § You can get cancers

category	Video name	The reason
Philip Morris	Bus	§ Friends § It could kill you § You can die!
	Different	§ It is dumb § Lung Cancer blah blah blah blah blah blah blah § Smoking can kill people and you shouldn't smoke because your friends smoke it § You don't have to be different to smoke. § You might die from smoking
	Karate	§ My future § If you smoke it can ruin friendship § Smoking will prevent you from realizing you dreams § You can't do things you want to as easily
	Reasons	§ Not to smoke because someone else does § What you live for and love is at stake if you smoke (not explained directly)