REALITY CHECK

SECTION OVERVIEW

SMOKE FREE MEDIA GUIDE

SECTION 1: INTRODUCTION

THE PROBLEM:

Television, movies, the Internet and other forms of media, offer the tobacco industry direct and sometimes unregulated access into teens' daily lives.
That's why we've written this Smoke Free Media Guide for Reality Check (RC) coordinators, where you'll find information on how you can educate your community about tobacco use on screen. Because the media is in constant flux, thanks to ever-changing norms and technology, this guide should be viewed as a place to begin work, not as a map to the final destination.

The Role of Reality Check in Smoke Free Media

Reality Check coordinators will empower and mobilize New York's youth to communicate with others about the problem of youth smoking, which is caused, in part, by tobacco depictions in the media. Through education, RC coordinators and youth mobilize community members, parents and other influential adults to help approach decision makers in the movie and Internet businesses to advocate for policy changes that protect our children – our nation's most valuable asset.

What has Reality Check done in the past?

Reality Check's campaign for Smoke Free Movies has set the stage for the work that we continue today. In 2003, Reality Check launched its first initiative, "Tobacco & Hollywood, Headed for a Breakup." The initiative educated Hollywood industry leaders and local video store owners about the effects of tobacco usage in the movies. RC advocates accomplished this through many different actions including writing movie reviews for local papers that highlighted tobacco use, hosting STOMP events to illustrate the very real problem of smoking in the movies, starting email chains, and conducting press conferences. These actions were supported by a paid media campaign. This Smoke Free Movies youth campaign resulted in thousands of letters written to film executives, thousands of people educated about the problem, hundreds of news stories and op-eds, and millions of media impressions. As a direct result of Reality Check's Smoke Free Movies work, and through partnership with Stan Glantz and the Smoke Free Movies organization at the University of California, San Francisco, five movie studios (Disney, Universal, Paramount, SONY and Time Warner) have implemented policies to protect youth from tobacco use on screen. Only one studio, 20th Century Fox (owned by Newscorp), does not have similar policies in place, despite continued pressure. Now, with a changing media landscape, Reality Check is expanding its work to the Internet to better embrace other types of media that leave youth just as vulnerable to the tobacco industry's dirty tricks.

Tobacco is still the number one killer.

While the title of our initiative is "Smoke" Free Media, tobacco use as a whole remains the number one cause of preventable death in the United States , and youth tobacco use must be addressed in order to stem the tide of tobacco related deaths. Each day, the tobacco industry loses 1,200 addicted American customers.[1] That is the equivalent two fully loaded 747 jumbo jets crashing every day with no survivors.

Big Tobacco views teenagers as replacements for these dying customers and spends $1 million every hour in the United States to market their deadly and addictive products, knowing that 88% of smokers start before their 18th birthday.[1] In New York State, the tobacco industry spends $1 million per day to market its products in retail stores.[2]

One way that teens are exposed to the tobacco industry is through tobacco imagery and brand identification on screen, whether it be a computer, smart phone, television or movie screen.

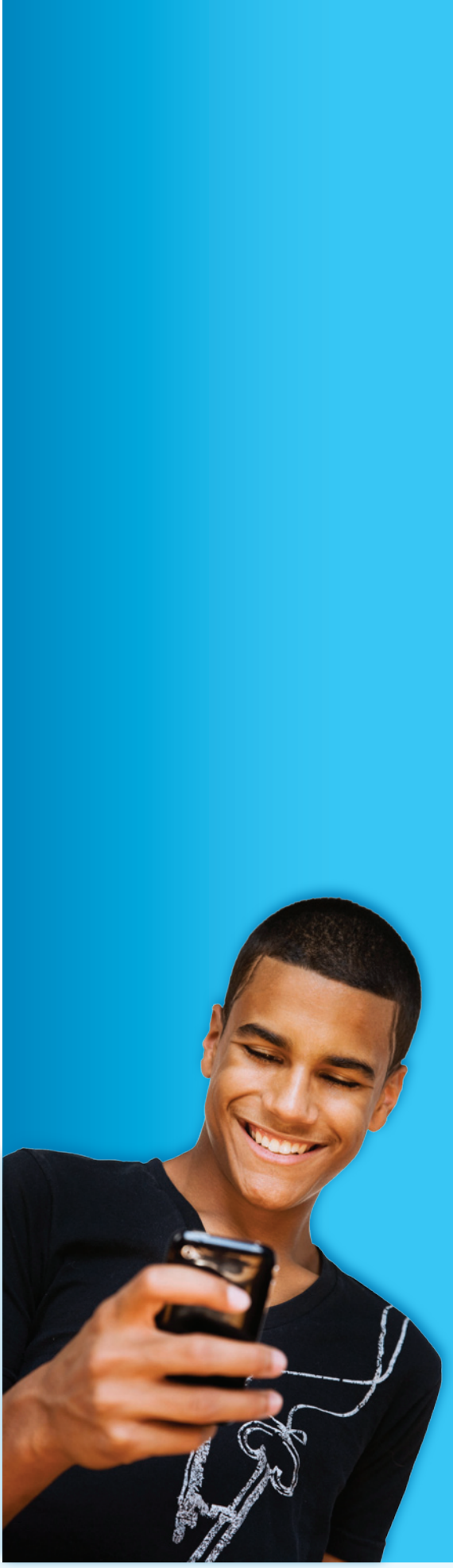
As tobacco industry marketing becomes increasingly regulated, they must find newer, more insidious ways to find replacement smokers.

Between the 1998 Master Settlement Agreement and the 2009 Family Smoking Prevention and Tobacco Control Act, Big Tobacco has lost access to many of the venues they once used to promote their products. However, movies, television and the Internet provide creative avenues where tobaccos use, imagery and brands can be promoted. The Children's' Online Privacy Protection Act (COPPA), which some assume provides protection for youth on the internet, only protects youth aged 12 and under from having personal information collected without parental permission. It does not protect youth from exposure to any potentially harmful imagery, nor does it require individual companies to do so.[3]

In 2004, 81% of youth were exposed to pro-tobacco imagery on TV and in the movies. During this same period, exposure to pro-tobacco images on the Internet increased, from 22% in 2000 to 33% in 2004.[4]

Youth consume more media than ever before in new, sometimes unregulated ways.

The amount of media teens consume has increased steadily since Duke's study in 2004. In 2010, youth viewed an average of almost 11 hours of media content in a single day, when accounting for multitasking.[5] Today, youth often multitask between media, allowing them to consume exponentially more in any given day.



Youth aged 11–14 have higher levels of media consumption than older youth—as children transition into adolescence, their media use explodes.[5] Parents are often unaware of the amount, type and content of the media that their children consume.

Media is one of the quickest and easiest ways to access youth.

Today, youth can access media much more quickly due to advanced technology on mobile phones and computers. Pulling up a video, website or movie is now as simple as the touch of a screen. This type of media consumption is much more difficult for parents to monitor on a regular basis.

- 20% of youth media consumption is on mobile devices such as smart phones, mp3 players, tablets and e-readers.[5]
- Two out of three 8–18 year olds have their own mobile device.[5]

What does Reality Check want to accomplish with this initiative?

Reality Check's current objectives are:

- The implementation of an MPAA policy that requires an automatic R-rating for all movies featuring tobacco use on screen.
- The implementation of a strong policy at YouTube that requires that all videos featuring tobacco use be age-restricted content, requiring users to be logged in to their website as over the age of 18.

SECTION 2: MOVIES

THE KEY MESSAGE:

Smoking on Screen Kills in Real Life.

THE PROBLEM:

Smoking in youth rated movies (G, PG and PG-13) is both common and a primary recruiter of teen smokers, one third of whom will die prematurely from a tobacco related illness.

A 2012 study published in the August issue of journal Pediatrics, states that "PG-13 films account for nearly two-thirds of the smoking scenes adolescents see on the big screen."[6]

A two-year study surveyed roughly 5,000 children ages 10 to 14 about the movies they had seen and whether they had ever tried a cigarette.[6]

> *Smoking in PG-13 films – including background shots and other passing instances – was just as strongly linked with real-world experimentation as the smoking in R-rated films. For every 500 smoking scenes a child saw in PG-13 movies, his or her likelihood of trying cigarettes increased by 49%. The comparable figure for R-rated movies was 33%, a statistically negligible difference.*

After the U.S. Surgeon General linked tobacco to lung cancer in 1964, smoking on screen declined but by the early 1970s, after the U.S. banned tobacco ads on TV, tobacco imagery and product placement began to increase again. Despite an overall decline in movie smoking in the 1990s and 2000s, the number of "tobacco episodes" in youth-rated movies increased 27% over the period 1996–2005.[1]

Today, many youth-rated films still feature a dangerously high amount of tobacco imagery, such as the PG rated Viacom film, *Rango*, which had more than 50 instances of tobacco use.[7] Tobacco imagery on screen is often unrealistic and both normalizes and glamorizes tobacco use.

Tobacco imagery on screen is a primary recruiter of teen smokers.

In 2008, after the most comprehensive review of the science to date, the U.S. National Cancer Institute concluded that there is a causal relationship between exposure to tobacco depictions in movies and youth smoking initiation. The more smoking youth see in movies, the more likely they are to start smoking.

According to the 2012 Surgeon General's report Preventing Tobacco Use Among Youth and Young Adults, "The evidence is sufficient to conclude that there is a causal relationship between depictions of smoking in the movies and the initiation of smoking among young people."

Smoking on screen recruits 390,000 teens to start smoking every day, one third of which will die prematurely from tobacco related illnesses.

- Non-smoking teens whose favorite stars frequently smoke on screen are sixteen times more likely to have positive attitudes about smoking in the future.[8]
- Taking all other factors into account — such as whether their parents smoke — seeing a lot of smoking in movies tripled the odds that teens would try smoking.
- More important, exposure to smoking in the movies quadrupled the chance that nonsmokers' kids would start.

History of Smoke Free Movie Progress

The Motion Picture Association of America (MPAA)

The MPAA is the lobbying and trade group that represents the major film studios. The MPAA manages the US film rating system and could remedy the problem of smoking in youth-rated films; however, the MPAA's powerful film industry board members have yet to reach a consensus regarding this problem. Instead, the MPAA has spent the last decade using public relations (PR) tactics to confuse and minimize the issue.

The MPAA has been contacted multiple times by the National Association of Attorneys General, individual Attorneys General, and numerous health organizations; however, they have yet to implement any real policy to remove tobacco imagery from youth-rated films.

The MPAA's Tobacco Imagery Track Record:

- 2003 - 27 Attorneys General write the Motion Picture Association of America (MPAA) expressing concern about the growth of smoking in the movies and its effect on teens.
- 2004 - Dan Glickman succeeds Jack Valenti as president of the MPAA. However, Valenti continues to represent the studios on smoking in films and to oppose an R-rating.
- 2005 - 32 AGs write the MPAA and studios, urging them to include an anti-smoking ad on movie DVDs that include smoking.
- September 7, 2006 - 41 AGs again write the MPAA and studios renewing their call for anti-smoking ads.
- October 5, 2006 - MPAA's Glickman tells the AGs that the MPAA has invited recommendations from the Harvard School of Public Health and will work to gain consensus" among its member studios to implement them.
- February 23, 2007 - Consistent with Smoke Free Movies' policy solutions, Harvard recommends that the MPAA "take substantive and effective action to eliminate the depiction of tobacco smoking from films accessible to children and youth..."
- May 1, 2007 - After Harvard's recommendations are made public on April 3, 31 AGs follow up with another letter to the MPAA.
- May 10, 2007 - The MPAA announces that it will "consider" tobacco imagery in the ratings starting immediately. However, it does not bind itself to take any particular action after reviewing films with smoking. Leading health organizations quickly denounced the MPAA's placebo policy as inadequate. They pledge to keep pressing for the R-rating and other measures that can substantially and permanently reduce adolescent exposure.
- June 5, 2007 - Vermont Attorney General William H. Sorrell, a leader among AGs on tobacco issues, informs the MPAA that AGs are "withholding judgment" on the effectiveness of the MPAA's plan and requests more specific information from the

MPAA, which is not provided. Later that year, the AG declines to meet with the MPAA.

- May 2009 - After two years, independent researchers report that the MPAA's rating practices have had virtually no effect on youth exposure to on-screen smoking and give consumers no reliable guidance on films' tobacco content.
- June 2, 2009 - Attorney General Sorrell writes the CEOs of the media companies that own the film studios:…

  > I urge all studios to fulfill the Harvard School of Public Health's recommendation evidence of its negative consequences is now inescapable. Moreover, as this evidence grows, it is clear that every time the industry releases another movie that depicts smoking, it does so with full knowledge of the deadly harm it will bring to children who watch it.

- May 8, 2012 - 38 state and territorial Attorneys General write the CEOs of the media companies that have no published policy on movie smoking, including News Corp. (Fox), Sony, and Viacom (Paramount). Citing the US Surgeon General's March 2012 report, the state AG's declare the toll from movie smoking "a colossal, preventable tragedy."

MPAA Policies/Practices:

The MPAA currently has no published policy regarding smoking on screen. Since May 2007, the MPAA has consistently stated that smoking is a factor in its film ratings and that 75 percent of movies with smoking are already rated "R." Both of these assertions contradict independent observations and research results. The MPAA has continuously attempted to convince the public that the problem of smoking on screen has been solved rather than create a real, effective solution.

Assertion:

2007—present—"Now, all smoking will be a consideration in the rating process."

Reality

Since its May 2007 press announcement on tobacco and ratings, the MPAA has identified no film whose rating was "R" because of tobacco content. The MPAA and the National Association of Theater Owners Rating Rules, last revised in January of 2010, makes no reference to tobacco product imagery or use as a factor in U.S. film ratings.[11]

Between 2007 and 2010, the MPAA added fine-print "smoking" descriptors to the ratings of just 15% of all wide-release, youth-rated movies with smoking. Approximately 85% of tobacco impressions delivered to theater audiences by youth-rated films came from unlabeled films. There is absolutely no evidence that descriptors, as a method, can reduce adolescents' exposure to on-screen smoking.[11]

Observation

The MPAA's assertions create the impression that the MPAA has responded to concerns from public health authorities, state attorneys general and leading national medical and health groups by bringing tobacco into its rating system. In reality, the MPAA has not done so. Meanwhile, labeling a mere fraction of films with smoking is much more likely to mislead than to inform parents about a film's tobacco content.[11]

Assertion:

2007 — present — "Nearly 75% of pictures with smoking are already rated R."[11]

Reality

From 2004 to 2006, 44% of movies with tobacco imagery would have already been rated R for other reasons. From 2007 to 2010, 47% of movies with tobacco imagery would have already been rated R regardless. 2010 was the first year that more than half of movies with smoking (54%) were R-rated without taking smoking into account.[11]

Observation

The misleading 75% figure appears to suggest that the MPAA's current R-rating practices are adequate and have already solved the smoking problem in youth-rated movies. At the same time, the MPAA has also characterized the proposal to R-rate smoking as "extreme."[11]

REALITY CHECK'S GOAL:

By June 30, 2013, the MPAA will rate all movies featuring tobacco use on screen "R" to ensure that there is no exposure to tobacco imagery in youth rated films.

Why an R-rating?

The United States film industry can take one simple step to protect youth from tobacco imagery and brand identification on screen -- one that does not require government action or restrict creative choice. That step is to give films featuring tobacco an R-rating. This will keep tobacco imagery and brand identification out of G, PG and PG-13 rated movies and in turn assist in preventing tobacco use initiation, addiction, disease, and death.

An R-rating for smoking will cut kids' exposure to smoking in movies by at least half, preventing almost 200,000 adolescents from starting to smoke every year and averting 50-60,000 tobacco deaths a year in coming decades.[9]

How the R-rating for smoking works.

Rating films with smoking scenes R is not intended to simply prevent teens from watching movies. Instead, it offers a voluntary market incentive for producers to choose to keep smoking out of movies marketed to teens.

Typically, movies rated PG-13 gross twice as much as R-rated films do. No producer will believe it worthwhile to release a film rated R, for smoking alone. In turn, producers will voluntarily keep smoking out of films they want rated PG-13, just as they tone down violence and sex for a PG-13 rating.[8]

Film studios routinely alter the content of films such as language, violence and sexual situations to win the rating they want in order to attract a larger audience. They should treat smoking (which kills 50 Americans an hour) exactly the way they treat offensive, non-lethal, four-letter words.

What is in it for the movie industry?

Lots. According to an article in the journal Tobacco Control, Stan Glantz reports that data from the top 10 grossing films for at least 1 week in the USA between 2002 and 2010 show that non-smoking films make about 13% more than smoking films with the same rating.[12]

Reality Check's Exceptions to the R-rating:

All movies featuring tobacco should be subject to a mandatory R-rating EXCEPT when:

1. The presentation of tobacco clearly and unambiguously reflects the dangers and consequences of tobacco use; or
2. When tobacco use is necessary to represent the smoking of a real historical figure.

▶ THE STRATEGY:

The Motion Picture Association of America is composed of the six major studios (owned by the six major parent companies): Viacom, News Corp, Disney, Comcast, Sony, and Time Warner. Currently, five out of these six major studios have policies in place regarding smoking in their youth-rated films (Paramount, SONY, Disney, Universal, and Warner Brothers.) While many of these policies retain large loopholes, they are a first step in acknowledging the detrimental effects of tobacco imagery on youth movie viewers. Thus far, the Motion Picture Association has yet to come to a consensus about the on-screen tobacco problem and instead does their best to minimize it, despite the insurmountable evidence that smoking on screen is, indeed, a colossal problem.

By leveraging the consensus of the majority of major film studios, we hope to influence the Motion Picture Association towards adopting the R-rating policy for ALL films that contain smoking. If the majority of the MPAA's member companies continue to endorse and codify the ideals of the smoke free movies initiative, we hope the MPAA will finally take a stand to protect youth from tobacco use on screen.

Policy Ask for the Motion Picture Association of America

- Implementation of an MPAA industry-wide policy that is consistent with the R-rating recommendation for the Smoke Free Movies Network.

▶ THE MOVIE STUDIOS AND PARENT COMPANIES:

Paramount Pictures Corp owned by Viacom

Philippe P. Dauman, CEO
New York, NY
Board of Directors: http://bit.ly/Use01N

History with Tobacco Imagery On Screen (1999-2011)

- SMOKING OVERALL: 69% (135 of 195 films)
- SMOKING IN YOUTH-RATED FILMS: 61% (70 of 115 films)
- SMOKING IN R-RATED FILMS: 81% (65 of 80 films)
- OF ALL SMOKING MOVIES, 52% are youth-rated

From 2005-2010, Viacom accounted for 18% of tobacco impressions

Recent Youth-Rated Films with Tobacco Imagery:

- Transformers: Dark Side of the Moon—2011—2PG-13
- Super 8—2011—2PG-13
- Mission Impossible: Ghost Protocol—2011—2PG-13
- Rango—2over 50 tobacco instances—2010—2PG

Agreements/Policies:
http://www.paramount.com/inside-studio/studio/business-conduct/smoking-and-tobacco-depiction-policy

Effective January 1, 2013

Paramount Pictures recognizes the serious health risks that accompany tobacco use. That's why Paramount has developed policies to decrease depictions of smoking and tobacco products in the films it produces, particularly youth-rated films. To that end, Paramount's current policies and practices include the following:

- Paramount Pictures makes no product placement, tie-in or other promotional arrangements with tobacco companies for any of its films, regardless of rating. No Paramount production may receive consideration of any kind in exchange for depicting tobacco or tobacco-related products in a Paramount film.
- Paramount discourages the depiction of smoking or tobacco in youth-rated films. Paramount will communicate this policy to its filmmakers, but also will take into account the creative vision of the filmmakers recognizing that there may be situations where a filmmaker believes that the depiction of smoking or tobacco is important to a film.
- If a Paramount youth-rated film contains depictions of smoking or tobacco, the end credits of the film will include the following language: "Paramount Pictures Corporation did not receive any payment or other consideration, or enter into any agreement, for the depiction of tobacco products in this film."

- If a Paramount youth-rated film contains any depiction of smoking or tobacco, subject to any contractual requirements, Paramount will include on all domestic DVDs an anti-smoking PSA produced by the California Health and Human Services Agency.

Paramount will regularly review the implementation and effectiveness of this policy and may also recommend revisions to this policy.

Also Owns:

- Paramount Pictures
- MTV Networks *which owns*
  - CMT
  - Addicting Games
  - Comedy Central
  - LOGO
  - MTV
  - MTV2
  - MTVU
  - NEOPets
  - Nickelodeon
  - Nick Jr.
  - Nick at Nite
  - NickToons
  - ParentsConnect
  - Spike
  - TeenNick
  - TV Land
  - VH1
  - VH1 Classics

Twentieth Century Fox Film Corporation owned by NewsCorp

Rupert Murdoch, CEO
New York, NY
Board of Directors: http://bit.ly/TXuIUB

- In 1998, News Corp appointed Philip Morris tobacco company Chairman Geoffrey Bible to its Board of Directors.
- Chairman and CEO Rupert Murdoch served on the Board of Directors of Philip Morris

History with Tobacco Imagery on Screen (1999-2011)

- SMOKING OVERALL: 58% (153 of 262 films)
- SMOKING IN YOUTH-RATED FILMS: 48% (85 of 178 films)
- SMOKING IN R-RATED FILMS: 81% (68 of 84 films)
- OF ALL SMOKING MOVIES, 56% are youth-rated

From 2005-2010, News Corp accounted for 8% of tobacco impressions

Recent Youth-Rated Films with Tobacco Imagery:

- Water for Elephants—2011—PG-13
- X-Men: The First Class—2011—PG-13
- Avatar—2009—PG-13

Agreements/Policies:

- Currently has no policy in place regarding tobacco imagery or brand identification on screen.

Also Owns:

- Fox Broadcasting
- Fox Sports Network
- Fox News
- DIRECTV
- STAR
- 20th Century Fox
- Blue Sky Studios
- Shine Group
- AmericanIdol.com
- Hulu (jointly with NBC/Universal and Disney/ABC Television
- 35 U.S. TV Stations
- The New York Post

Walt Disney Studios Motion Pictures owned by Disney

Robert Iger, CEO
Burbank, CA
Board of Directors: http://bit.ly/TiQJBt

History with Tobacco Imagery on Screen (1999-2011):

- SMOKING OVERALL: 49% (95 of 194 films)
- SMOKING IN YOUTH-RATED FILMS: 40% (63 of 158 films)
- SMOKING IN R-RATED FILMS: 89% (32 of 36 films)
- OF ALL SMOKING MOVIES, 66% are youth-rated

From 2005-2010, Disney has accounted for 2% of tobacco impressions

Recent Youth-Rated Films with Tobacco Imagery:

- The Help—2011—PG-13 (partnership with Dreamworks)
- Alice In Wonderland—2010 - PG
- War Horse—2011—PG-13 (partnership with Dreamworks)Source: www.screenit.com

Agreements/Policies:
[Effective October, 2004]
Disney has determined not to depict smoking in movies produced by the company that carry the Disney brand, except in limited circumstances including:

- Movies produced in the U.S. for the Touchstone label
- Movies co-produced by Disney or produced outside of the United States
- When considering the "creative vision" of directors, actors and others involved in the creative process.

→

In these circumstances, Disney seeks to discourage the depiction of smoking where they believe it is appropriate and practical to do so.

To read this policy in full, visit: http://bit.ly/NMC00x

Also Owns:

- Touchstone Pictures
- Disney/ABC Television Group *which owns*
  - ABC Family
  - Disney Channel
  - Disney XD
  - Radio Disney
  - A&E Television Network
    (joint venture of the Hearst Cooperation, Disney/ABC Television Group and NBC/Universal)
  - Hulu
    (jointly with NBC/Universal and News Corp

Universal City Studios owned by Comcast

Brian Roberts, CEO
Philadelphia, PA
Board of Directors:
http://xfin.tv/OTOi2h

History with Tobacco Imagery on Screen:

- SMOKING OVERALL: 72% (185 of 256 films)
- SMOKING IN YOUTH-RATED FILMS: 60% (44 of 141 films)
- SMOKING IN R-RATED FILMS: 88% (101 of 115 films)
- OF ALL SMOKING MOVIES, 45% are youth-rated

From 2005–2010, Comcast has accounted for 21% of tobacco impressions

Recent Youth-Rated Films with Tobacco Imagery:

- Cowboys & Aliens—2011—PG-13
- Larry Crowne—2011—PG-13
- Definitely, Maybe—2009—PG-13

  Source: www.screenit.com

Agreements/Policies:
[Effective April, 2007]
Universal Pictures presumes that no smoking incidents should appear in any youth-rated film produced by Universal Pictures or any wholly-owned Universal Studios film label and released in the United States, except in limited circumstances including:

- Movies co-produced by Universal or acquired complete or in post-production
- Movies distributed by Universal on behalf of a third-party producer
- When considering "creative vision," how factual the tobacco incident is, and how difficult it will be to remove the incident
  - In these circumstances, Universal seeks to discourage the depiction of smoking and will release the film with a health warning in certain distribution channels.
  - Universal also certifies that they make no product placement, tie-in or promotional arrangements with tobacco companies.

To read this policy in full, visit: http://bit.ly/RLOot1

Also Owns:

- 51% of NBC/Universal (GE owns the other 49%) *which owns*
  - Bravo
  - NBC News
  - NBC Entertainment
  - CNBC
  - E! Group and NBC/Universal)
  - MSNBC
  - Oxygen
  - Sprout
  - The Style Network
  - Universal Media Studios
  - USA
  - The Weather Channel

Sony Pictures Entertainment owned by SONY

Sir Howard Stringer, CEO
New York, NY
Board of Directors: http://bit.ly/Q7NzQ7

History with Tobacco Imagery on Screen (1999-2011):

- SMOKING OVERALL: 72% (235 of 325 films)
- SMOKING IN YOUTH-RATED FILMS: 68% (137 of 201 films)
- SMOKING IN R-RATED FILMS: 79% (98 of 124 films)
- OF ALL SMOKING MOVIES, 58% are youth-rated

From 2005-2010, Sony accounted for 13% of tobacco impressions.

Recent Youth-Rated Films with Tobacco Imagery:

- Sparkle – 2012 – PG-13
- Ghost Rider: Spirit of Vengeance – 2012 – PG-13
- Columbiana – 2011 – PG-13
- Country Strong – 2011 – PG-13
- Moneyball – 2011 – PG-13
- Burlesque – 2010 – PG-13

Source: www.screenit.com

Agreements/Policies:
http://www.sonypictures.com/corp/help.html

- Sony Pictures Entertainment (SPE) is committed to reducing depictions of tobacco use in the films produced by the company or any wholly-owned film division.
- SPE has adopted a standard protocol to identify, and where appropriate and feasible, eliminate portrayals of tobacco use.
- In particular, there will be a working presumption that youth-rated films produced and distributed in the United States shall not feature depictions of tobacco use unless there is a compelling creative justification that may include, but is not limited to, factors such as historical accuracy or an important tie to the creative context of the project and vision of the filmmaker.
- SPE will continue its existing policy of not entering into product placement arrangements in connection with the depiction of tobacco products. As part of the commitment to this long-standing ban, SPE will, on a going forward basis, indicate in the end credits of films with tobacco depictions that no product placement arrangement was made.
- With regard to film acquisitions, co-productions, and films produced and distributed outside of the United States, Sony Pictures Entertainment may have limited influence over the content. In these instances, SPE will discourage depictions of tobacco use where reasonable and practical.
- And finally, Sony Pictures Entertainment strongly supports the continued use of a smoking descriptor in a youth-rated film's MPAA rating so that consumers can make an informed choice when deciding whether a film is appropriate.

Also Owns: •PlayStation • Music labels

SONY

Warner Brothers Entertainment owned by Time Warner

Jeffrey Bewkes, CEO
New York, NY
Board of Directors: http://bit.ly/TnkJuo

History with Tobacco Imagery On Screen (1999-2011):

- SMOKING OVERALL: 65% (249 of 386 films)
- SMOKING IN YOUTH-RATED FILMS: 51% (111 of 216 films)
- SMOKING IN R-RATED FILMS: 81% (138 of 170 films)
- OF ALL SMOKING MOVIES, 65% are youth-rated

From 2005-2010, Time Warner accounted for 19% of tobacco impressions

Recent Youth-Rated Films with Tobacco Imagery:

- Trouble With Curve – 2012 – PG-13
- Dark Shadows – 2012 – PG-13
- Sherlock Holmes: A Game of Shadows – 2011 – PG-13
- Sucker Punch – 2011 – PG-13
- He's Just Not That Into You – 2009 – PG-13

Source: www.screenit.com

Agreements/Policies:
[Effective July, 2005]

- Time Warner presumes that no smoking incidents should appear in any youth-rated film produced by Time Warner or any wholly-owned Time Warner film label and released in the United States, except in limited circumstances including:
  - Movies co-produced by Time Warner
  - Movies distributed by Time Warner on behalf of a third-party producer
  - When the tobacco depiction is historically accurate or is part of a conspicuous anti-smoking reference
- In these circumstances, Time Warner seeks to discourage the depiction of smoking and will release the film with a health warning in certain distribution channels.
- Time Warner also certifies that they make no product placement, tie-in or promotional arrangements with tobacco companies.

To read this policy in full, visit: http://bit.ly/On4iuh

Also Owns:

- Turner Broadcasting System *which owns*
  - Adult Swim
  - Boomerang
  - Cartoon Network
  - CNN
  - HLN
  - TNT
  - CBS
  - Turner Classic Movies
  - Turner Sports
- Warner Bros. Entertainment *which owns*
  - Warner Bros. Pictures
  - Warner Bros. TV Group
  - Warner Bros. Home Entertainment Group
- Home Box Office *which owns*
  - HBO
  - Cinemax
- Time Inc. *which owns*
  - People
  - Sports Illustrated
  - Essence
  - Entertainment Weekly
  - Health
  - InStyle
  - Sports Illustrated Kids
  - TIME for kids

SMOKE FREE MOVIES ALLIES

New York State Attorney General

Marc A. Konowitz, ASSISTANT ATTORNEY GENERAL
New York State Office of the Attorney General
Tobacco Compliance Bureau
120 Broadway, 3rd Floor, New York, NY 10271
PHONE (212)416-8549 FAX (212)416-8877
EMAIL marc.konowitz@ag.ny.gov

Historically, the New York State Attorney General, and the National Association of Attorneys General (NAAG) have been strong supporters of the Smoke Free Movies effort.

NAAG has communicated with movie studios, most recently in May 2012, urging them to adopt the R-rating in order to protect youth from tobacco imagery on screen.

Smoke Free Movies Action Network

www.smokefreemovies.uscf.edu

Smoke Free Movies is a project of Stanton A. Glantz, PhD, professor of medicine at the University of California, San Francisco. Professor Glantz is co-author of The Cigarette Papers and Tobacco War and director of the UCSF Center for Tobacco Control Research and Education. This project is supported by grants from the American Legacy Foundation, the Arimathea Fund of the Tides Foundation, and other donors. Earlier support came from the Robert Wood Johnson Foundation and the Richard and Rhoda Goldman Fund.

Contact Information:

- movies@medicine.ucsf.edu
- Smoke Free Movies,
  UCSF School of Medicine, Box 1390, San Francisco CA 94143-1390
- Or phone Karen Williams at 415.476.4683

Other Smoke Free Movies Resources/Allies

- Issue research and advocacy strategy, print ad campaign, and web content editing by Jonathan Polansky, Onbeyond.
- James Sargent of the Department of Pediatrics at Dartmouth Medical School, the Thumbs Up Thumbs Down project of the Breathe California of Sacramento/Emigrant Trails, and others assisted in developing the lists on this web site. Mira Dougherty-Johnson assisted in locating relevant tobacco industry documents. Karen Williams and Annemarie Charlesworth assisted in other research. Isaac Sato manages the computer that hosts the web site. Karen Williams coordinates our activities with people all over the country and generally keeps the wheels turning.
- Web site hosted by UCSF Cardiovascular Research Institute.
  http://www.cvri.ucsf.edu/
- Published web site designed and supported by Stone Ground Solutions.
  http://www.stoneground.com/

MOVIES: ADDITIONAL RESOURCES & ALLIES

MOVIES: ADDITIONAL RESOURCES & ALLIES

SECTION 3: INTERNET

THE KEY MESSAGE:

Smoking on Screen Kills in Real Life.

THE PROBLEM:

Tobacco marketing and imagery on the Internet are virtually unregulated.
There are currently no state or federal laws restricting tobacco marketing on the Internet. The original developers of the Internet intended to create a universal resource, which would develop in a decentralized manner and not be hindered by regulations. The global nature of the Internet makes it difficult to regulate content; if content is banned in one country, it can simply be uploaded from a website based in another.

...Consequently, Internet tobacco marketing may not face the same public scrutiny and public opposition as much more visible tobacco product ads – even though they can reach the same vulnerable audiences. (Campaign for Tobacco Free Kids)

As the tobacco industry becomes increasingly restricted in how and where they can advertise, the Internet becomes more and more appealing. The tobacco industry has always been quick to change the form and character of their advertising in response to social and policy changes. The Internet offers 24 hour, worldwide exposure for a minimal cost.

FRAMEWORK CONVENTION TOBACCO CONTROL
- THE WORLD HEALTH ORGANIZATION FCTC ARTICLE 13

THE FOLLOWING ARE EXCERPTS FROM SUPPORTING ARTICLE "PRO-TOBACCO MESSAGES PROMINENT ON YOUTUBE"

The Internet is providing an ideal marketing outlet for large tobacco companies due to its unregulated nature.

- Tobacco marketing is ideal for the Internet because there is no universal regulatory body controlling content. This means that media banned in one country can easily be uploaded from another.
- Tobacco marketing is also relatively cheap to produce; provides sufficient information via a computer screen; and provides 24-hour brand access.
- According to the study, governments should consider implementing the Framework Convention on Tobacco Control to help prevent pro-tobacco content from appearing in online mediums. Plus, public and health organizations should ask YouTube to remove the offending pro-tobacco content.

- Tobacco companies are denying that they are behind the advertising– particularly on YouTube, even though a recent study found that some of the videos were high quality and appeared professionally made. Many also conformed to brands' themes and contained images or music that may be copyrighted to tobacco companies.

The following is a Summary Statement:
Surgeon General's report 2012 on Digital Tobacco Marketing page 551:

New media channels provide both promise and chal¬lenges for preventing youth tobacco use. Monitoring and countering the tobacco industry will be an ongoing challenge for researchers and regulators, but must become an essential element of tobacco control. The tobacco-related content that currently exists on the Web—thousands of pages with some kind of pro-smoking or pro-tobacco sentiment—potentially exposes huge num¬bers of youth and young adults to tobacco at little expense to tobacco companies. Interest in the tobacco companies' products and brands is already there, with a consumer base that is actively using the Internet to share information and extol its favorite brands to the wide world of the Web. These consumers act as "brand ambassadors," as market¬ers have dubbed them. But unlike the brand ambassadors a tobacco company may send out in person to promote cigarettes in bars or clubs, virtual brand ambassadors cost nothing. In fact, with or without support from the tobacco companies, the industry has achieved a prized goal in digital marketing: consumer-to-consumer chat, recom-mendations, and brand promotions, all at very little or no expense. Online tobacco marketing is almost completely "viral," or spread by consumers themselves as they use the social networking features of various Web sites.

> *As you are no doubt aware, our ability to communicate about the company and its positions through traditional media is severely restricted. As a result, the website takes an added significance.*-Attorney with Philip Morris Corporate Services, 2000, National Cancer Institute, 2008, p. 111

- 93% of teens use the Internet at least once a day and spend increasing amounts of time surfing the web.5
- The industry spent over 130 times as much on Internet advertising in 2008 as they did in 1998.
- The tobacco industry spent $17.8 billion dollars on advertising on company websites and Internet marketing in 2008.13

- Between 2005 and 2006 alone, tobacco company expenditures on company websites and Internet marketing more than doubled – from $3.3 million in 2005 to $8.3 million in 2006.

Big Tobacco is incredibly difficult to track on the web.

While tobacco imagery and branding are prevalent on the Internet, it is incredibly difficult to track their origin. The tobacco industry vehemently denies advertising on the internet; however

> *…with anonymous posting as easy as a walk in the park, [the tobacco industry's] declaration of innocence is hardly surprising. Furthermore, this is an industry that for decades, denied that nicotine is addictive and smoking causes lung cancer. So should we really take their word for it?* – Chapman & Freeman, 2007

The industry has a long history of "astroturfing", which dates back to at least 1993 with Philip Morris's involvement in the National Smokers Alliance, the 1996 Guest Choice Network apposing Clean Indoor Air, and as recently as 2010 in Australia, in protest to proposed plain packaging restrictions.

Tobacco branding and imagery are prevalent on sites frequented by youth.

Teens spend the majority of their time on the Internet on (1) social networking sites, (2) video sites and (3) gaming sites.5 Tobacco has a presence on all three of these. Between 2000 and 2004, exposure to pro-tobacco messages declined in every channel studied except for the Internet.1

Advertising:

- In 2004, 34.1% of middle school students and 39.2% of high school students reported seeing ads for tobacco products on the Internet.1

Social Networking Sites [Facebook, Twitter, Tumblr, etc.]

- Twitter accounts and Facebook fan pages exist for many tobacco brands and are accessible to youth.
- A 2010 study caught British American Tobacco employees taking advantage of social networking sites to create youth accessible fan pages.

Video Sites [YouTube, Vevo, Vimeo, etc.]

- 12–17 year olds visit YouTube more than any other age group.[18]
- Thousands of "amateur" user-submitted videos exist on YouTube depicting tobacco use/specific tobacco brands.

These videos range from tobacco reviews, to "how to" sessions to smoking fetish imagery.

  - While there is no reliable way to track whether or not these videos are truly user-generated, these videos are still allowing tobacco imagery to proliferate on the Internet.
  - Proactive efforts are needed to ensure that YouTube and other online media do not become influential vehicles for tobacco promotion to youth.
- According to a 2012 study of YouTube videos featuring tobacco brand imagery, 71% featured pro-tobacco messaging while only 3.7% contained anti-tobacco messaging.

Viral/Buzz Marketing

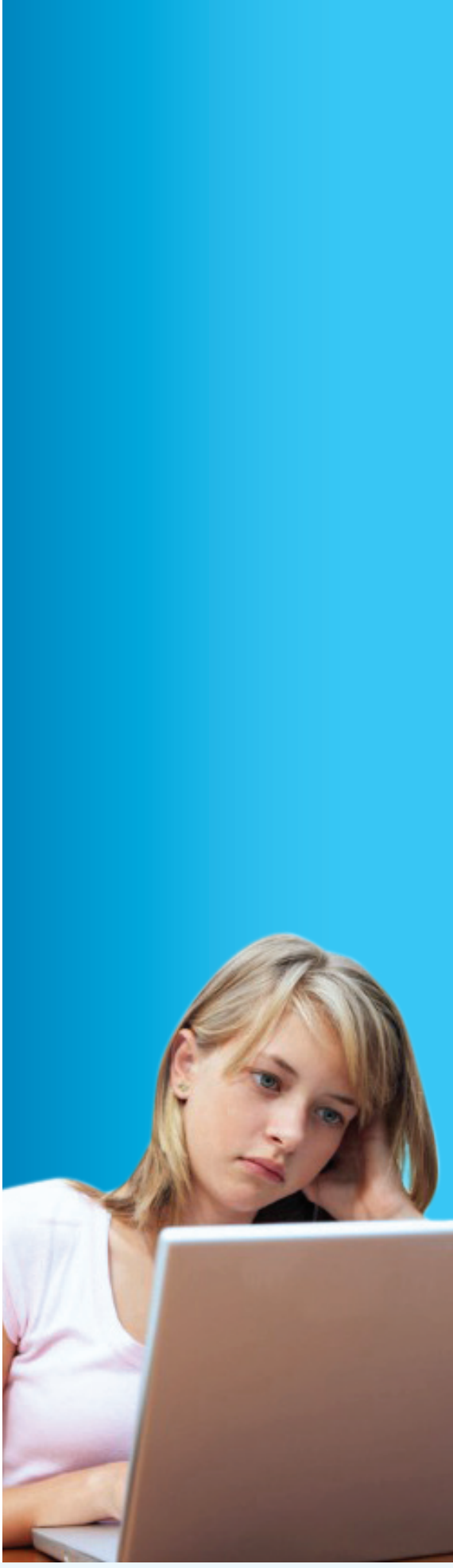
- Viral/Buzz marketing refers to the situation in which the advertiser creates an environment in which the idea can replicate and spread – the virus does the work, not the marketer.
- Viral/Buzz marketing offers companies widespread advertising and promotion for a minimal cost, requires little effort, and also offers the opportunity to do consumer research. It is also incredibly difficult to track the origin of the virus back to the company responsible.

- Examples: paying a teen to talk to their friends about a product or infiltrate a chat room, creating websites or sponsoring events that support a product but without overt brand imagery.

Brand Websites

Tobacco industry brand websites often feature contests, games, interactive message boards and coupon offers. While the majority of industry websites require legitimate forms of age verification such as a license, it is not difficult for youth to obtain someone else's login information once the account has been created.

1. FCTC calls for an increased regulation of social media and greater use of social media for tobacco prevention and control
2. Proactive efforts are needed to ensure that YouTube and other online media do not become influential vehicles for tobacco promotion to youth."Youth Access, Creation, and Content of Smokeless Tobacco ("Dip") Videos in Social Media"; Andrew B. Seidenberg, M.P.H.*, Elizabeth J. Rodgers, M.A., M.S.P.H., Vaughan W. Rees, Ph.D., and Gregory N. Connolly, D.M.D, M.P.H..



YOUTUBE

YouTube was started in 2005 by three former PayPal employees. It was purchased by Google for $1.65 Billion in November 2006. It is operated as a subsidiary of Google, based in San Bruno, CA. Google was founded as a search engine in 1998 by two friends that met at Stanford University. It went public in 2004.

YouTube allows more than 1 billion people per day to share and watch videos via the internet, with no cost to creators or viewers. It serves as a way for individual creators to distribute content, as well as advertisers. In January, 2012, YouTube stated that four billion videos were streamed each day.

CEO of YouTube/Senior VP of Video at Google:

Salar Kamangar – Born in 1977, Tehran, Iran.
BS from Stanford University

The 9th employee hired by Google in 1999. Former VP of Google's Web applications. In charge of Google TV and Google's other video plans.

Google CEO

Larry Page – BS in Engineering from the University of Michigan, Ann Arbor,
MS in Computer Science from Stanford University
Elected to the National Academy of Engineering in 2004

YOUTUBE'S CURRENT POLICY:

YouTube Community Guidelines concerning tobacco

"Don't post videos showing bad stuff like animal abuse, drug abuse, underage drinking or smoking or bomb making."

Reporting Inappropriate Content

YouTube relies on its users to report inappropriate content. To report an inappropriate video on YouTube, please select "harmful dangerous links" and then select "pharmaceutical or drug abuse."

YouTube Drug Use Rating System

- *No drug abuse*
  Content rated 'No drug abuse' should be free of any drug abuse. However, fleeting and moderate consumption of alcohol or tobacco by adults as well as responsible use of medications may appear.
- *D: Mild drug use*
  Content rated D may contain mild drug use, including excessive or persistent consumption of alcohol or tobacco. It also may include incidental or comedic use of drugs such as marijuana, sativa, hallucinogens or prescription pharmaceuticals. Implied, non-graphic use of other drugs, such as heroin, may be rated D as well.
- *D+: Drug use*
  Content rated D+ may contain graphic, fictional depictions of drug abuse and display of drug paraphernalia. Content rated D+ may also contain actual depictions of drug abuse where the context is appropriately educational, documentary or scientific

Note: Some shows and movies may contain D+ content not otherwise permitted on the site. Videos originating from the YouTube user community must abide by the YouTube Community Guidelines and are not permitted to include such content.

▶ REALITY CHECK'S GOAL:

By June 30, 2014, any video featuring tobacco imagery (including user videos) would only be visible to users logged in as over the age of 18. Any video featuring tobacco use by a minor or posted by a minor would be removed

▶ THE STRATEGY:

Our strategy is to utilize Reality Check's relationship with NAAG's internet workgroup to communicate directly with YouTube. NAAG has requested that Reality Check work within Google's current flagging system to flag videos available to youth that feature tobacco imagery. Reality Check will work on a monthly basis to tag a monthly list of videos which will then be reported back to the NYS Attorney General's office, who will then communicate with YouTube.

In addition, Reality Check members will educate their communities about the effects of exposure to pro tobacco imagery on the internet, on social media and on YouTube specifically. Through earned media and through direct communication with YouTube, they will reinforce the message being conveyed through the NAAG.

▶ SMOKE FREE INTERNET ALLIES

New York State Attorney General

Marc A. Konowitz, ASSISTANT ATTORNEY GENERAL
New York State Office of the Attorney General
Tobacco Compliance Bureau
120 Broadway, 3rd Floor, New York, NY 10271
PHONE (212)416-8549 FAX (212)416-8877
EMAIL marc.konowitz@ag.ny.gov

Historically, the New York State Attorney General, and the National Association of Attorneys General (NAAG) have been strong supporters of the Smoke Free Movies effort.

NAAG has communicated with YouTube, which has expressed interest in continuing the dialogue reflecting concerns about tobacco imagery on its website. The NYS AG's office will continue to be RC's point of contact for this line of communication. One contractor will serve as a point of contact for this ally

INTERNET: ADDITIONAL RESOURCES & ALLIES

INTERNET: ADDITIONAL RESOURCES & ALLIES

SECTION 4:

REALITY CHECK WATCHDOG

Keeping watch for the tobacco industry's presence in other forms of media

Build a Reality Check Watchdog Team

Part of the mission of Reality Check program coordinators is to engage youth to be constantly vigilant regarding new ways that the tobacco industry is attempting to reach and market to youth worldwide.

Reality Check youth are the eyes and ears of the anti-industry movement. Encourage your youth to seek out tobacco promotion and brand identification on the Internet, television, video games, music sites, apps and movies and any other new avenues the tobacco industry may employ to reach them. All suspicious tobacco industry promotional activity should be reported and watched to track developing trends. The tobacco industry is sneaky and sly, but with open eyes and ears our youth are up to the challenge of stopping the industry in their tracks.

It is also important to monitor what other anti-tobacco movements are doing across the country and the globe and share that information with other Reality Check youth and contracts. No information is too insignificant or new to share with the Reality Check program staff. Awareness is the key to staying on top of the tobacco industry.

Other forms of media to keep watch over:

Television

Today's youth have access to television not only on the traditional monitor found in the family home, but also through the Internet on such sites as Netflix, Hulu and YouTube. Shows can be watched anytime of the day or night, at almost any location, through smart phones, tablets and computers. As of 2012, more than 15% of US TV homes own one or more smart phones or tablets. The 24/7 availability of programming makes it much more difficult for parents to monitor usage. The FCC ratings, which restrict adult content to certain time periods, are not useful when the programming is available round the clock, often in a non supervised setting.

Many of today's parents are unaware of their children's viewing habits. An informal survey distributed by Reality Check independently to both adults and children asked about the degree of parental supervision of TV viewing. While the results are not scientifically significant, an overwhelming number of youth stated that their parents only minimally regulated what they watched while the parent group strongly believed that they knew what their children were watching.

A 2007 study showed 40% of popular shows viewed by teens 12-17 contained at least one depiction of tobacco use. These shows averaged 4.4 tobacco depictions per hour. Exposure to tobacco on television is more common in television shows watched by tweens than shows watched by young adults. More tobacco use is depicted in TV-PG shows (50%) compared to shows with a more mature TV-14 rating (26%).17 Tobacco use is not only more common in television shows focusing on young teens but also more likely to be remembered by them.[21]

The more smoking adolescents see on TV, the more likely they are to smoke. Research on smoking on television has demonstrated a dose-response relationship between the amount of tobacco depictions viewed and the initiation of smoking among 10–15 year olds. In addition, a 2009 study showed that exposure to movie trailers on television increased the attractiveness of smoking among youth who had experimented with cigarettes.[22]

Increasing amounts of research are demonstrating that tobacco imagery is not only a powerful recruiter on movie screens but also on television screens.

Social Media Other than YouTube

As of July 2011, the Pew Research Center found that 80% of teens are active on social media sites, including Facebook, MySpace, Twitter, Yahoo, YouTube, Skype, myYearbook, Tumblr and Google Buzz. As youth spend increasing amounts of time on these social media sites, tobacco products and promotions become increasingly visible to youth through the use of viral/buzz marketing.

Viral/buzz marketing is defined as "the situation in which the advertiser creates an environment in which the idea can replicate and spread…it's the virus that does the work, not the marketer." Through viral/buzz marketing, the tobacco industry is able to promote their products through Twitter accounts, Facebook pages and Google and Yahoo groups, where members and fans (including youth) can share their enthusiasm and recommendations for tobacco products. Members also share information on pricing, promotions and coupons. These groups are not age-restricted and are used by teens as young as 13. What could be better than uncensored, unregulated and free word-of-mouth marketing, especially marketing whose source is difficult to trace?

Hundreds, if not thousands, of groups, fan pages and Facebook apps exist on social media dedicated to glamorizing, sexualizing and glorifying tobacco use through the sharing of comments, photos and videos. Social media groups also exist focused on smokers' rights and methods for opposing tobacco control legislation. According to the 2012 Surgeon General's report, "the origin of this content is often unknown, and it could simply reflect the action of independent individuals or could be content that is disseminated by tobacco companies or their allies." In fact, a 2010 study caught British American Tobacco employees red-handed creating youth-accessible fan-pages.

According to a 2009 study on youth exposure to tobacco content online, approximately one-half of the tobacco-related content teens were exposed to comes from social networking sites.[1] Teens are routinely exposed to tobacco imagery and viral marketing on social media and it is imperative that tobacco control advocates stay one step ahead of the tobacco industry, which routinely reaps the benefits of such marketing.

Gaming

A recent study showed that video game playing was more prevalent among smokers than nonsmokers. Smokers reported playing more recently, for longer durations each week, and were more likely to play social games than nonsmokers.

Advertising in video games

In recent years, game designers have begun to recognize its potential as an advertising medium, developing commercial areas dedicated to the sale of advertising in video games. This new trend, known as "in-game advertising" (in-game advertisement) has already been used by sports products, food and even political campaigns. In 2006 in-game advertising revenue generated $77.7 million, but is expected to grow to $971.3 million by the end of 2011.

Video games and the tobacco industry

Although it is difficult to confirm a link between financial game developers and big tobacco, there is evidence that links directly with game development. According to a 2012 article in The Lancet, "Video games are an ideal marketing medium because they are widely used by young people and produce immersive, emotionally engaging experiences with high-quality graphics and complex, interactive storylines."

In 2005, 0.8% of E10+ rated video games contained tobacco content. By 2011, the prevalence was 12.6%.This suggests that the incidence of tobacco imagery in video games is rising steadily. These games are rated to be played by youth well under the legal age to purchase tobacco products.[27]

It should be noted that the recent increase in tobacco prevalence in video games has occurred at the same time that tobacco imagery in movies has decreased. This is concerning, since 87% of youth aged 8-18 in the U.S. own some sort of video game platform, and play an average of 1 hour and 13 minutes per day.[27]

Apps

Pro-smoking apps are emerging as the latest tool for marketers and the latest trend among kids. It's as simple as going to the App Store on any smartphone and typing in "smoking." There are over 107 pro-smoking apps that appear. These apps are categorized into six different groups based on their functionality. Strikingly, many of these apps are available under categories more likely to appeal to children, such as "Entertainment" and "Games." Others are ironically placed under "Lifestyle" and

"Health and Fitness." Pro-smoking apps range from virtual cigarettes for users to utilize by literally blowing on a cell phone's microphone, pro-smoking games (Puff Puff Pass, Hotsmoke, MyAshTray). There are even apps that have explanations of different cigarette brands along with apps that help you find nearby tobacco stores or even let you roll your own cigarette. Most of these apps that are available to children contain messages that most parents would find objectionable and fail to inform parents about the messages that the app contains.

A cell phone acts as the perfect marketing vehicle for consumers at any location, at any hour of the day. Apple and Android app stores have the technological infrastructure to block the sale of apps in accordance with local laws. These stores can also change the retail category suggested by the developer, which could limit youth exposure to questionable material.

One solution to this problem might be to rate apps in order to limit child access to inappropriate material. There should be a parental lock/code on electronic devices that will not allow youth to download unregulated apps without parental consent.

Other Internet Sites

While Reality Check's focus remains on YouTube, we must remain aware of other sites where youth may be able to access media containing tobacco use and marketing. This may include video sites such as Vimio, Yahoo!Video and Hulu.

Teens also have access to all tobacco company websites and can easily access tobacco discount websites such as www.cigarettesforless.com. It is important that as we search sites we are aware of the ease at which we can enter them. If we see tobacco use, we must make a note of it so the appropriate office/person can be notified. Please ask your youth to report back to you when they come across tobacco images online while pursuing other activities.

SECTION 5:

ACTION PLANS & WORKSHEETS

SMOKE FREE MEDIA ACTION PLAN

How can Reality Check make a difference?

The role of Reality Check coordinators is to empower and mobilize New York's youth to communicate with others about the problem of youth smoking, which is caused, in part, by tobacco depictions in many forms of media. Through education, RC coordinators and youth will mobilize community members, parents and other influential adults to assist in approaching decision makers in the movie and Internet industries to advocate for policy changes that protect our most vulnerable citizens: our children

What do we need to do?

- Create talking points from the Smoke Free Media Fact Sheet that incorporate values that resonate with members of the community.
- Train youth leaders on the issue and on community mobilization strategies.
- Brainstorm with youth leaders on potential community allies they know and how well they know them.
- Mobilize youth leaders to help create a plan to reach out to key community leaders and organizations.
- Create a local and statewide action plan for community education and mobilization.
- Create a plan to educate parents, teachers and parent/teacher groups.
- Mobilize members of organizations and key community leaders (focus on medical providers, teachers, parents, and attorneys).
- Use mobilized youth to engage members of community organizations and key community leaders.
- Set up communication opportunities such as calls or meetings with targeted organizations or individuals to present the issue of smoking in the media, and to garner support for our efforts.
- Meet face to face with individuals, organizations, and elected officials.
- Create a plan for communication with State and National allies. This would include, but not be limited to 1) the New York State Attorney General's office 2) the Campaign for Tobacco Free Kids 3) Legacy 4) Smoke Free Movies.

SMOKE FREE MEDIA ACTION PLAN: ACTIVITY SUGGESTIONS

Information

This section of the guide is meant to provide a starting point for activity suggestions. You are not limited to these suggestions, nor are you required to use them exactly as written. Decisions about work plan activities should be made in conjunction with your Modality Manager and Contract Manager.

Preparation:

- **Educate yourself and your youth through:**
  - Participation in monthly national SF Movie Calls
  - Continued research
    - Are there new articles that reinforce Reality Check's case?
    - Are there new videos or movies that contain smoking or tobacco images that your youth should be aware of?
    - Is there a local level evaluation project that youth could conduct?
    - Search the Legacy database for documents that discuss television and/or Internet. Infuse this information into your education efforts.

Community Education

- **Hold community events to build outrage about Smoke Free Media issues.:**
  - Hold movie stomps as a platform to educate about all media/tobacco issues.
    - Involve supportive local organizations such as YMCA, PTA, Boys & Girls' Club.
    - Provide a way for those who attend to take action,, either through social media, post cards, letters or other means.
    - Host a movie stomp to educate community members about the problem of tobacco imagery in different forms of media. Have a tablet or laptop available to illustrate the problem on YouTube, as well.
- **Use social media to educate community members**
  - Daily social media posts from RC youth with # and @
  - Use a tweet calendar such as the one in the appendix of this guide.
  - Direct Tweet or Facebook message parents about the issues.
  - Create social media buzz during the release of youth-rated movies and television shows that contain smoking.
  - Share videos that you have flagged so others can do the same. Work with RC colleagues such as NAAG and other youth advocacy organizations to communicate the flagged videos to others around the country.
  - Increase the tobacco prevention presence online by
    - Commenting on videos that contain tobacco imagery.
    - Create and post response videos to pro tobacco videos.
- **Street Marketing**
  - Work with Reality Check youth to plan actions that educate the community and build outrage about the problem.
    - Actions might include:
      - Flash Mobs
      - Chalk the Walk
      - Hold a rally
    - Invite elected officials.
    - Invite members of the press: Use press alerts and press releases. Call reporters and editorial boards.
- **Earned Media**
  - Send media alerts and press releases for any and all Reality Check events/actions.
  - Send letters to the editor to local publications as well as national and trade publications.
  - Pitch stories to local and national media sources.
  - Examine alternative forms of media including podcasts and YouTube videos for outreach and education opportunities.

Community Mobilization

- **Motivate others in your community to educate, advocate and activate others.**
  - Ask community members to educate their community in a variety of different ways.
    - Ask a SADD group to "chalk the walk.".
    - Ask community members to write letters to the editor or call the press
    - Ask community members to use their social media networks to spread the word.
  - Ask community members to advocate with organizational decision makers.
  - Ask community members to communicate with government policy makers.

Advocating with Organizational Decision Makers

- **From the start, maintain regular communication with the MPAA, YouTube and other organizations/key decision makers. Use different methods of communication such as:**
  - Letters
  - Postcards
  - Email
  - Mailings
  - Petitions
  - Photos
  - Social Media
  - Telephone Calls
  - Text Messages
- **Identify key decision makers within targeted organizations and pursue opportunities to discuss Reality Check issues.**
  - Follow up with telephone calls and personal meetings if possible.
- **Plan actions that will reach organizations**
  - Geographically
  - Through the media
- **Independently, or in conjunction with national organizations such as the Campaign for Tobacco Free kids, obtain proxies to attend shareholders' meetings for movie studio parent companies and Google.**
  - Communicate with decision makers about the effect that tobacco imagery has on youth in movies and on the Internet.
- **Flagging Campaign**
  - Flag videos that promote tobacco and drug use on YouTube.
    - Document what you are flagging. Follow up with an email/letter/communication to YouTube, government policy makers and/or the press as you find particularly egregious examples.
    - Keep a running list of the videos that have been flagged and reported, so we can assess effectiveness of YouTube's response.
  - Share the flag list with your Reality Check point of contact, who will share this information with the NYS Attorney General's office on a monthly basis.
  - Communicate with YouTube about incorporating more appropriate language for flagging adult content material such as tobacco content and imagery – otherwise, they will not know why we have flagged a video.

Government Policy Maker Education

- **Maintain regular communication with government entities and policy makers through:**
  - Letters
  - Postcards
  - Email
  - Mailings
  - Petitions
  - Photos
  - Social Media
  - Telephone Calls
  - Text Messages
  - Personal Visits
- **Government Policy Makers to Consider**
  - FDA
  - FCC
  - Attorney General
  - National Association of Attorneys General (NAAG)
- **Alert government policy makers when you see an Internet video that seems to be industry made.**
- **Educate policy makers on the power of the Internet, brand ambassadors and tobacco industry exploitation of the lack of regulation on the Internet.**

▶ 4 SQUARE TOOL

Instructions: The 4-Square tool below can help you assess where to focus your time energy & efforts with Smoke Free Media.

- Think about what you are working on;
- Using the 4 square tool decide, which quadrant is best used to manage your time, energy and efforts?

	URGENT	NOT URGENT
IMPORTANT	Quadrant I	Quadrant II
NOT IMPORTANT	Quadrant III	Quadrant IV

▶ 4 SQUARE TOOL

	URGENT	NOT URGENT
IMPORTANT	**Quadrant I** • Crises • Pressing Problems • Deadline-driven projects	**Quadrant II** • Prevention • Relationship Building • Recognizing new opportunities • Planning
NOT IMPORTANT	**Quadrant III** • Interruptions • Some calls, mail & some reports • Some meetings • Popular activities	**Quadrant IV** • Trivia, busy work • Some mail & phone calls • Time wasters • Pleasant activities

Note: Effective people stay out of Quadrants III and IV because, urgent or not, they aren't important. They also shrink Quadrant I down to size by spending more time in Quadrant II.

Quadrant II is the heart of effective personal management. It deals with things that are not urgent, but are important

Adapted from The Seven Habits of Highly Effective People, Stephen R. Covey. Free Press, 2004. pp. 151- 153.

▶ ACTION PLAN

Instructions:

- Write down three actions you intend to take in the next two weeks to further your Smoke Free Media work.

I intend to do the following:

1. _____

2. _____

3. _____

▶ PLANNING WORKSHEET

When working on the Smoke Free media initiative, identify where you are going to start, and whom you are going to build relationships with. Use this space to map out who is doing what.

Where are you going to concentrate your efforts? YouTube, the MPAA, individual movie studios or others?

Who are the individual decision makers at the organization that you plan to target? How will you reach those individuals?

Who is taking responsibility for cultivating each of these relationships? Put a name next to each of the decision makers.

What actions need to be taken within the next month? Identify who will be doing those actions and by when.

How is progress going to be communicated and measured?

▶ ASSESSING ALLIES

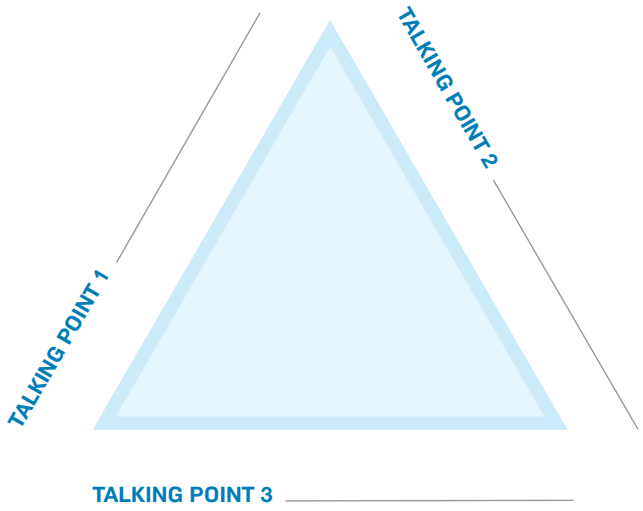
List the natural allies and resources you have either in your internal community (agency), or External community. Internal Allies can include other TCP Modality partners.

Who?: Internal Allies (Put one per box)	**Why do you want to build a relationship with them?** **What do they bring to the table?**	**What is your goal for the relationship?**

▶ TALKING POINTS TRIANGLE

Instructions:

- Use this triangle to help you develop 3 concise talking points about smoke free media.



TALKING POINT 1

TALKING POINT 2

TALKING POINT 3

▶ SMOKING ON SCREEN KILLS IN REAL LIFE

FACT SHEET: Tobacco Imagery In Movies

The Problem:

Movies encourage teens to smoke.

- Smoking in youth rated movies (G, PG, and PG-13) is very common and a primary recruiter of teen smokers.
- The US Surgeon General concludes that there is a causal relationship between depictions of smoking in the movies and the initiation of smoking among young people.[1]
- A 2012 study found that PG-13 films account for nearly two-thirds of the smoking scenes adolescents see on the big screen.[2]
- Tobacco use kills over 400,000 Americans every year - one third of teen smokers will become part of that statistic and die prematurely from a tobacco-related illness.[3]
- The tobacco imagery that kids are exposed to matters because most smokers start when they're young - 88 percent of smokers start before age 18.[1]
- Non-smoking teens whose favorite stars frequently smoke on screen are sixteen times more likely to have positive attitudes about smoking in the future.[4]

The Solution:

Rate movies with smoking "R".

- We can limit kids' exposure to smoking in movies by making sure that movies that contain smoking are rated "R".
- Rating smoking films "R" will reduce kids' exposure to smoking in movies by at least 50 percent.[5]
- If movie studios know that smoking will trigger an "R" rating, they will avoid including smoking and tobacco in movies targeted to kids and teens.

It's Time to Act:

Your voice makes a difference.

- You can make a difference by getting involved – write letters and let the industry know you want to protect our kids.
- Let the movie studios, theaters and Motion Picture Association of America (MPAA) know that movies with smoking should be rated "R".
- Ask the MPAA for an industry-wide policy that rates movies with smoking "R".

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[1] U.S. Department of Health and Human Services. Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012.
[2] Sargent, James, et al. "Influence of Motion Picture Rating on Adolescent Response to Movie Smoking." Pediatrics 130, no. 2 (2012); 228-236 doi:*10.1542/peds.2011-1787*
[3] http://www.tobaccofreekids.org/facts_issues/toll_us/
[4] http://www.smokefreemovies.ucsf.edu/problem/moviessell.html
[5] www.SmokeFreeMovies.ucsf.edu

▶ SMOKING ON SCREEN KILLS IN REAL LIFE

FACT SHEET: Tobacco Imagery on YouTube

The Problem:

Youth are exposed to an increasing amount of tobacco imagery on internet sites such as YouTube.

- Kids who are online have easy access to tobacco marketing and imagery because the internet is almost completely unregulated.
- The tobacco industry has embraced the internet for marketing its products.
- Thousands of "amateur" user-submitted videos exist on YouTube depicting tobacco use and specific tobacco brands. There is no reliable way to track where these videos originate, and new videos appear each day.
- Exposure to tobacco imagery matters because most smokers start when they're young - 88 percent of smokers start before age 18.

The Facts:

- The Children's' Online Privacy Protection Act protects youth aged 12 and under, and prevents companies from collecting private information from youth without parental permission. It does not protect youth from exposure to harmful imagery on the internet, and does not require individual companies to do so.[3]
- 12–17 year olds visit YouTube more than any other age group.[4]
- According to a 2010 study of YouTube videos featuring tobacco brand imagery, 71 percent featured pro-tobacco messaging while only 3.7 percent contained anti-tobacco messaging and the researchers concluded that pro-tobacco videos have a significant presence on YouTube.[1]
- The industry spent over **130 times** as much on internet advertising in 2008 as they did in 1998.[5]
- A 2010 study found that British American Tobacco employees were taking advantage of social networking sites **to create fan pages accessible by youth.**[6]
- In 2004, 34.1% of middle school students and 39.2% of high school students reported seeing ads for tobacco products on the internet.[2]
- Between 2000 and 2004, exposure to pro tobacco messages declined in every channel studied except for the internet.[2]

The Solution:

Restrict youth access to tobacco imagery on YouTube

- Proactive efforts are needed to ensure that YouTube and other online media do not become influential vehicles for tobacco promotion to youth.

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[3] www.coppa.org
[4] Freeman, B., & Chapman, S. Is "YouTube" telling or selling you something? Tobacco content on the YouTube Video-sharing website. Tobacco Control, 16, 207-210.

It's Time to Act:

Your voice makes a difference.

- You can make a difference by getting involved – let YouTube know that you want them to help protect our kids.
- Tell YouTube that you support adding tobacco use to the list of topics that require users to be logged in as over the age of 18.
- Use the YouTube flagging system to report inappropriate content; click the "Flag" link under videos that contain smoking imagery and report videos as containing "harmful dangerous acts" then select "pharmaceutical or drug abuse".[7]
    - ▸ YouTube relies on users to report inappropriate content, including smoking videos available to youth. Serious or repeated violations can lead to account termination.

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[5] U.S. Federal Trade Commission (FTC), Cigarette Report for 2006, 2009 [data for top six manufacturers only], http://ftc.gov/os/2009/08/090812cigarettereport.pdf. FTC, Smokeless Tobacco Report for the Years 2006, 2009, http://ftc.gov/os/2009/08/090812smokelesstobaccoreport.pdf

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[7] www.youtube.com

SECTION 8:

SOCIAL MEDIA PLAN

SMOKE FREE MEDIA ACTION PLAN

This section includes suggested social media messages, #hashtags, Twitter contacts, and Facebook contact information.

Suggested Social Media Messages

January - Resolutions (Hit TV)
"This year resolve to get smoking out of youth television shows! #tobaccoimagerykills"

February - International Action for smoking in movies (Hit 6 Major studio heads & MPAA)
"?youth smoking movies stat?" Take a stand globally and #RateitR

March - Kick Butts Day (Hit FCC & FDA)
"Kick Butts Day is to stand out, speak up and seize control against Big Tobacco! #Tobaccoimagerykills"

May - World No tobacco day (Hit 6 Major Studio Heads)
"Tobacco products are the only legally available products that can kill up to 1/2 of its consumers when used as intended #tobaccoimagerykills"

June - Relay for Life- Cancer focused (Hit FCC & FDA)
"Let's have a world with more birthdays and less cancer. #Tobaccoimagerykills"

July - Independence day, Freedom, Movies (Hit TV)
"Exercise your freedom to get smoking out of youth television shows! #Tobaccoimagerykills"

August - Heat of summer, movies (Hit 6 Major Studio Heads & MPAA)
"As the summer movie season heats up, it's important to remember that #tobaccoimagerykills. #RateitR"

September - Back to school (Hit YouTube/Google & FCC & FDA)
"90% of adult smokers began smoking in high school. Put an age restriction on smoking videos @YouTube! #tobaccoimagerykills"

October - Halloween (Hit MPAA & Disney)
"Smoking in movies is scary! #RateitR"

November - Great American Smokeout (Hit TV)
Thousands of smokers will find the courage to quit this month. Find the courage to get smoking out of youth TV shows! #tobaccoimagerykills"

December - Family gatherings (Hit MPAA)
"Spending time with family around the holidays is great fun. Don't let one of them fall victim to the tobacco industry's imagery. #RateitR "

#hashtags to use for each message:

MPAA - #RateitR
YouTube - #Tobaccoimagerykills
TV - #Tobaccoimagerykills
FCC - #Tobaccoimagerykills
FDA - #Tobaccoimagerykills
NBC Universal - #Tobaccoimagerykills #RateitR
Disney - #Tobaccoimagerykills #RateitR
Viacom - #Tobaccoimagerykills #RateitR
Newscorp - #Tobaccoimagerykills #RateitR
Time Warner - #Tobaccoimagerykills #RateitR

Twitter Contact Information

@FCC
The official Twitter page of the US Federal Communications Commission

@MPAA
The Motion Picture Association of America

@YouTube
Tweets on YouTube news

@Google
News and updates from Google

Movies — Twitter

@20thcenturyfox
Welcome to the Official Twitter page for 20th Century Fox.

@NWScorp
Diversified global media company

@rupertmurdoch
CEO of News Corporation/ 20th Century Fox

@viacom
Proud parent of BET, Centric, CMT, Comedy Central, Logo, MTV, Nickelodeon, Paramount Pictures, Spike, TV Land, VH1 and Viacom International Media Networks

@ParamountPics
Welcome to the Official Twitter Page for Paramount Pictures.

@Disney
We seek to estimate the future and its bearing on our existence, as well as dwelling fondly on the past or indulging in escapist dreams. - Walt Disney

@DisneyPictures
The official Twitter page for Walt Disney Pictures where we can share news, videos, pics, and more from upcoming films with our fans!

@ShopComcast
Bundle and Save with Comcast® Triple Play! Get High-Speed Internet + Digital Cable + Digital Voice. + get a FREE $285 Visa Prepaid Card* on select plans

@UniversalPics
Welcome to Universal Pictures via Twitter!

@Sony
The official Twitter account for Sony in the United States. Believe that anything you can imagine, you can make real

@twxcorp
The official Twitter account for Time Warner Inc. (NYSE:TWX)

@LionsgateMovies
Tweets about Lionsgate upcoming movies

@LionsgateMedia
The Official Lionsgate Films Home Entertainment Twitter Account! Follow @LionsgateMovies too!

@WeinsteinFilms
curated by @yosub www.facebook.com/weinsteinco

@yosub
social media for The Weinstein Company- lovin' every minute of it! www.facebook.com/weinsteinco

@HarveyTWC
Chair of The Weinstein Company

@FocusFeatures
At Focus Features, the world's most exciting filmmakers make the world's best movies, including ATONEMENT, BROKEBACK MOUNTAIN, THE CONSTANT GARDENER and more.

@Miramax
Official Tweets from Miramax.

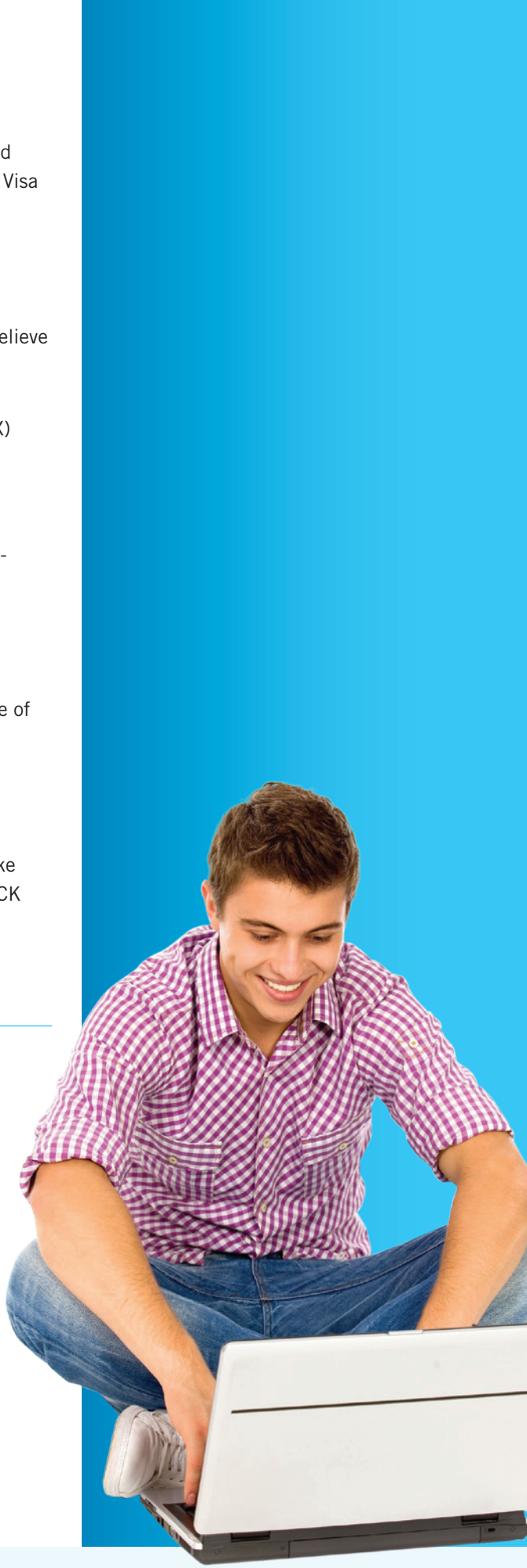
Facebook Contact Information

FCC
http://www.facebook.com/pages/FCC/105910619449332

MPAA
http://www.facebook.com/pages/MPAA/111011882256402

YouTube
http://www.facebook.com/youtube

Google
http://www.facebook.com/Google



Movies — Facebook

20th Century Fox
http://www.facebook.com/FoxMovies

News Corp
http://www.facebook.com/pages/News-Corporation/103117589728244

Rupert Murdoch
http://www.facebook.com/pages/Rupert-Murdoch/104117959624707

Viacom
http://www.facebook.com/Viacom

Paramount Pictures
http://www.facebook.com/Paramount

Disney
http://www.facebook.com/DisneyChannel

Disney Pixar
http://www.facebook.com/DisneyPixar

Disney Pictures
http://www.facebook.com/Disney?rf=111648112184692

Comcast
http://www.facebook.com/pages/Comcast/105523912813955

Universal Pictures
http://www.facebook.com/UniversalPictures

NBC Universal
http://www.facebook.com/nbcuniversal

Sony
http://www.facebook.com/Sony

Time Warner
http://www.facebook.com/TimeWarner

Lionsgate
http://www.facebook.com/lionsgate

Weinstein Films
http://www.facebook.com/pages/Dimension-Extreme/108304419197125?rf=123384691072546

Focus Features
http://www.facebook.com/FocusFeatures

Miramax
http://www.facebook.com/miramax

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RESOURCE #1

SCREEN OUT:
A PARENT'S GUIDE TO SMOKING, MOVIES AND CHILDREN'S HEALTH

A PROJECT OF THE SMOKEFREE MOVIES ACTION NETWORK

A PROJECT OF THE
SMOKEFREE MOVIES ACTION NETWORK

SCREEN OUT!

A Parent's Guide to Smoking, Movies and Children's Health

ACTION UPDATE: WHY HOLLYWOOD NEEDS TO HEAR FROM YOU NOW!

THIS PROJECT ENDORSED BY

American Heart Association®
Learn and Live℠

Legacy
American Legacy Foundation®

AMA
AMERICAN MEDICAL ASSOCIATION

DOH
STATE OF NEW YORK DEPARTMENT OF HEALTH

SCREEN OUT!

A project of the Smokefree Movies Action Network

This project is endorsed by the American Heart Association, American Legacy Foundation, American Medical Association, and New York State Dept. of Health

Download more copies of this guide at www.smokefreemovies.ucsf.edu/parents

Other inquiries? Please call New York State Department of Health, Tobacco Control Program: Rachel Iverson 518-474-1515

v2.0 | Updated 10/07

Dear parents (and others who care about kids):

Tobacco is America's #1 cause of preventable death. So what should parents do to protect their children?

A decade of scientific research points to a very powerful answer: **Reduce your kids' exposure to smoking in movies.** The reason is stunningly simple. Smoking on the silver screen influences more U.S. teens to begin smoking than any other kind of tobacco promotion.

Exposure to on-screen smoking starts half of all teen smokers, an estimated 390,000 each year. Movies feed the tobacco industry almost enough fresh smokers to replace the 438,000 adults killed by tobacco annually.

The problem for parents? It's now almost impossible to avoid smoking on screen. Three in four PG-13 movies include tobacco. According to the latest studies, smoking in movies plays a larger role overall than whether a child participates in sports or has friends who smoke. In fact, Hollywood movies with smoking are more powerful than a parent's own personal example.

On-screen smoking is one of the gravest threats that kids 10 and over will ever encounter. Tobacco kills more Americans than criminal violence, drunk driving, illicit drugs and HIV/AIDS — the "11 O'Clock News causes" — combined. The good news? Chances are excellent that kids who graduate high school as nonsmokers will be nonsmokers for life.

Why should parents make their voices heard in Hollywood? Because that's exactly what Hollywood has told us will bring about real change. Whether your own kids are in Grade 1 or Grade 12, you can help prevent as many as 60,000 future tobacco deaths a year by taking the survival steps outlined in this special ***SCREEN OUT!*** parent's guide.

This guide will **change the way you look at movies...and the movie industry.** Most important, it will help you succeed in protecting your kids from tobacco, America's #1 cause of preventable death.

Best wishes,

Cass Wheeler
CEO
American Heart Association

Cheryl Healton, Dr.P.H.
President & CEO
American Legacy Foundation

Ronald M. Davis, MD
President
American Medical Association

SCREEN OUT!

A project of the Smokefree Movies Action Network

Tobacco is the most deadly product. Movies sell tobacco.

Still the #1 cause of preventable death.

Tobacco kills 438,000 Americans every year.[1] That makes smoking the #1 cause of preventable death in the United States. Tobacco is also marketed aggressively overseas. If present trends continue, tobacco will kill 650 million of the 1.3 billion smokers around the world.[2]

Tobacco kills through cardiovascular disease (heart attacks and stroke), by triggering cancer of the lung, throat, mouth, cervix and kidney, and by compromising lung capacity. Secondhand smoke is a major factor in Sudden Infant Death Syndrome and causes asthma attacks, heart attacks, lung cancer and breast cancer in nonsmokers.[3]

In addition to the hundreds of thousands who die yearly, as many as 10.5 million other Americans suffer long-term disability — chronic bronchitis, emphysema, heart disease and cancer from tobacco smoke.[4] Annual medical costs and productivity losses due to tobacco disability and death tops $167 billion a year[5] or $1,250 per American wage earner.[6]

Meanwhile, major cigarette companies spent more than $13 billion on U.S. advertising and promotion in the most recent year reported.[7]

How many U.S. kids smoke?

Seventy percent of kids try smoking. One in three of these kids becomes a regular smoker. Three-quarters of high school students who smoke daily report they've tried to quit. Only one in six succeeds.[8]

Eighty percent of U.S. smokers begin smoking by age 18.[9] Today, one in twelve middle school students are cigarette smokers. More than one in five high school students, boys and girls alike, smoke cigarettes regularly.[10] There are now at least three million U.S. smokers under 18.[11] Unless quit-smoking programs are strengthened, tobacco will kill 960,000 of them.[12]

Smoking hurts kids as soon as they start.

Damage from smoking starts immediately. Once kids start smoking, they are more likely to lose teeth, experience shortness of breath and accelerated heart rate, catch the flu, and have a chronic cough. They are also more tense, suffer more frequent headaches, and lose hearing and vision—compared to nonsmokers.[13]

(See "Reference" page for sources.)

What smoking in movies does to our kids.

A project of the Smokefree Movies Action Network

FUTURE U.S. DEATHS ATTRIBUTABLE TO TEENS' EXPOSURE TO SMOKING ON SCREEN:
120,000

Compared with other causes of preventable death:

Alcohol-induced (other than accidents and assault, 2004)[7]: 21,081

Drunk driving deaths (2005)[8]: 16,885

All vehicle deaths (2005)[9]: 39,189

Homicide (2005)[10]: 16,692

Suicide (2004)[11]: 32,439

Firearms (all, 2004)[12]: 29,569

Drugs (all, 2004)[13]: 30,711

HIV/AIDS (2004)[14]: 13,063

Obesity (2004)[15]: 112,000

Movie smoking more powerful than traditional tobacco ads.

Kids whose favorite actors have smoked in three or more of their recent films are sixteen times more likely to feel positively about smoking — making them much more likely to start smoking themselves.[1]

Kids 10-14 who see the most smoking on screen are nearly three times more likely to start smoking than kids who see the least. There is a direct relationship between kids' exposure and how many of them start to smoke: the more on-screen smoking they see, the more likely they will smoke. The less they see, the less likely they will smoke.[2]

Experts estimate that movies featuring tobacco start half of all new teen smokers, 390,000 each year. Of this number, a projected 120,000 will later die from smoking. This is more Americans than will die from drunk driving, homicide, suicide, drugs and HIV/AIDS combined. R-rating future movie smoking should cut youth exposure in half, saving as many as 60,000 lives a year.[3]

The scientific case is rock solid.

Research studies over the last ten years have established that on-screen smoking strongly influences young people.[4] The research that has won the most attention followed more than 2,000 New England middle and high school students for two years. The study took all other factors known to predict whether adolescents smoke into account: age, grades in school, parenting style, risk-taking, parents and siblings who smoke, friends who smoke — more than a dozen in all. After controlling for all these other factors, the study found that *exposure to smoking on screen made the most difference* in who started to smoke and who did not.[5]

This research method — a "longitudinal" study that follows subjects through time — is considered the gold standard. When combined with the findings in other studies, such large-scale, long-term studies prove it's no coincidence or mere association. *Exposure to smoking on screen causes kids to smoke.*

In November 2005, the same research team who followed the New England students also reported on a *nationwide* survey of 10-14 year olds. "Our findings indicate that all U.S. adolescents, regardless of race or place of residence, have a higher risk of trying smoking as their exposure to movies increases," concluded the study's lead investigator.

The director of the National Cancer Institute's Division of Cancer Control and Population Sciences remarked: "Now we need to consider effective ways to reduce youths' exposure to this preventable risk factor."[6]

SCREEN OUT!

A project of the Smokefree Movies Action Network

Three out of four recent PG-13 films include smoking.

Smoking in movies today is hard to avoid.

As you may have noticed, a lot of today's movies have smoking in them. In fact, almost 90 percent of R-rated movies since 1999 include tobacco images; 75 percent of PG-13 movies; and more than one-third rated G and PG.[1]

Even though half as many American adults smoke now as in 1950, there's again as much smoking on screen as there was half a century ago.[2] Smoking in movies declined after the U.S. Surgeon General linked tobacco to lung cancer in 1964. But by the early 1970s, after the U.S. banned tobacco ads on TV, the tobacco companies were systematically using product placement and other techniques to boost smoking in Hollywood movies.

Paid product placement by major domestic tobacco companies (but not their international affiliates) was prohibited in a 1998 agreement with top law enforcement officials. Yet on-screen smoking is still on the rise — and favors the brands that kids start smoking first. Since 2000, the majority of tobacco impressions delivered to audiences has shifted from R-rated to kid-rated movies. Think PG-13 films and DVDs are safe? They're not.

Are some studios better than others?

The major studios that produce and distribute most U.S. movies (Disney, Fox, Paramount, Columbia, Universal, and Warner Bros.) differ mainly in the *number* of movies they release, not in their smoking content. But note this:

Three media corporations—Time Warner, Disney, and Sony—account for the majority of all U.S. movies with smoking.

In the last eight years, Disney, Sony, and Viacom (Paramount) had the highest percentage of PG-13 movies with smoking: 79-81 percent. Disney, which owns Touchstone and Miramax, also had the highest proportion of R-rated movies with smoking: 92 percent. Sixty-one percent of Sony's G/PG movies — and half of those from GE (Universal) — featured tobacco.

What about movies in theaters and on video now?

In the fall of 2007, the MPAA began to mention tobacco in some of its rating labels. But not all smoking is labeled and labels giving the reason for ratings don't always appear in theater ads. The surest way for parents to tell if the week's top ten films and videos include smoking is online: www.smokefreemovies.ucsf.edu/problem/now_showing.html

STUDIO COMPARISON 1999-2006
What percent of their movies feature tobacco?

DISNEY
(The Disney Company)
G/PG: 35%
PG-13: 80%
R: 92%

COLUMBIA
(Sony)
G/PG: 61%
PG-13: 79%
R: 88%

FOX
(News Corporation)
G/PG: 8%
PG-13: 71%
R: 87%

PARAMOUNT
(Viacom)
G/PG: 18%
PG-13: 81%
R: 87%

UNIVERSAL
(General Electric)
G/PG: 50%
PG-13: 75%
R: 90%

WARNER BROS.
(Time Warner)
G/PG: 38%
PG-13: 65%
R: 85%

SOURCE: UCSF Center for Tobacco Control Research and Education. See www.smokefreemovies.ucsf.edu/problem/studio_surveys.html

How to cut kids' exposure to on-screen smoking in half.

A project of the Smokefree Movies Action Network

Countries threatened by movies that push smoking may arrive at different solutions. For example, the Health Ministry in India — representing one-sixth of the world's population — proposes to bar smoking in all future Indian films and TV shows.

In America, where the First Amendment keeps government out of film content, the movie industry itself runs a robust rating system. This voluntary system can be used to cut kids' exposure in half while leaving filmmakers free to include smoking in any movie they choose. How?

1. Rate new smoking movies R. Film studios routinely tune the content of films to win the rating they want for commercial reasons. They should treat smoking (which kills fifty Americans an hour) exactly the way they treat offensive, but non-lethal, four-letter words:

> Any film that shows or implies tobacco should be rated R. The only exceptions should be when the presentation of tobacco clearly and unambiguously reflects the dangers and consequences of tobacco use or is necessary to represent the smoking of a real historical figure. Films released before the rating system is updated would not be re-rated.

The net effect? Producers would voluntarily keep smoking out of films they want rated PG-13 to attract a bigger audience, just as they tone down violence and sex for a PG-13 rating today. While kids would still be exposed by the R-rated films they manage to see, overall their exposure should be cut at least in half. This can avert as many as 60,000 future tobacco deaths a year.

2. Certify no payoffs. The producers should post a certificate in closing credits declaring that nobody on the production received anything of value (cash money, free cigarettes or other gifts, free publicity, interest-free loans or anything else) from anyone in exchange for using or displaying tobacco.

3. Require strong anti-smoking ads. Studios and theaters should require a genuinely strong anti-smoking ad (not one produced by a tobacco company) to run before any film with tobacco presence, in any distribution channel, regardless of rating.

4. Stop identifying tobacco brands. There should be no tobacco brand identification nor the presence of tobacco brand imagery (such as billboards) in the background of any movie scene.

EACH OF THESE FOUR SMOKEFREE MOVIE POLICY PROPOSALS IS ENDORSED BY:

World Health Organization (WHO)

American Medical Association

American Academy of Pediatrics

American Legacy Foundation

American Heart Association

American Academy of Allergy, Asthma and Immunology

Society for Adolescent Medicine

L.A. Department of Health Services

U.S. Public Interest Research Group

Partial list. The R-rating is also endorsed by:

American Lung Association

Campaign for Tobacco Free Kids

National Parent-Teacher Association (PTA)

SCREEN OUT!

A project of the Smokefree Movies Action Network

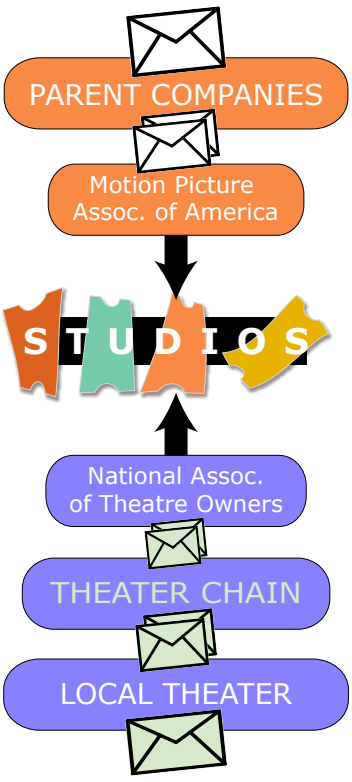
To change how studios behave, write their "parents."

Since 2002, the U.S. Senate has held hearings about smoking in movies... state Attorneys General have met with the production chiefs of every major studio...high school students across New York State have sent 300,000 letters to their favorite Hollywood stars...and the film industry's leaders have been fully briefed on the latest health research.

Hollywood's response? "We don't think parents care."

It will only take you a few minutes to let Hollywood know how much parents care...*if* you compose your own letter *and* send it to the right people. This kit includes model letters and the addresses you need. The diagram below maps the most important places to make your voice heard.

1) Write ONE letter to the top executive of Time Warner, Disney or Sony. COPY this letter to the other two companies AND to Hollywood's lobbying group, the Motion Picture Association of America (MPAA).



Send Hollywood the message!

2) Write a SECOND letter to the local theater where you and your kids watch movies. Then COPY this letter to the theater chain's headquarters AND to the theaters' trade association, the National Organization of Theatre Owners (NATO).

Answer? The parent-to-"parent" campaign.

All major Hollywood studios (like Warner Bros.) are owned by a *parent* company (like Time Warner). These parent companies own lots of other media — cable channels, TV networks, satellite services, magazines and newspapers — you may buy every day.

The way to change the way studios behave is through their "parent" corporations.

The same goes for your local movie theater. Almost all movie theaters belong to regional or national chains.

To convince movie studios to keep smoking out of kid-rated movies, we need to squeeze from both ends: from the top of their own corporate ladder and from the theater chains that sell their product to the public.

Write the parent companies that own the major studios. Contact local theaters that show their movies. Show them all how much parents really care.

SCREEN OUT!

A project of the Smokefree Movies Action Network

How to make a big impression on Hollywood.

1) Write one Chief Executive Officer (CEO) of a Top Three media company. A model letter is included in this kit. 2) Copy (cc:) the same letter to the heads of of the two other other media companies. 3) Copy the same letter to Dan Glickman, president of the MPAA (address at left).

FYI: We also include all the other key industry names, for reference.

MOTION PICTURE ASSOCIATION OF AMERICA

Dan Glickman,
President
MPAA
1600 Eye St., NW
Washington, DC
20007

The MPAA is the U.S. film industry's lobbying arm. It battles film piracy, for example, and also maintains the movie rating system.

The rating system has been revised and updated over the years to reflect changing standards.

In May 2007, under pressure, the MPAA announced it would start mentioning tobacco on some rating labels. Health authorities have rejected this policy as inadequate.

Tell MPAA chief Dan Glickman that parents feel the same way. Copy him on your letters to the parent companies.

Time Warner owns...
Warner Bros.
Castle Rock
New Line, Picturehouse
HBO Films

Richard Parsons, CEO
TIME WARNER
1 Time Warner Center
New York, NY 10019

Barry M. Meyer, CEO
Warner Bros. Entertainment
4000 Warner Blvd.
Burbank, CA 91522

Disney owns...
Disney Pictures
Touchstone
Miramax

Robert Iger, CEO (from 10/05)
THE DISNEY COMPANY
500 S. Buena Vista St.
Burbank, CA 91521-9722

Richard W. Cook, CEO
The Walt Disney Studios
500 S. Buena Vista St.
Burbank, CA 91521-9722

Sony owns...
Columbia
Sony Pictures
Sony Classics
MGM, Screen Gems

Sir Howard Stringer, CEO
SONY CORPORATION
550 Madison Avenue
New York, NY 10022

Michael Lynton, CEO
Sony Pictures Entertainment
10202 W. Washington Blvd.
Culver City, CA 90232

News Corp. owns...
Twentieth Century Fox
Fox 2000
Fox Searchlight
FoxFaith

Rupert Murdoch, CEO
THE NEWS CORPORATION
1211 Avenue of the Americas
New York, NY 10036

Jim Gianopulos &
Tom Rothman, Co-chairs
Fox Filmed Entertainment
10201 West Pico Blvd.
Los Angeles, CA 90035

Viacom owns...
Paramount
Dreamworks
MTV Films

Phillipe Dauman, CEO
VIACOM
1515 Broadway
New York, NY 10036

Brad Grey, CEO
Paramount Pictures
5555 Melrose Avenue
Los Angeles, CA 90038

GE owns...
Universal
Focus
Rogue

Jeffrey Imelt, CEO
GENERAL ELECTRIC
3135 Easton Turnpike
Fairfield, CT 06828-0001

Robert C. Wright, CEO
NBC Universal
30 Rockefeller Plaza
New York, NY 10112

How to move movie theaters.

SCREEN OUT!

A project of the Smokefree Movies Action Network

After writing media CEOs, groups should write to local movie theater managers (model letter included in kit). Arrange a face-to-face meeting to express concerns and describe solutions. Equally important? Copy (cc:) your letters "upstairs" to the theater chain's headquarters, listed here, and to NATO, the movie theater trade association (lower left).

Smoking doesn't sell movie tickets. Why should theaters defend it?

WHAT CHAINS DO YOUR LOCAL THEATERS BELONG TO?

Often you can tell by their newspaper listings: "AMC Metroplex 16," for example. If you see names that don't seem to belong to the biggest chains listed here, ask at the box office. Theater phone numbers give movie times, nothing more. If needed, visit the theater and request the manager's name and direct phone line. Be straightforward and persistent.

NATIONAL ASSOCIATION OF THEATRE OWNERS

John Fithian,
Exec. Director
NATO
750 First St., NE
Washington D.C.
20002

Make sure that NATO gets a copy of the letter you send local theaters. They pay attention to the community.

AMC
5,300 screens: Loews Cineplex, Cineplex Odeon, Star, Magic Johnson
• Peter C. Brown, Pres.
AMC Entertainment
920 Main Street
Kansas City, MO 64105

CARMIKE
2,500 screens in smaller markets
• Michael W. Patrick, Pres.
Carmike Cinemas
1301 First Avenue
Columbus, GA 31901

CINEMARK
4,500 screens
• Lee Roy Mitchell, CEO
Cinemark
3900 Dallas Parkway, Suite 500
Plano, TX 75093

CINEPLEX
1,300 screens across Canada: Odeon, Galaxy, Famous Players, etc.
• Ellis Jacob, Pres. & CEO
1303 Yonge Street
Toronto, Ontario
M4T 2Y9

EMPIRE THEATRES
375 screens across Canada
• Stuart G. Fraser, Pres. & CEO
610 East River Road
New Glasgow, Nova Scotia
B2H 3S2

KERASOTES THEATRES
800 screens in Midwest
• Tony Kerasotes, CEO
Kerasotes Theatres
224 N. Des Plaines, Suite 200
Chicago, IL 60661

LANDMARK THEATRES
240 screens
• Kevin Parke, Pres. & CEO
2222 S. Barrington Ave.
Los Angeles, CA 90064

MARCUS THEATRES
500 screens in upper Midwest
• Bruce J. Olson, Pres.
Marcus Theatres
100 East Wisconsin Ave., Suite 1900
Milwaukee, WI 53202

NATIONAL AMUSEMENTS
1,100 screens: Showcase, Multiplex, The Bridge, De Lux
• Shari E. Redstone, Pres.
National Amusements
200 Elm Street
Dedham, MA 02026
(Also owns Paramount, CBS, Viacom)

PACIFIC THEATRES
300 screens in Southern California
• Christopher Forman, CEO
Pacific Theatres
120 N. Robertson Blvd.
Los Angeles, CA 90048

REGAL CINEMAS
6,400 screens: Regal, Edwards, UA, Hoyts
• Michael L. Campbell, CEO
Regal Cinemas
7132 Regal Lane
Knoxville, TN 37918

More theater chains:
http://www.insightcinema.org/ResourceGuide.html

SCREEN OUT!

A project of the Smokefree Movies Action Network

Individuals *and* groups can demonstrate Parent Power.

1. WRITE LETTERS: Your name can help save 60,000 lives a year.

E-mail is quick. But the big media companies really pay attention to the number of *original letters* they receive. The reason? If you take the time to write a letter, the companies know you care deeply. If 10,000 people write their own letters, that's a very big deal. The companies assume a million others care, too.

Follow the road map and you *will* make a difference. We need to show the studios and their owners that there's no way out of this problem except to do the right thing.

So write a thoughtful, reasoned letter, no matter how brief. Copy it to the suggested targets, then sign your name. If you take a few minutes to put your heart into it, you can make the biggest corporations stop and think.

2. SIGN THE GLOBAL PETITION: Join people from around the world.

Why do people around the world care about smoking in movies? They're watching millions of kids start to smoke — and fear what that means for the future. Any parent, teacher, health professional or young person can sign the global Smokefree Movies Action Network petition on the Web: www.thepetitionsite.com/takeaction/870523336. Your privacy is fully protected. Spread the word through Instant Messaging networks!

3. GROUPS CAN RUN ADS: Individuals can submit guest editorials.

Press-ready ads and op-ed articles included in this kit excite your community to meet this health emergency. From school newsletters to film festival programs to local newspapers, use this material to shape the public dialogue about smoking in movies. Try "earned" media first: op-ed language tailored to your audience. Can't get the right coverage for free? Attract it with a paid ad. The movie studios do!

4. EDUCATE AT THEATERS: Movie smoking kills in real life.

Theaters showing kid-rated movies with smoking are a problem, but they're also an opportunity for adult and student groups. Leaflets or palm cards that ask, **"How much smoking do you see in this movie?"** help moviegoers take notice — and come to their own conclusions. Of course, if they want to know more, you'll be glad to tell them! This relaxed approach should earn theater managers' tolerance, even cooperation. And you can use this kind of activity to earn press coverage, too.

EXTRA CREDIT: HELP PASS A RESOLUTION!

From California to New York State, civic groups are passing resolutions endorsing Smoke Free Movies' four policy goals:

- R-rate future smoking
- Certify no payoffs
- Run strong counter-ads
- Stop identifying brands

The resolutions also call on local movie theaters to treat movies with smoking as if they were R-rated already.

Organizing to pass a resolution is a great way to rally your community.

For details, see the "Resolved!" page in this action guide.

How parents can protect kids from smoking in current films.

A project of the Smokefree Movies Action Network

WHY POLICY CHANGE IS NEEDED

Families can't solve this problem by themselves.

Along with major health and public interest groups, the U.S. Centers for Disease Control and Prevention agree that the film industry must alter its practices.

Health advocates have worked with Hollywood for a long time, educating writers and directors about the impact of smoking in films — even setting up quit-smoking programs for the industry's unions and guilds.

Yet there's more smoking in films than ever and more of kids' exposure now comes from kid-rated films.

Persuading the industry that it's time to change is something every family can be proud of.

1. Know what kids are watching.

Along with TV programs like *E.R.* that show lots of smoking, kids watch rented videos, borrow DVDs from friends, maybe even download movies. If families don't always watch together, ask about kids' favorite movies and what stars they like best. And don't hesitate to tell kids what you think about smoking — on-screen *and* in real life.

2. Keep track of new films and videos with smoking.

Assume that most of the movies promoted to kids have smoking in them. Want to know for sure? The smoking status of the top ten movies and videos is updated every Friday at smokefreemovies.ucsf.edu/problem/now_showing.html. For example:

Smoking	Film	Rating	Director
	Dukes of Hazzard	PG-13	Jay Chandrasekhar
	Wedding Crashers	R	David Dobkin
	Charlie and The Chocolate Factory	PG	Tim Burton
	Sky High	PG	Mike Mitchell
	Must Love Dogs	PG-13	Gary David Goldberg
	March of the Penguins	G	Luc Jacquet
	Stealth	PG-13	Rob Cohen
	Fantastic Four	PG-13	Tim Story
	War of the Worlds	PG-13	Steven Spielberg
	The Island	PG	Michael Bay

Promotes smoking
Smoking with negative consequences
Smokefree

3. Limit kids' exposure to R-rated films.

Whatever adults might feel about the language, violence or sexual content in R-rated movies, 90 percent of these films also include tobacco content dangerous to children and adolescents. The average R-rated film with smoking shows *twice* as much smoking as a typical PG-13 movie with smoking. While two-thirds of the films seen by teens are rated PG-13 at most, they still get half of their tobacco exposure from R-rated films.

No rating system is 100 percent effective. Studies by the U.S. Federal Trade Commission and private audience research services find the R-rating is about 50 percent effective at keeping kids out of R-rated movies. *Meanwhile, research has found that parents who enforce the R-rating themselves dramatically cut their kids' risk of smoking.*

Until Hollywood is convinced to clear smoking out of the PG-13 movies most teens see most often, however, today's R-rating is only half the answer.

SCREEN OUT!

A project of the Smokefree Movies Action Network

What will winning look like?

1. 60,000 fewer tobacco deaths a year, in the future.

Keeping tobacco out of future kid-rated movies will eliminate about half of kid's exposure — and cut teen smoking rates substantially. Experts estimate that 390,000 kids are influenced to smoke by on-screen smoking each year. R-rating future films with smoking should reduce that number by 50 percent, averting as many as 60,000 U.S. tobacco deaths a year in decades to come.

With one simple change, a handful of media executives can achieve the equivalent of ending *all* U.S. deaths from car accidents and HIV/AIDS. Wouldn't *you* do that if *you* had the chance?

2. Filmmakers can still include smoking in any film.

The R-rating and other policies do not censor content. The government is not involved. The film industry will simply include smoking imagery — known to be lethal — in its rating system along with strong language, violent images and sexual content. If filmmakers believe smoking is essential, they can still include it. But, just like four letter words, vivid violence or sexual situations do now, promoting tobacco will earn the movie an R.

Hollywood already claims to R-rate scenes of teenage smoking to discourage such imagery. When all smoking in films is rated R, there need not be more R-rated films — just fewer kid-rated films with smoking!

3. Tobacco industry will lose $2 billion in sales.

Experts calculate that the new young smokers influenced by smoking in movies each year are worth *$4.1 billion* to the tobacco industry in lifetime sales revenue (net present value). If keeping tobacco out of kid-rated films averts half of those addictions, then the tobacco industry stands to lose half of those sales, worth $2 billion. And that's just in the United States. Hollywood, like the U.S. tobacco industry, makes half of its sales overseas. The impact of on-screen smoking promotion on other nations and cultures is incalculable.

4. No impact on Hollywood or the movie experience.

Nobody goes to the movies to watch people smoke. Nobody has ever left a movie thinking that it should have had more smoking in it. And classic films like *Casablanca* will *not* be affected in any way.

Smoking doesn't sell movie tickets. All it sells is smoking. *What's in it for the studios?*

PARENTS ARE NOT ALONE IN THIS FIGHT

There's national consensus that tobacco shouldn't be marketed to children and adolescents. The opponents of smoking in kid-rated films include:

Major health groups representing physicians and public health advocates...

Shareholders who ask if major media companies are risking their reputations and incurring massive liability by knowingly promoting tobacco to kids...

Law enforcement officials whose 1998 Master Settlement Agreement with tobacco companies prohibits paid brand placement...

High school students battling tobacco marketing practices that influence kids to smoke...

Health advocates in other countries concerned about the threat to their own young people posed by popular Hollywood blockbusters.

An individual's letter to Disney, Sony and Time Warner.

A project of the Smokefree Movies Action Network

ADOLESCENTS WHO BEGIN TO SMOKE BECAUSE OF THEIR EXPOSURE TO TOBACCO IMAGERY IN THE FILMS OF MAJOR STUDIOS (PER YEAR):

Disney Company
66,000 kids

General Electric (Universal)
57,000 kids

News Corp. (Fox)
34,000 kids

Sony (Columbia)
70,000 kids

Time Warner (Warner Bros.)
90,000 kids

Viacom (Paramount)
41,000 kids

32 percent of these young smokers will eventually die from tobacco-caused disease.

Average, per year, based on 1999-2005 data. Computation detailed at smokefreemovies.ucsf.edu/problem/new_smokers.html

Dear Mr. BLANK, CEO of Company A:

I'm a parent and I'm very concerned about the smoking in films rated G, PG and PG-13. I've learned that on-screen smoking is a major influence on teens in the United States. It's more powerful than traditional tobacco ads and undermines all attempts by parents like me to keep my kids safe from tobacco, America's #1 cause of preventable death.

Your motion picture studio has a poor record on smoking in kid-rated movies. I'm convinced that the movies you produce and distribute are dangerous to children and adolescents. Major health groups agree.

There's an easy way to solve this problem. You already tailor films to meet certain age standards on language, sex and violence. It's at least as important to rate them according to their smoking content — the only content *scientifically proven* to physically harm young people. In fact, experts have estimated that your films influence [insert #] kids a year to smoke!

Now that the rest of us know how harmful these images are, I demand that you pledge to stop producing or distributing G, PG and PG-13 rated movies with smoking, in future, and push the MPAA to rate smoking "R" across the industry.

That's a reasonable but effective answer to this terrible health challenge. If you do any less, you risk losing the trust and respect of parents across America. I know. I'm one of them.

Please tell me how soon your company will end smoking in youth-rated movies. I will be following your actions closely.

Sincerely,

cc: CEO, Company B
CEO, Company C
Dan Glickman, Motion Picture Association of America

Organzation's letter to a movie theater manager.

A project of the Smokefree Movies Action Network

DETAILS YOU CAN ADD TO YOUR LETTERS:

Estimated number of tobacco impressions delivered to theater audiences from 1999 to 2006:
44 billion

Estimated impressions delivered to children 6-11:
2.4 billion

To adolescents 12-17:
8.8 billion

Dear [Local Theater Manager]:

Our organization is deeply concerned about the smoking in G, PG and PG-13 films shown by your theater. We know that you don't personally choose the movies shown. But your screens are directly exposing our community to tobacco imagery that influences kids to smoke.

This is not a problem of "taste" or morals. It's a public health issue. Smoking is even more of a hazard on screen than if you allowed smoking in the theater itself. The science is undeniable. Smoking in movies has a major impact on U.S. teens. Researchers estimate that it influences 390,000 to start smoking each year, of whom a projected 120,000 will die from tobacco addiction.

The studios will listen if you tell them that our community cares about this issue. Explain that R-rating the smoking in future films is the best solution. A PG-13 tobacco "warning" would only cut teens' exposure by 5 percent. Clearing *all* smoking from films would require censorship nobody in America wants. What's reasonable? Treat tobacco, which kills 438,000 Americans a year, as seriously as the MPAA now treats four-letter words that kill no one.

When you report box office numbers, remind the studios that movie smoking doesn't sell a single movie ticket. It only sells smoking. Studio veterans know this already. Why should theaters take the heat when the studios push tobacco at kids 12-17, the age group most likely to start smoking?

We welcome the chance to work together and end this problem. Let's set a time to meet.

Cordially,

cc: [CEO, THEATER CHAIN]
John Fithian, National Organization of Theatre Owners

RESOLVED! A model resolution for civic groups.

A project of the Smokefree Movies Action Network

Supporting smokefree movies...

Whereas tobacco use is the leading cause of preventable death and disability in the United States;

Whereas youth ages 12-20 are one-sixth of the U.S., population but buy one-quarter of all movie tickets;

Whereas most U.S. movies with tobacco imagery are rated G, PG or PG-13, and three-quarters of all U.S. live-action films rated PG-13 and 36 percent of films rated G or PG released 1999-2006 feature tobacco;

Whereas exposure to smoking in movies is the primary influence on half of all new adolescent smokers;

Whereas each year an estimated 390,000 teens start smoking because of exposure to smoking in movies and 120,000 will die prematurely as a result;

Whereas the tobacco industry has had a long, documented history of promoting tobacco use and particular brands on screen, while obscuring its true role;

Whereas the U.S. Centers for Disease Control and Prevention in 2002, 2003 and 2005 listed smoking in movies as a primary reason why the decline in teen smoking rates has stalled;

Whereas the World Health Organization, American Medical Association, National PTA, American Heart Association, American Lung Association, American Legacy Foundation, American Academy of Pediatrics, American Academy of Allergy, Asthma, and Immunology, Society for Adolescent Medicine, L.A. County Department of Health Services and others endorse getting smoking out of movies rated G, PG and PG-13;

Now, therefore be it resolved that [NAME OF ORGANIZATION] of [LOCATION] endorses the four objectives of the Smoke Free Movies campaign:

(1) Rate new smoking movies "R," with the sole exceptions being when the tobacco presentation clearly and unambiguously reflects the dangers and consequences of tobacco use or is necessary to represent smoking of a real historical figure; (2) require producers to certify on screen that no one on the production received anything of value in consideration for using or displaying tobacco; (3) require strong anti-smoking ads before any movie with tobacco use, regardless of rating; (4) stop identifying tobacco brands.

Be it further resolved that the [ORGANIZATION EXECUTIVE] shall write letters to theaters in this community asking that they refrain from showing G/PG/PG-13 films with tobacco imagery or, if they do, to admit patrons on the same terms as if the film were rated "R."

Sample op-ed article.

A project of the Smokefree Movies Action Network

HOW TO MAKE THIS OP-ED YOUR OWN:

- **Make it personal.** Describe a recent experience at the movies. Talk about the challenge for parents in un-selling the most dangerous addiction: tobacco. Almost every family has been touched by tobacco tragedy.
- **Make it local.** Call your nearest tobacco prevention program and get the latest local data. Count the number of movie screens and video retailers in the phone book. If your community is smokefree, compare it to what we see on screen.

Before submitting. Check out your local paper's length requirements and submit in the exact form they specify. This sample is 580 words.

It's easy to make fun of people who blame Hollywood for everything. After all, movies are merely entertainment. Movie studios are neither missionary chapels nor outposts of political correctness. They're businesses. As a producer once remarked, "We don't make movies. We make money."

But, since they're businesses, why not hold them to normal business standards? For example, it's almost universally considered bad form for a business to sell a product that kills its own customers — or their kids.

Unfortunately, scientific evidence now indicates that movie studios are doing massive harm. While it's the tobacco industry whose products kill 438,000 Americans a year, it's exposure to smoking in Hollywood movies that generates 390,000 new teen smokers a year to replace them. Experts project that 120,000 of these kids will ultimately die from tobacco-caused heart disease, emphysema or cancer.

Smoking takes its toll on the rest of us, too. Counting lost productivity and medical expenses, tobacco costs every American wage-earner $1,250 a year.

We believe the movie studios account for so many future tobacco deaths because 75 percent of all live-action films since 1999 have included smoking. Tobacco is even featured in three-quarters of PG-13 movies, the kind adolescents see most.

Studies controlling for every other conceivable factor find that kids 10-14 who see the most movies with smoking are three times as likely to start smoking as kids who see the least. Nonsmokers' children may be the most vulnerable; they're four times as likely to start smoking after watching lots of smoking on screen.

But you don't need to take the word of independent researchers publishing in the world's most respected medical journals. Read tobacco industry files dating back to 1971. They describe how tobacco companies set out to systematically boost their products in major motion pictures. They figured out that they didn't even have to flash a particular brand. Seeing any kind of smoking in movies would keep it "fashionable."

To put tobacco on screen, the companies invested millions in product placement until at least the early 1990s, when the paper trail disappears off shore. When some of their deals were discovered, they tried to launch a Nick Naylor-esque defense, claiming that restrictions on paid tobacco placement would threaten creative freedom.

With so many lives at stake, the U.S. Centers for Disease Control and Prevention are urging the movie industry to change its practices. Leading medical groups, including the American Academy of Pediatricians, the AMA and others join the World Health Organization in recommending a voluntary R-rating for future films with smoking. (Note the word "future." Nobody is going to touch classics like *Casablanca* or *The Hot Chick*.)

This and other policies, like an anti-tobacco spot before any movie with smoking, are reasonable and responsible. Filmmakers would remain free to include smoking in any movie they want, just as they can use the f-word in any movie they want. Realistic depictions of smoking's real consequences—and film portraits of historical smokers like Winston Churchill or Ray Charles—would be exempt. The government need not be involved at all, yet taxpayers would save billions.

The R-rating alone will cut teen exposure to movie smoking in half and avert as many as 60,000 tobacco deaths a year in decades to come, more than all Americans killed by car crashes and drug use combined. The six top media CEOs can pick up their phones and make it happen today. Why not? Nobel Prizes have been won for less.

-- END --

A model press release.

A project of the Smokefree Movies Action Network

[CONTACT NAME]
[ORGANIZATION]
[E-MAIL AND PHONE]

EMBARGO TO:
[TIME and DATE]

(NOTE: Be available 24/7 by phone on the release date.)

Parents and physicians launch [PLACE'S] first campaign against tobacco danger in kids' films

[DATE] — With kids back in school, [PLACE] parents and pediatricians are launching a first-ever campaign to alert the public to the dangers of tobacco scenes in mainstream movies. Recent studies find that exposure to on-screen smoking is the primary influence on teens to start smoking. Campaigners aim to warn parents of unlabeled tobacco content, enlist local movie theaters in educational efforts, and update the movie industry's rating system to keep smoking out of future G, PG and PG-13 films.

"Dramatic risks to kids like violence, drugs and drunk driving are tragic enough. Yet tobacco remains America's #1 cause of preventable death," says [PERSON #1]. "On-screen smoking alone will kill as many of today's kids as car wrecks, crime, drug use and HIV/AIDS combined."

The good news, according to co-organizer [PERSON #2], is that kids who don't smoke when they graduate high school will likely stay nonsmokers for life. But research shows that smoking in movies cancels out parents' efforts to keep their teens away from tobacco.

"Nonsmokers' kids are as susceptible to smoking scenes at the multiplex than kids whose parents smoke," [PERSON #2] says. "A parent's example isn't enough in this case. We need to get smoking out of future kid-rated movies, using Hollywood's own voluntary rating system."

The campaign will ask local theater managers to relay community concerns to the film industry. Letter-writing to media company CEOs and talks to local PTAs and other civic groups are also slated. All can sign the global petition online at www.thepetitionsite.com/takeaction/870523336.

"This is bigger than [PLACE]," notes [PERSON #1]. "Parents and pediatricians around the world are putting this issue on the agenda. If one child dies on a theme park ride it makes national news, but 120,000 future deaths a year from movie smoking are business as usual. Compared to other major public health problems, this can be fixed quickly at no public cost. Even with the history of product placement, that makes Hollywood's continuing denial very hard to understand."

[SPONSORING ORGANIZATION NAMES AND 1-2 LINE DESCRIPTIONS]

— END —

HOW TO EARN GOOD NEWS COVERAGE:

- **Be topical.** Refer to a kid-rated movie with smoking that's on screen or video.
- **Focus the headline.** If you have a specific goal, announce it.
- **Define the story.** Most local media outlets are unfamiliar with this story and will need background. Your consistent message? Scientific research has identified a major health threat to kids that demands immediate remedy.

To reporters and editors, emphasize that this is a science-based issue, not another protest of bad taste or "immoral media."

- **Conflict adds interest.** Studios that once blatantly sold out to Big Tobacco now claim this is all about creative choice.

But they tailor movies to win certain ratings all the time. An R-rating simply gives producers a voluntary, market-based incentive to keep future kids' movies smokefree.

References and sources.

A project of the Smokefree Movies Action Network

Want to learn more about children, smoking and movies? Here are some web sites with top-notch information, constantly updated:

www.smokefreemovies.ucsf.edu Based at the University of California-San Francisco, this site offers full-text research studies, secret tobacco industry documents, and complete surveys of smoking content and impact, broken out by studio, since 1999. Check out the links to other groups.

www.scenesmoking.org Sponsored by the Lung Association of Sacramento-Emigrant Trails, this site updates its info on top-grossing movies and videos every week. Archives reach back to the early 1990s.

www.cdc.gov/tobacco/index.htm Fact sheets and reports on every aspect of tobacco, from the U.S. Centers for Disease Control and Prevention.

"Tobacco is the most deadly product..."

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"What smoking in movies does to our kids"

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3 Glantz, SA. Smoking in movies: A major problem and a real solution. The Lancet 2003:362(9380):281-285. See errata for corrected calculations.

4 Charlesworth A, Glantz SA. Smoking in the movies increases adolescent smoking: a review. Pediatrics 116 (6):1516-1528.

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Causes of preventable death:

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"Three out of four recent PG-13 films include smoking"

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SCREEN OUT! prepared by onbeyond LLC

SCREEN OUT!

The problem...

QUICK FACTS

Smoking in movies kills in real life.

1 Tobacco is still the #1 cause of preventable death in the U.S. This year, smoking will kill 438,000 Americans.

2 Most smokers start when they're kids — some as young as 10. The number who start smoking climbs through middle school and peaks in high school.

3 Tobacco is one of the biggest health threats your kids will ever face. Smoking in movies is a primary promotional channel.

4 One major study found exposure to on-screen smoking is the primary influence on half of all the kids who start to smoke.

5 Published estimates say that movies will influence 390,000 U.S. teens to start smoking this year — nearly enough to replace all adult smokers killed by tobacco.

6 Of those new young smokers, experts project 120,000 will ultimately be killed by their tobacco addiction.

7 That's more than all Americans killed by drunk drivers, crime, drug use and HIV/AIDS every year.

8 The study also found that on-screen smoking influenced nonsmokers' children to start smoking even more than it influenced the children of parents who smoke.

9 Movie smoking is almost impossible to avoid. Three-quarters of U.S. live-action films feature tobacco, including three out of four PG-13 films, which most parents think are safe.

10 For ten years, health groups tried to educate Hollywood about the harm from smoking in movies. Over that time, smoking in movies only increased.

A project of the Smokefree Movies Action Network

This project is endorsed by the American Heart Association, American Legacy Foundation, American Medical Association, and New York State Dept. of Health

SCREEN OUT!

The solution...

QUICK FACTS

4 easy steps can save 60,000 lives a year!

How can we protect our kids from smoking in movies?

1 **RATE NEW SMOKING MOVIES "R"** Movie studios routinely tune film content to win the rating they want for commercial reasons. They should treat smoking (which kills close to one American each minute) exactly the way they treat four-letter words:

> Any film that shows or implies tobacco should be rated "R". The only exceptions should be when the presentation of tobacco clearly and unambiguously reflects the dangers and consequences of tobacco use or is necessary to represent the smoking of a real historical figure. Films released before the rating system change would not be re-rated.

Result? Producers will keep smoking out of films they want rated PG-13 to attract a bigger audience, just like they tone down violence and sex today. While kids would still see smoking in the R-rated films they manage to view, their overall exposure should be cut at least in half. Cutting exposure in half could avert as many as 60,000 U.S. tobacco deaths annually.

2 **CERTIFY NO PAYOFFS** Producers of films with tobacco should post a certificate in the closing credits declaring that nobody on the production received anything of value (cash money, free cigarettes or other gifts, free publicity, interest-free loans or anything else) from anyone in exchange for using or displaying tobacco.

3 **REQUIRE STRONG ANTI-SMOKING ADS** Studios and theaters should run a genuinely strong anti-smoking ad (not one produced by a tobacco company) before any film with tobacco presence, in any distribution channel, regardless of the film's rating.

> When you contact theaters and theater chains, emphasize that strong anti-tobacco spots must show before *all* films with smoking.

4 **STOP SHOWING TOBACCO BRANDS** There should be no tobacco brand identification nor the presence of tobacco brand imagery (such as billboards) in the background of any movie scene.

R-rating tobacco in future movies is endorsed by leading health groups, but the rating system is controlled by major movie studios. That means a handful of media executives have the power to reduce dramatically our kids' exposure to on-screen smoking, saving as many as 60,000 U.S. lives a year in decades to come.

A project of the Smokefree Movies Action Network

This project is endorsed by the American Heart Association, American Legacy Foundation, American Medical Association, and New York State Dept. of Health

SCREEN OUT!

What parents can do NOW...

QUICK FACTS

Limiting your kids' exposure to R-rated movies helps solve HALF the problem.

Clearing tobacco out of G, PG and PG-13 movies will QUICKLY solve the other half!

The two most effective things you can do to protect your kids:

1 **LIMIT KIDS' EXPOSURE TO R-RATED MOVIES**
As children grow, they are more likely to see movies rated "R." They have access to them on DVD, on cable and in movie theaters. Even after theaters stiffened enforcement of the R-rating after the shootings in Colombine, CO (out of concern over violent imagery) the U.S. Federal Trade Commission found the "R" was about 50 percent successful at keeping kids under 17 out of R-rated screenings.

Still, even older kids see only half as many R-rated movies as youth-rated films. Unfortunately, R-rated movies average twice as much smoking as PG-13 movies. Result? Kids 12-17 receive *half* of their smoking exposure from R-rated movies. Limiting your kids' exposure to R-rated films can protect many from starting to smoke. But as long as kids get half of their exposure from youth-rated movies, today's "R" is only half the answer.

2 **CLEAR SMOKING OUT OF G, PG AND, *MOST IMPORTANTLY,* PG-13 MOVIES** The best way to stop tobacco promotion is at its source. The media companies that own Hollywood studios need to know that parents want kid-rated movies to stop promoting tobacco.

As an individual parent, you can make a big impact. Write a thoughtful letter to the top media executive at a major studio's parent company. Then copy (cc:) the letter to the other two companies and to Hollywood's lobbying group, the Motion Picture Association of America (MPAA). Base your letter on the powerful facts you've learned about movies and kids' health. There's no need to get "personal"!

Bob Iger
Disney

Dick Parsons
Time Warner

Howard Stringer
Sony

Dan Glickman
Motion Picture Association of America

Your organization, in addition to writing the studios' "parent" companies and lobbying group, should write local movie theater managers, the CEOs of the chains that own them, and their trade group, the National Association of Theatre Owners (NATO).

Hollywood will stop promoting tobacco in kid-rated movies when it feels pressure through its **corporate owners** *and* **movie theaters** in towns and cities across the country. That's how parents will be heard.

A project of the Smokefree Movies Action Network

This project is endorsed by the American Heart Association, American Legacy Foundation, American Medical Association, and New York State Dept. of Health

SCREEN OUT!

Here's where to write...

QUICK FACTS

Three giant media companies make more than half of all movies with smoking. Experts find adolescents are influenced by movie tobacco content to start smoking. If these companies chose, they could stop producing and distributing youth-rated films with smoking tomorrow. They could also update Hollywood's rating system, which they control through the Motion Picture Association of America, to impose an "R" on almost all tobacco scenes in the future.

1. Write the media CEO of your choice...

2. Then cc: the other two...

3. AND the studios' lobbying group!

TimeWarner

CORPORATE LEADER
Richard D. Parsons, CEO
Time Warner
1 Time Warner Center
New York, NY 10019

MOVIE LABELS
Warner Bros, Castle Rock, New Line, Picturehouse, HBO Films

TOBACCO CONTENT, 8-YEAR AVG.
G/PG Movies: 38%
PG-13 Movies: 65%
R-Rated Movies: 85%

NEW TEEN SMOKERS YEARLY (estimated)
90,000

Disney

CORPORATE LEADER
Robert Iger, CEO
The Disney Company
500 S. Buena Vista
Burbank, CA 91521

MOVIE LABELS
Disney Pictures, Touchstone, Miramax

TOBACCO CONTENT, 8-YEAR AVG.
G/PG Movies: 35%
PG-13 Movies: 80%
R-Rated Movies: 92%

NEW TEEN SMOKERS YEARLY (estimated)
61,000

SONY

CORPORATE LEADER
Howard Stringer, CEO
Sony Corporation
550 Madison Avenue
New York, NY 10022

MOVIE LABELS
Columbia, Sony Pictures/ Classics, MGM, Screen Gems, Tristar

TOBACCO CONTENT, 8-YEAR AVG.
G/PG Movies: 61%
PG-13 Movies: 79%
R-Rated Movies: 88%

NEW TEEN SMOKERS YEARLY (estimated)
70,000

MOTION PICTURE ASSOCIATION OF AMERICA
Dan Glickman, President
1600 Eye St., NW
Washington, DC 20007

A project of the Smokefree Movies Action Network

This project is endorsed by the American Heart Association, American Legacy Foundation, American Medical Association, and New York State Dept. of Health

SCREEN OUT!

Hollywood's track record

QUICK FACTS

SUMMARY | In 2006, two-thirds of U.S.-produced, live action movies (116 of 176) included tobacco. For the eighth year in a row, most kid-rated movies (54%) featured tobacco use. Three companies — Sony, Time Warner, and General Electric (Universal) — accounted for 59% percent of PG-13 movies with smoking.

In 2006, more than half of movies with smoking were rated G, PG or PG-13.

2006 KID-RATED MOVIES WITH TOBACCO

Curious George (G: GE)
Akeelah and the Bee (PG: Lions Gate)
Ant Bully, The (PG: Time Warner)
Barnyard (PG: Viacom)
Flushed Away (PG: Viacom)
Lassie (PG: Weinstein)
Material Girls (PG: Sony)
Pink Panther, The (PG: Sony)
Rocky Balboa (PG: Sony)

16 Blocks (PG-13: Time Warner)
A Good Year (PG-13: News Corp.)
All the King's Men (PG-13: Sony)
American Dreamz (PG-13: GE)
An American Haunting (PG-13: Freestyle)
Annapolis (PG-13: Disney)
ATL (PG-13: Time Warner)
Benchwarmers (PG-13: Sony)
Break-Up, The (PG-13: GE)
Catch a Fire (PG-13: GE)
Click (PG-13: Sony)
Covenant, The (PG-13: Sony)
Crossover (PG-13: Sony)
Da Vinci Code, The (PG-13: Sony)
Date Movie (PG-13: News Corp.)
Déja Vu (PG-13: Disney)
Dreamgirls (PG-13: Viacom)
Fast and the Furious 3 (PG-13: GE)
Fearless (PG-13: GE)
Flyboys (PG-13: Sony)
For Your Consideration (PG-13: Time Warner)
Goal! (PG-13: Disney)
Grudge 2, The (PG-13: Sony)
Holiday, The (PG-13: Sony)
Illusionist, The (PG-13: Yari)
Kinky Boots (PG-13: Disney)
Lady in the Water (PG-13: Time Warner)
Larry the Cable Guy: H.I. (PG-13: Lionsgate)
Last Holiday (PG-13: Viacom)
Little Man (PG-13: Sony)
Madea's Family Reunion (PG-13: Lionsgate)
Man of the Year (PG-13: GE)
Marie Antoinette (PG-13: Sony)
Mission: Impossible III (PG-13: Viacom)
My Super Ex-Girlfriend (PG-13: News Corp.)
Painted Veil, The (PG-13: Time Warner)
Pirates of the Caribbean 2 (PG-13: Disney)
Poseidon (PG-13: Time Warner)
Prairie Home Companion (PG-13: GreeneStreet)
Pulse (PG-13: Weinstein)
Pursuit of Happyness (PG-13: Sony)
School for Scoundrels
(PG-13: Sony/Weinstein)
Scoop (PG-13: GE)
Sentinel, The (PG-13: News Corp.)
Something New (PG-13: GE)
Stay Alive (PG-13: Disney)
Stranger Than Fiction (PG-13: Sony)
Superman Returns (PG-13: Time Warner)
Talladega Nights (PG-13: Sony)
Wicker Man, The (PG-13: Time Warner)
World Trade Center (PG-13: Viacom)
World's Fastest Indian (PG-13: Magnolia)
X-Men 3 (PG-13: News Corp.)
You, Me and Dupree (PG-13: GE)

SOME 2007 KID-RATED MOVIES WITH TOBACCO

Meet the Robinsons (G: Disney)
Mr. Bean's Holiday (G: GE)
Amazing Grace (PG: Goldwyn)
Arthur and the Invisibles (PG: Sony)
Hairspray (PG: Time Warner)
Nancy Drew (PG: Time Warner)
Pride (PG: Lionsgate)

1408 (PG-13: Weinstein)
Balls of Fury (PG-13: GE)
Blades of Glory (PG-13: Viacom)
Catch and Release (PG-13: Sony)
Daddy's Little Girls (PG-13: Lionsgate)
Delta Farce (PG-13: Lionsgate)
Epic Movie (PG-13: News Corp.)
Evening (PG-13: GE)
Ghost Rider (PG-13: Sony)
Gracie (PG-13: Time Warner)
Hot Rod (PG-13: Viacom)
I Now Pronounce You Chuck and Larry (PG-13: GE)
Invisible, The (PG-13: Disney)
Lucky You (PG-13: Time Warner)
Mr. Woodcock (PG-13: Time Warner)
Nanny Diaries, The (PG-13: Weinstein)
Next (PG-13: Viacom)
Norbit (PG-13: Viacom)
Ocean's Thirteen (PG-13: Time Warner)
Premonition (PG-13: Sony)
Rush Hour 3: (PG-13: Time Warner)
Simpsons Movie, The (PG-13: News Corp.)
Spider-Man 3 (PG-13: Sony)
Stardust (PG-13: Viacom)
Stomp the Yard (PG-13: Sony)
Who's Your Caddy (PG-13: Weinstein)
Wild Hogs (PG-13: Disney)

For latest releases, visit: www.smokefreemovies.ucsf.edu/now_showing/

A project of the Smokefree Movies Action Network

This project is endorsed by the American Heart Association, American Legacy Foundation, American Medical Association, and New York State Dept. of Health

RESOURCE #2

US SURGEON GENERAL'S 2012 REPORT

PREVENTING TOBACCO USE AMONG YOUTH AND YOUNG ADULTS

CHAPTER 5:
THE TOBACCO INDUSTRY'S INFLUENCES ON THE USE OF TOBACCO AMONG YOUTH

Chapter 5
The Tobacco Industry's Influences on the Use of Tobacco Among Youth

Introduction

In most developed countries, businesses use a broad variety of marketing techniques to increase their sales, gain market share, attract new users, and retain existing customers. These techniques include product design, packaging, pricing, distribution, product placement, advertising, and a variety of promotional activities. Tobacco companies were among the earliest companies to identify and implement effective, integrated marketing strategies, and cigarettes and other tobacco products have long been among the most heavily marketed consumer products in the United States (Brandt 2007). In the late nineteenth century, James Buchanan Duke used the cost advantages he gained from his adoption of James Bonsack's mechanized cigarette rolling machine to aggressively market his cigarette brands (Chaloupka 2007). Duke's marketing practices included setting relatively low prices, providing sophisticated packaging, carrying out promotions such as including picture cards in cigarette packs and sponsoring various public events, and paying distributors and retailers to promote his brands (Kluger 1996). These strategies contributed to the growth of Duke's American Tobacco Company, which came to dominate U.S. tobacco markets in the early twentieth century before antitrust actions dissolved the trust in 1911. Despite the breakup of the trust, U.S. markets for tobacco products have remained highly concentrated, with little price competition. Even so, variations of many of the marketing practices used by Duke continue to be important marketing tools for today's tobacco companies, as discussed in this chapter.

Tobacco companies have long argued that their marketing efforts do not increase the overall demand for tobacco products and have no impact on the initiation of tobacco use among young people; rather, they argue, they are competing with other companies for market share. In contrast, the weight of the evidence from extensive and increasingly sophisticated research conducted over the past few decades shows that the industry's marketing activities have been a key factor in leading young people to take up tobacco, keeping some users from quitting, and achieving greater consumption among users (National Cancer Institute [NCI] 2008). This growing evidence has helped to spur a variety of policy interventions aimed at reducing the influence of marketing on tobacco initiation and consumption by the tobacco companies, from the 1971 ban on broadcast advertising to the constraints contained in the 1998 Master Settlement Agreement (National Association of Attorneys General [NAAG] 1998a) and Smokeless Tobacco Master Settlement Agreement (NAAG 1998b).

As research evidence has accumulated over time, the relationships between the marketing activities of tobacco companies and the use of tobacco, including use among young people, have become clear. Correspondingly, the growing strength of the evidence in this area has been reflected by the increasingly strong conclusions drawn in comprehensive reviews of this evidence, including those in previous Surgeon General's reports on smoking and health (notably the 1989, 1994, 1998, and 2000 reports [U.S. Department of Health and Human Services (USDHHS) 1989, 1994, 1998, 2000]) and other comprehensive reviews (e.g., Lynch and Bonnie 1994; *Federal Register* 1996; Lovato et al. 2003; NCI 2008).

The present chapter provides an updated and extended review of the evidence on the impact of the tobacco companies' marketing activities on tobacco use. The chapter begins by reviewing trends in marketing expenditures made by the tobacco companies and changes in the focus of these expenditures over time. This review then presents a conceptual framework that relates advertising and promotion by tobacco companies to tobacco use among young people. The section on the framework is followed by a review of the evidence on the effects of advertising and promotion on tobacco use among young people, drawing from and updating existing comprehensive reviews. Next is a discussion of the role of marketing techniques that have been given relatively little attention in most previous reviews: pricing strategies, packaging and design, marketing at the point of sale, and emerging digital marketing techniques. This is followed by a section that describes programs sponsored by tobacco companies with the stated purpose of preventing tobacco use among young people and the evidence of their impact on this population. Following this section is a review of the impact of exposure to tobacco use in the movies. The chapter closes with major conclusions about the role of marketing by the tobacco companies and depictions of smoking in movies influencing tobacco use among young people.

Marketing Expenditures of the Tobacco Companies

Cigarettes

Each year, tobacco companies are required to report detailed information on their domestic cigarette sales and marketing expenditures to the Federal Trade Commission (FTC 2011a). The publicly available data do not include the level of detail reported by tobacco companies (i.e., by company, brand, and type of activity) but are instead presented in the aggregate in FTC's regular reports on the marketing expenditures of cigarette companies. Over time, however, FTC's reports on these data have become increasingly detailed, with expenditures now reported in numerous categories. In recent years, spending has been reported for separate categories, as defined in Table 5.1.

In earlier years, FTC reported expenditures in several of the current categories as part of an aggregated category (e.g., coupons and retail value-added as one category, promotional allowances including price discounts as another). Similarly, in earlier years, expenditures on other types of marketing activities that are no longer allowed or used were reported, including expenditures on television and radio advertising and on endorsements and testimonials.

In 2008, the most recent year reported, expenditures on price discounts accounted for the largest single category—nearly three-fourths of total expenditures (Table 5.2; FTC 2011a). When other price-related discounts are included (coupons and free cigarettes from either sampling or retail-value-added promotions), spending on marketing practices that reduced cigarette prices accounted for about $6.00 of every $7.00 (about 84%) spent on cigarette marketing in 2008. In contrast, traditional advertising (including that in newspapers and magazines, outdoors, and at the point of sale) accounted for less than 2.0% of total spending on marketing (FTC 2011a).

In 2008, $9.94 billion was spent on marketing cigarettes in the United States (down from a high of $15.1 billion in 2003) by the five major U.S. cigarette companies: Altria Group, Inc. (ultimate parent company for Philip Morris USA); Commonwealth Brands, Inc.; Lorillard, Inc. (ultimate parent company for Lorillard Tobacco Company); Reynolds American, Inc. (ultimate parent company for R.J. Reynolds Tobacco Company [RJR] and Santa Fe Natural Tobacco Company, Inc.; Reynolds American Inc. acquired Brown & Williamson (B&W) Tobacco Corporation in 2004); and Vector Group Ltd. (ultimate parent company for Liggett Group, LLC, and Vector Tobacco Inc.) (Tables 5.2 and 5.3; FTC 2011a). In 2008, this amounted to 62 cents per pack of cigarettes sold (just over 18% of the average price per pack), down from a high of 84 cents per pack (almost 24% of average price) in 2003. In 2006, cigarette companies spent an estimated 28.9% of their revenues (net of state and federal cigarette excise taxes) on their marketing efforts, up somewhat from an estimated 25.4% in 2003 (FTC 2011a).

In addition to the marketing activities covered in the FTC reports, cigarette companies engage in various marketing-related activities for which data are not publicly available. For example, companies invest considerable funds in the development of new brands, brand extensions (i.e., extensions of existing brands), or new products that may help them gain market share from other companies and/or attract new consumers. The cigarette pack itself is a form of marketing, with companies developing packaging designed to attract attention, appeal to specific consumers, reinforce brand identity, or suggest specific product qualities (Wakefield et al. 2002a).

In inflation-adjusted (real) terms, marketing expenditures by the cigarette companies have generally increased over time since 1963 (Table 5.3). Real expenditures for marketing fell in the early 1970s, however, as a ban on broadcast cigarette advertising went into effect in 1971. Indeed, real spending fell by nearly one-quarter from 1970 to 1971. By 1975, spending had surpassed the level seen in the last year before the ban, as cigarette companies increased spending on other marketing activities. Real spending increased nearly every year from 1975 through 1993 before dropping 26.8% in 1994. The decline in spending from 1993 to 1994 largely resulted from industry-wide price cuts that made permanent the price reductions initially implemented through various price promotions initiated by Philip Morris USA for Marlboros on April 2, 1993 (which became known as "Marlboro Friday"), and subsequently matched by other companies on their leading brands (Chen et al. 2009). After a few years of relative stability, marketing expenditures rose sharply beginning in 1997, with total real expenditures rising by 243% from 1996 to 2003 before falling from 2004 to 2008.

The relative emphasis on different cigarette marketing activities has changed dramatically over the past four decades (Tables 5.3 and 5.4). In the 1960s and early 1970s, about 90% of total marketing expenditures were on print, broadcast, and outdoor (including transit) advertising ("Advertising" in Table 5.3). By 1980, spending on advertising (including point of sale) was down to 70% of the total, and by 1998, it was just 13.9%. The November 1998 Master Settlement Agreement contained a number of provisions that limited cigarette advertising, including a ban

Table 5.1 Cigarette company marketing activities reported to the Federal Trade Commission

Newspapers	Newspaper advertising; but excluding expenditures in connection with sampling, specialty item distribution, public entertainment, endorsements, sponsorships, coupons, and retail value added.
Magazines	Magazine advertising; but excluding expenditures in connection with sampling, specialty item distribution, public entertainment, endorsements, sponsorships, coupons, and retail value added.
Outdoor	Billboards; signs and placards in arenas, stadiums, and shopping malls, whether they are open air or enclosed; and any other advertisements placed outdoors, regardless of their size, including those on cigarette retailer property; but excluding expenditures in connection with sampling, specialty item distribution, public entertainment, endorsements, sponsorships, coupons, and retail value added.
Audiovisual	Audiovisual or video advertising on any medium of electronic communication not subject to the Federal Communications Commission's jurisdiction, including screens at motion picture theaters, video cassettes or DVDs, and television screens or monitors in stores; but excluding expenditures in connection with Internet advertising.
Transit	Advertising on or within private or public vehicles and all advertisements placed at, on or within any bus stop, taxi stand, transportation waiting area, train station, airport, or any other transportation facility; but excluding expenditures in connection with sampling, specialty item distribution, public entertainment, endorsements, sponsorships, coupons, and retail value added.
Point of sale	Point-of-sale advertisements; but excluding expenditures in connection with outdoor advertising, sampling, specialty item distribution, public entertainment, endorsements, sponsorships, coupons, and retail value added.
Price discounts	Price discounts paid to cigarette retailers or wholesalers in order to reduce the price of cigarettes to consumers, including off-invoice discounts, buy downs, voluntary price reductions, and trade programs; but excluding retail-value-added expenditures for promotions involving free cigarettes and expenditures involving coupons.
Promotional allowances—retail	Promotional allowances paid to cigarette retailers in order to facilitate the sale or placement of any cigarette, including payments for stocking, shelving, displaying and merchandising brands, volume rebates, incentive payments, and the cost of cigarettes given to retailers for free for subsequent sale to consumers; but excluding expenditures in connection with newspapers, magazines, outdoor, audiovisual, transit, direct mail, point of sale, and price discounts.
Promotional allowances—wholesale	Promotional allowances paid to cigarette wholesalers in order to facilitate the sale or placement of any cigarette, including payments for volume rebates, incentive payments, value added services, promotional execution and satisfaction of reporting requirements; but excluding expenditures in connection with newspapers, magazines, outdoor, audiovisual, transit, direct mail, point of sale, price discounts, and retail promotional allowances.
Promotional allowances—other	Promotional allowances paid to any persons other than retailers, wholesalers, and full-time company employees who are involved in the cigarette distribution and sales process in order to facilitate the sale or placement of any cigarette; but excluding expenditures in connection with newspapers, magazines, outdoor, audiovisual, transit, direct mail, point of sale, price discounts, and retail and wholesale promotional allowances.
Sampling	Sampling of cigarettes, including the cost of the cigarettes, all associated excise taxes and increased costs under the Master Settlement Agreement, and the cost of organizing, promoting, and conducting sampling. Sampling includes the distribution of cigarettes for consumer testing or evaluation when consumers are able to smoke the cigarettes outside of a facility operated by the company, but not the cost of actual clinical testing or market research associated with such cigarette distributions. Sampling also includes the distribution of coupons for free cigarettes, when no purchase or payment is required to obtain the coupons or cigarettes.

Table 5.1 Continued

Specialty item distribution—branded	All costs of distributing any item (other than cigarettes, items the sole function of which is to advertise or promote cigarettes, or written or electronic publications), whether distributed by sale, redemption of coupons, or otherwise, that bears the name, logo, or an image of any portion of the package of any brand or variety of cigarettes, including the cost of the items distributed but subtracting any payments received for the item. The costs associated with distributing noncigarette items in connection with sampling or retail-value-added programs are reported in those categories, not as specialty item distribution.
Specialty item distribution—nonbranded	All costs of distributing any item (other than cigarettes, items the sole function of which is to advertise or promote cigarettes, or written or electronic publications), whether distributed by sale, redemption of coupons, or otherwise, that does not bear the name, logo, or an image of any portion of the package of any brand or variety of cigarette, including the cost of the items distributed but subtracting any payments received for the item. The costs associated with distributing noncigarette items in connection with sampling or retail-value-added programs are reported in those categories, not as specialty item distribution.
Direct mail	Direct mail advertising; but excluding expenditures in connection with sampling, specialty item distribution, public entertainment, endorsements, sponsorships, coupons, retail value added, and Internet advertising.
Public entertainment—adult only	Public entertainment events bearing or otherwise displaying the name or logo or an image of any portion of the package of any of a company's cigarettes or otherwise referring or relating to cigarettes, which take place in an adult-only facility, including all expenditures made by the company in promoting and/or sponsoring such events.
Public entertainment—general audience	Public entertainment events bearing or otherwise displaying the name or logo or an image of any portion of the package of any of a company's cigarettes or otherwise referring or relating to cigarettes, which do not take place in an adult-only facility, including all expenditures made by the company in promoting and/or sponsoring such events.
Retail value added—bonus cigarettes	Retail-value-added expenditures for promotions involving free cigarettes (e.g., buy two packs, get one free), whether or not the free cigarettes are physically bundled together with the purchased cigarettes, including all expenditures and costs associated with the value added to the purchase of cigarettes (e.g., excise taxes paid for the free cigarettes and increased costs under the Master Settlement Agreement).
Retail value added—noncigarette bonus	Retail-value-added expenditures for promotions involving free noncigarette items (e.g., buy two packs, get a cigarette lighter), including all expenditures and costs associated with the value added to the purchase of cigarettes.
Coupons	All costs associated with coupons for the reduction of the retail cost of cigarettes, whether redeemed at the point of sale or by mail, including all costs associated with advertising or promotion, design, printing, distribution, and redemption. However, when coupons are distributed for free cigarettes and no purchase or payment is required to obtain the coupons or the cigarettes, these activities are considered to be sampling and not couponing.
Sponsorships	Sponsorships of sports teams or individual athletes, but excluding endorsements.
Endorsements and testimonials	Endorsements, testimonials, and product placement.
Company Web site	All expenditures associated with advertising on any company Internet Web site.
Internet—other	Internet advertising other than on the company's own Internet Web site, including on the World Wide Web, on commercial online services, and through electronic mail messages.

Table 5.1 Continued

Telephone	Telephone advertising, including costs associated with the placement of telemarketing calls or the operation of incoming telephone lines that allow consumers to participate in any promotion or hear prerecorded product messages; but excluding costs associated with having customer service representatives available for responding to consumer complaints or questions.
Other	Advertising and promotional expenditures not covered by another category.

Source: Federal Trade Commission (FTC) 2011a.
Note: Comparable definitions apply to various smokeless tobacco marketing efforts reported on by FTC.

on billboard and transit advertising. Since 1998, marketing expenditures for traditional cigarette advertising have fallen further, accounting for just 1.9% of total spending in 2008, with more than three-fourths of this accounted for by point-of-sale advertising.

In March 2010, the U.S. Food and Drug Administration (FDA) reissued the "1996 rule," which further restricts marketing activities that are likely to appeal to youth. Restrictions include, for example, a ban on the distribution of non-tobacco items with brand names, logos, or selling messages; a broad ban on brand name sponsorship of athletic, musical, artistic, or other social or cultural events; and teams or entries in these events (*Federal Register* 2010).

Although traditional cigarette advertising was becoming a less important component of the cigarette companies' marketing strategies, other activities were increasing. Companies began spending more on sponsorships and other public entertainment activities, but these efforts never accounted for more than 4% of overall expenditures. Spending on specialty item distribution and noncigarette retail-value-added promotions became more important in the 1980s through the mid-1990s, with programs such as "Marlboro Miles" and "Camel Cash," as well as other promotional giveaways. The Master Settlement Agreement's ban on the distribution of branded merchandise, however, put an end to many of these activities, with spending on merchandise-related promotions accounting for less than 2% of the total in recent years (Table 5.4; FTC 2011a). Expenditures on product placement at the point of sale (promotional allowances, such as those paid for through programs like Philip Morris' Retail Leaders and Wholesale Leaders trade programs) grew throughout much of the 1990s, peaking at about one-seventh of total spending (14.3%) in 2002. This spending fell to a low of about 6.5% of total spending in 2005 but has climbed steadily since, reaching 9.4% in 2008 (Table 5.4; FTC 2011a).

The largest shift, however, has taken place in marketing efforts that lower the price of cigarettes: coupons, cigarette giveaways (sampling and retail-value-added promotions), and reductions from payments to retailers and wholesalers that are passed on to smokers. Price discounts are estimated to have accounted for about one-fifth of overall marketing expenditures by cigarette companies in the late 1970s; by 1988, they were estimated to account for just over one-half of overall expenditures (Table 5.4). Since the Master Settlement Agreement, however, spending on price discounts that reduce the price of cigarettes more than doubled, from $3.5 billion in 1997 to $8.3 billion in 2008 (Table 5.5), accounting for 84% of total expenditures in that year.

Smokeless Tobacco Products

Companies that sell smokeless tobacco engage in many of the same marketing practices used by cigarette companies. In 2008, total marketing expenditures for smokeless tobacco products were $547 million (Table 5.6; FTC 2011b), just under 14% of total revenues from the sale of smokeless tobacco products. Traditional advertising is relatively more important for smokeless tobacco products than for cigarettes, accounting for between 10.6% and 21% of total marketing expenditures in recent years, with print and point-of-sale advertising accounting for nearly all of this (Tables 5.6 and 5.7). As with cigarettes, spending on price discounts accounts for the single largest share of marketing expenditures, at 59.3% in 2008 (Table 5.6; FTC 2011b). When other price-reducing marketing expenditures are added (including coupons, sampling distribution, and retail-value-added bonus products), a little less than $3.00 of every $4.00 (72.1%) currently spent on the marketing of smokeless tobacco products goes to reducing their price to consumers (Tables 5.8 and 5.9).

In addition, the traditional division of products, brand identities, and marketing between cigarette and smokeless tobacco companies has all but become nonexistent in recent years as major U.S. cigarette companies, including RJR and Altria, have acquired smokeless tobacco

Table 5.2 Detailed expenditures for cigarette marketing, in thousands of dollars, 2002–2008

	2002		2003		2004		2005	
	Expenditures ($)	As % of total	Expenditures ($)	As % of total	Expenditures ($)	As % of total	Expenditures ($)	As % of total
Newspapers	25,538	0.2	8,251	0.1	4,913	0.0	1,589	0.0
Magazines	106,852	0.9	156,394	1.0	95,700	0.7	44,777	0.3
Outdoor	24,192	0.2	32,599	0.2	17,135	0.1	9,821	0.1
Transit	0	0.0	0	0.0	0	0.0	0	0.0
Point of sale	260,902	2.1	165,573	1.1	163,621	1.2	182,193	1.4
Price discounts	7,873,835	63.2	10,808,239	71.4	10,932,199	77.3	9,776,069	74.6
Promotional allowances—retail	1,333,097	10.7	1,229,327	8.1	542,213	3.8	435,830	3.3
Promotional allowances—wholesale	446,327	3.6	683,067	4.5	387,758	2.7	410,363	3.1
Promotional allowances—other	2,767	0.0	2,786	0.0	1,323	0.0	1,493	0.0
Sampling	28,777	0.2	17,853	0.1	11,649	0.1	17,211	0.1
Specialty item distribution—branded	49,423	0.4	9,195	0.1	8,011	0.1	5,255	0.0
Specialty item distribution—nonbranded	174,201	1.4	254,956	1.7	216,577	1.5	225,279	1.7
Public entertainment—adult only	219,016	1.8	150,889	1.0	140,137	1.0	214,075	1.6
Public entertainment—general audience	34,089	0.3	32,849	0.2	115	0.0	152	0.0
Sponsorship	54,247	0.4	31,371	0.2	28,231	0.2	30,575	0.2
Direct mail	111,319	0.9	92,978	0.6	93,836	0.7	51,844	0.4
Coupons	522,246	4.2	650,653	4.3	751,761	5.3	870,137	6.6
Retail value added—bonus cigarettes	1,060,304	8.5	677,308	4.5	636,221	4.5	725,010	5.5

Table 5.2 Continued

	2002		2003		2004		2005	
	Expenditures ($)	As % of total	Expenditures ($)	As % of total	Expenditures ($)	As % of total	Expenditures ($)	As % of total
Retail value added—noncigarette bonus	24,727	0.2	20,535	0.1	14,343	0.1	7,526	0.1
Company Web site	940	0.0	2,851	0.0	1,401	0.0	2,675	0.0
Telephone	679	0.0	760	0.0	346	0.0	59	0.0
All other	112,879	0.9	117,563	0.8	102,369	0.7	99,025	0.8
FTC total	12,466,358		15,145,998		14,149,859		13,110,958	

	2006		2007		2008	
	Expenditures ($)	As % of total	Expenditures ($)	As % of total	Expenditures ($)	As % of total
Newspapers	NA	—	NA	—	169	0.0
Magazines	50,293	0.4	47,203	0.4	25,478	0.3
Outdoor	935	0.0	3,041	0.0	2,045	0.0
Transit	0	0.0	0	0.0	0	0.0
Point of sale	242,625	1.9	198,861	1.8	163,709	1.0
Price discounts	9,205,106	73.7	7,699,362	70.9	7,171,092	72.1
Promotional allowances—retail	434,239	3.5	454,139	4.2	481,500	4.8
Promotional allowances—wholesale	471,204	3.8	479,032	4.4	448,461	4.2
Promotional allowances—other	—	—	NA	—	1,245	0.0
Sampling	29,431	0.2	48,719	0.4	54,261	0.5
Specialty item distribution—branded	5,546	0.0	8,070	0.0	7,188	0.1
Specialty item distribution—nonbranded	163,761	1.3	160,047	1.5	93,798	0.9

Table 5.2 Continued

	2006		2007		2008	
	Expenditures ($)	**As % of total**	**Expenditures ($)**	**As % of total**	**Expenditures ($)**	**As % of total**
Public entertainment—adult only	168,098	1.3	160,104	1.5	154,749	1.5
Public entertainment—general audience	NA	NA	NA	—	NA	—
Sponsorship	NA	NA	NA	—	NA	—
Direct mail	102,353	0.8	81,929	0.8	89,920	0.9
Coupons	625,777	5.0	366,779	3.4	359,793	3.6
Retail value added—bonus cigarettes	817,792	6.5	981,566	9.0	721,818	7.3
Retail value added—noncigarette bonus	14,642	0.1	17,720	0.1	10,983	0.1
Company Web site	6,497	0.1	2,351	0.0	13,172	0.1
Telephone	—	—	NA	—	NA	—
All other	151,392	1.2	155,843	1.4	143,688	1.4
FTC total	12,489,692		10,864,767		9,943,068	

Source: Federal Trade Commission (FTC) 2011a.
Note: FTC reported zero expenditures in all years in three categories, which were omitted from this table: transit, endorsements and testimonials, and Internet—other. Because of rounding, in any year the sum of the individual expenditures may not equal total expenditures and the sum of percentages may not equal 100. The "all other" category includes expenditures on audiovisual to avoid disclosure of individual company data. Expenditures denoted as "NA" are included in the "all other" category to avoid disclosure of individual company data. "—" = not available.

Table 5.3 Cigarette company marketing expenditures, by major category, in millions of dollars, 1963–2008

Year	Advertising ($)	Promotion and other ($)	Total ($)	Per pack ($)	Advertising as % of total	Total, 8/11 ($)	Per pack, 8/11 ($)
1963	228.9	20.6	249.5	0.01	91.7	1,847.2	0.07
1964	240.9	20.4	261.3	0.01	92.2	1,909.6	0.08
1965	242.3	20.7	263.0	0.01	92.1	1,891.5	0.07
1966	272.7	24.8	297.5	0.01	91.7	2,080.2	0.08
1967	285.6	26.3	311.9	0.01	91.6	2,115.6	0.08
1968	283.1	27.6	310.7	0.01	91.1	2,022.6	0.07
1969	283.6	22.3	305.9	0.01	92.7	1,888.3	0.07
1970	293.3	21.4	314.7	0.01	93.2	1,837.5	0.07
1971	220.4	31.2	251.6	0.01	87.6	1,407.4	0.05
1972	226.7	30.9	257.6	0.01	88.0	1,396.1	0.05
1973	220.9	26.6	247.5	0.01	89.3	1,262.8	0.04
1974	266.5	40.3	306.8	0.01	86.9	1,409.8	0.05
1975	366.2	*125.1*	491.3	0.02	74.5	2,068.6	0.07
1976	470.0	*169.1*	639.1	0.02	73.5	2,544.6	0.08
1977	552.1	*227.4*	779.5	0.03	70.8	2,913.9	0.10
1978	600.5	*274.5*	875.0	0.03	68.6	3,040.2	0.10
1979	748.9	*334.5*	1,083.4	0.03	69.1	3,380.8	0.11
1980	869.9	*372.4*	1,242.3	0.04	70.0	3,415.5	0.11
1981	998.3	*549.4*	1,547.7	0.05	64.5	3,857.1	0.12
1982	1,040.1	*753.7*	1,793.8	0.06	58.0	4,211.2	0.13
1983	1,080.9	*819.9*	1,900.8	0.06	56.9	4,323.4	0.14
1984	1,097.5	*997.7*	2,095.2	0.07	52.4	4,568.4	0.15
1985	1,074.9	*1,401.5*	2,476.4	0.08	43.4	5,214.0	0.17
1986	931.9	*1,450.5*	2,382.4	0.08	39.1	4,924.4	0.17
1987	872.7	*1,707.9*	2,580.5	0.09	33.8	5,146.1	0.18
1988	1,046.8	*2,228.1*	3,274.9	0.12	32.0	6,271.5	0.22
1989	1,110.1	*2,506.9*	3,617.0	0.14	30.7	6,608.2	0.25
1990	1,139.0	*2,853.0*	3,992.1	0.15	28.5	6,919.6	0.26
1991	1,117.2	*3,532.9*	4,650.1	0.18	24.0	7,734.7	0.30
1992	987.5	*4,244.4*	5,231.9	0.21	18.9	8,448.1	0.33

Table 5.3 Continued

Year	Advertising ($)	Promotion and other ($)	Total ($)	Per pack ($)	Advertising as % of total	Total, 8/11 ($)	Per pack, 8/11 ($)
1993	943.0	*5,092.4*	6,035.4	0.26	15.6	9,462.3	0.41
1994	887.8	*3,945.7*	4,833.5	0.20	18.4	7,388.7	0.30
1995	823.2	*4,072.0*	4,895.2	0.20	16.8	7,276.8	0.30
1996	830.9	*4,276.8*	5,107.7	0.21	16.3	7,374.9	0.30
1997	881.0	*4,779.0*	5,660.0	0.24	15.6	7,989.1	0.33
1998	936.4	*5,796.8*	6,733.2	0.29	13.9	9,358.1	0.41
1999	817.1	*7,420.5*	8,237.6	0.40	9.9	11,201.6	0.54
2000	702.9	*8,889.8*	9,592.6	0.46	7.3	12,620.0	0.61
2001	497.1	*10,719.1*	11,216.2	0.56	4.4	14,347.7	0.72
2002	417.5	*12,048.9*	12,466.4	0.66	3.3	15,698.7	0.83
2003	362.8	*14,783.2*	15,146.0	0.84	2.4	18,648.1	1.03
2004	281.4	*13,868.5*	14,149.9	0.78	2.0	16,969.7	0.94
2005	238.4	*12,872.6*	13,111.0	0.75	1.8	15,208.5	0.87
2006	293.9	12,195.8	12,489.7	0.73	2.4	14,035.1	0.82
2007	249.1	10,615.7	10,864.8	0.64	2.3	11,871.0	0.70
2008	191.4	9,751.7	9,943.1	0.62	1.9	10,462.2	0.65

Source: Federal Trade Commission (FTC) 2011a. Adjusted to 2011 dollars using the Consumer Price Index (Bureau of Labor Statistics 2011).
Note: Italicized figures represent estimated expenditures in these categories/years. "Advertising" includes expenditures on TV and radio (banned beginning January 1971), newspapers and magazines, outdoor and transit (reported separately beginning in 1970), and point of sale (reported separately beginning in 1975). "Promotion and other" includes expenditures on all other categories reported by FTC, including promotional allowances, retail value added, price discounts, specialty item distribution, sampling distribution, public entertainment, direct mail, endorsements and testimonials, Internet, and other; new categories have been added and others disaggregated over time. "Per pack" expenditures are based on cigarette sales reported by manufacturers to FTC (number of individual cigarettes divided by 20).

Table 5.4 Cigarette company marketing expenditures, percentage of total by major category, in millions of dollars, 1975–2008

Year	Advertising (%)	Public entertainment (%)	Placement (%)	Price discounts (%)	Merchandise (%)	Other (%)	Total, 8/11 ($)	Total per pack ($)
1975	74.5	1.7	*2.7*	*18.7*	*2.1*	*0.3*	491.3	0.02
1976	73.5	1.2	*2.4*	*19.3*	*3.2*	*0.3*	639.1	0.02
1977	70.8	1.2	*2.6*	*20.3*	*4.6*	*0.4*	779.5	0.03
1978	68.6	1.3	*2.6*	*21.2*	*5.6*	*0.6*	875.0	0.03
1979	69.1	1.0	*2.3*	*21.1*	*5.8*	*0.7*	1,083.4	0.03
1980	70.0	1.4	*2.7*	*19.8*	*5.6*	*0.6*	1,242.3	0.04
1981	64.5	2.4	*2.7*	*22.2*	*7.5*	*0.7*	1,547.7	0.05
1982	58.0	3.5	*2.8*	*29.0*	*5.4*	*1.2*	1,793.8	0.06
1983	56.9	4.0	*3.6*	*28.0*	*6.8*	*0.8*	1,900.8	0.06
1984	52.4	2.9	*3.2*	*33.0*	*6.9*	*1.7*	2,095.2	0.07
1985	43.4	2.3	*4.1*	*39.2*	*8.8*	*2.2*	2,476.4	0.08
1986	39.1	3.0	*4.9*	*41.7*	*9.1*	*2.2*	2,382.4	0.08
1987	33.8	2.8	*5.0*	*40.7*	*15.4*	*2.3*	2,580.5	0.09
1988	32.0	2.7	*5.0*	*50.5*	*6.2*	*3.7*	3,274.9	0.12
1989	30.7	2.5	*5.1*	*50.3*	*7.6*	*3.7*	3,617.0	0.14
1990	28.5	3.1	*4.7*	*52.6*	*8.1*	*2.9*	3,992.1	0.15
1991	24.0	2.6	*4.6*	*61.4*	*4.6*	*2.9*	4,650.1	0.18
1992	18.9	1.7	*5.3*	*65.5*	*7.1*	*1.5*	5,231.9	0.21
1993	15.6	1.4	*4.8*	*63.5*	*13.1*	*1.6*	6,035.4	0.26
1994	18.4	1.7	*6.4*	*53.9*	*18.0*	*1.6*	4,833.5	0.20
1995	16.8	2.3	*7.0*	*58.5*	*14.0*	*1.4*	4,895.2	0.20
1996	16.3	3.4	*7.8*	*59.9*	*11.0*	*1.7*	5,107.7	0.21
1997	15.6	3.4	*8.0*	*62.0*	*9.4*	*1.6*	5,660.0	0.24
1998	13.9	3.7	*7.9*	*66.9*	*5.8*	*1.8*	6,733.2	0.29
1999	9.9	3.2	*7.9*	*72.3*	*4.8*	*1.8*	8,237.6	0.40
2000	7.3	3.2	*7.5*	*76.0*	*4.2*	*1.6*	9,592.6	0.46
2001	4.4	2.8	*7.3*	*79.4*	*3.9*	*2.1*	11,216.2	0.56
2002	3.3	2.5	14.3	76.1	2.0	1.8	12,466.4	0.66
2003	2.4	1.4	12.6	80.2	1.9	1.4	15,146.0	0.84
2004	2.0	1.2	6.6	87.2	1.7	1.4	14,149.9	0.78

Table 5.4 Continued

Year	Advertising (%)	Public entertainment (%)	Placement (%)	Price discounts (%)	Merchandise (%)	Other (%)	Total, 8/11 ($)	Total per pack ($)
2005	1.8	1.9	6.5	86.9	1.8	1.2	13,111.0	0.75
2006	2.4	1.3	7.2	85.5	1.5	2.1	12,489.7	0.73
2007	2.3	1.5	8.6	83.7	1.7	2.2	10,864.8	0.64
2008	1.9	1.6	9.4	83.5	1.1	2.5	9,943.1	0.62

Source: Federal Trade Commission (FTC) 2011a; author's calculations.
Note: Percentages are based on the actual and estimated expenditures reported in Table 5.3. Italicized figures represent estimated percentages in these categories/years. Expenditure categories are as defined in the note to Table 5.3. Per pack expenditures are based on cigarette sales reported by manufacturers to FTC (number of individual cigarettes divided by 20).

Table 5.5 Cigarette company marketing expenditures, by major category, in millions of dollars, 1975–2008

Year	Advertising ($)	Public entertainment ($)	Placement ($)	Price discounts ($)	Merchandise ($)	Other ($)	Total ($)	Total per pack ($)	Price per pack ($)	FTC sales ($)
1975	366.2	8.5	*13.3*	*91.8*	*10.2*	*1.3*	491.3	0.02	0.00	603.2
1976	470.0	7.9	*15.2*	*123.4*	*20.3*	*2.2*	639.1	0.02	0.00	609.9
1977	552.1	9.5	*20.0*	*158.6*	*36.1*	*3.2*	779.5	0.03	0.01	612.6
1978	600.5	11.6	*23.1*	*185.9*	*48.8*	*5.1*	875.0	0.03	0.01	615.3
1979	748.9	10.8	*25.3*	*228.3*	*62.8*	*7.3*	1,083.4	0.03	0.01	621.8
1980	869.9	16.9	*33.1*	*245.6*	*70.0*	*6.9*	1,242.3	0.04	0.01	628.2
1981	998.3	37.4	*42.3*	*343.0*	*116.2*	*10.5*	1,547.7	0.05	0.01	636.5
1982	1,040.1	63.2	*50.3*	*520.6*	*97.6*	*22.1*	1,793.8	0.06	0.02	632.5
1983	1,080.9	76.6	*67.6*	*531.8*	*128.8*	*15.1*	1,900.8	0.06	0.02	603.6
1984	1,097.5	60.0	*67.0*	*691.8*	*144.1*	*34.8*	2,095.2	0.07	0.02	608.4
1985	1,074.9	57.6	*101.3*	*971.6*	*217.1*	*53.9*	2,476.4	0.08	0.03	599.3
1986	931.9	71.4	*116.3*	*993.5*	*215.7*	*53.6*	2,382.4	0.08	0.03	586.4
1987	872.7	71.4	*129.6*	*1,049.9*	*397.6*	*59.4*	2,580.5	0.09	0.04	575.4
1988	1,046.8	88.1	*162.4*	*1,653.3*	*202.7*	*121.7*	3,274.9	0.12	0.06	560.7
1989	1,110.1	92.1	*184.5*	*1,819.1*	*276.4*	*134.8*	3,617.0	0.14	0.07	525.6
1990	1,139.0	125.1	*188.5*	*2,100.4*	*324.2*	*114.8*	3,992.1	0.15	0.08	523.7
1991	1,117.2	118.6	*213.4*	*2,855.4*	*211.7*	*133.8*	4,650.1	0.18	0.11	510.9
1992	987.5	89.7	*279.4*	*3,427.7*	*371.6*	*76.0*	5,231.9	0.21	0.14	506.4
1993	943.0	84.3	*287.5*	*3,832.6*	*792.9*	*95.1*	6,035.4	0.26	0.17	461.4
1994	887.8	81.3	*309.9*	*2,606.8*	*868.9*	*78.9*	4,833.5	0.20	0.11	490.2
1995	823.2	110.7	*344.3*	*2,864.0*	*684.8*	*68.3*	4,895.2	0.20	0.12	482.3
1996	830.9	171.2	*397.0*	*3,059.5*	*563.3*	*85.8*	5,107.7	0.21	0.13	484.1
1997	881.0	195.2	*450.1*	*3,511.3*	*534.7*	*87.7*	5,660.0	0.24	0.15	478.6
1998	936.4	248.5	*531.4*	*4,506.1*	*391.3*	*119.5*	6,733.2	0.29	0.20	458.6
1999	817.1	267.4	*653.9*	*5,955.3*	*394.0*	*149.9*	8,237.6	0.40	0.29	411.3
2000	702.9	309.6	*722.4*	*7,294.0*	*406.5*	*157.2*	9,592.6	0.46	0.35	413.9
2001	497.1	312.4	*821.8*	*8,903.4*	*441.9*	*239.6*	11,216.2	0.56	0.45	398.3
2002	417.5	307.4	1,782.2	9,485.2	248.4	225.8	12,466.4	0.66	0.50	376.4
2003	362.8	215.1	1,915.2	12,154.1	284.7	214.2	15,146.0	0.84	0.67	360.5
2004	281.4	168.5	931.3	12,331.8	238.9	198.0	14,149.9	0.78	0.68	361.3

Table 5.5 Continued

Year	Advertising ($)	Public entertainment ($)	Placement ($)	Price discounts ($)	Merchandise ($)	Other ($)	Total ($)	Total per pack ($)	Price per pack ($)	FTC sales ($)
2005	238.4	244.8	847.7	11,388.4	238.1	153.6	13,111.0	0.75	0.65	351.6
2006	293.9	168.1	905.4	10,678.1	183.9	260.2	12,489.7	0.73	0.62	343.3
2007	249.1	160.1	933.2	9,096.4	185.8	240.1	10,864.8	0.64	0.54	337.7
2008	191.4	154.7	931.2	8,307.0	112.0	246.8	9,943.1	0.62	0.52	320

Source: Federal Trade Commission (FTC) 2011a; author's calculations.
Note: Italicized figures represent estimated expenditures in these categories/years. "Advertising" includes newspapers and magazines, outdoor and transit, and point of sale (reported separately beginning in 1975). "Public entertainment" includes general audience and adult-only public entertainment, reported in a single category in earlier years and reported separately beginning in 2002. "Placement" includes promotional allowances paid to retailers, wholesalers, and others, reported separately beginning in 2002 and estimated for earlier years from the percentage of the combined promotional allowances category accounted for by these categories in 2002. "Price discounts" include price discounts and retail-value-added bonus cigarettes (reported separately beginning in 2002), coupons (reported separately beginning in 1997), and sampling distribution. Estimates for earlier years are based on shares in the previously aggregated categories that included those in the first year's data and are reported for disaggregated categories. "Merchandise" includes branded and nonbranded specialty item distribution (reported as a single category before 2002 and separately beginning in 2002) and retail-value-added noncigarette bonus (reported separately in 2002 and estimated for earlier years from the share of combined retail value added as reported in 2002). "Other" includes all other categories reported by FTC, including direct mail, telephone, Internet (company Web sites and other), and other; in earlier years, a portion of the FTC-reported other and direct mail expenditures is allocated to other categories (e.g., coupons and retail value added) on the basis of shares of expenditures in the first year that expenditures in more disaggregated categories are reported. Per pack expenditures are based on cigarette sales reported by manufacturers to FTC (number of individual cigarettes divided by 20).

Table 5.6 Detailed expenditures for smokeless tobacco marketing, in thousands of dollars, 2002–2008

	2002		2003		2004		2005	
	Expenditures ($)	As % of total	Expenditures ($)	As % of total	Expenditures ($)	As % of total	Expenditures ($)	As % of total
Newspapers	722	0.3	262	0.1	285	0.1	453	0.2
Magazines	23,142	9.9	22,838	9.4	25,002	10.8	20,996	8.4
Outdoor	117	0.0	101	0.0	184	0.1	207	0.1
Audiovisual	7	0.0	139	0.1	7	0.0	119	0.0
Direct mail	7,073	3.0	5,982	2.5	5,670	2.5	8,237	3.3
Point of sale	16,894	7.2	20,874	8.6	23,120	10.0	20,748	8.3
Price discounts	99,000	42.2	106,531	43.9	86,977	37.6	99,699	39.8
Promotional allowances—retail	3,245	1.4	5,103	2.1	4,285	1.9	3,406	1.4
Promotional allowances—wholesale	16,755	7.1	12,632	5.2	11,222	4.9	12,550	5.0
Promotional allowances—other	41	0.0	29	0.0	9	0.0	29	0.0
Sampling	25,754	11.0	22,483	9.3	25,156	10.9	28,180	11.2
Specialty item distribution—branded	419	0.2	45	0.0	22	0.0	119	0.0
Specialty item distribution—nonbranded	0	0.0	0	0.0	0	0.0	36	0.0
Public entertainment—adult only	0	0.0	0	0.0	7	0.0	73	0.0
Public entertainment—general audience	1,453	0.6	1,640	0.7	1,349	0.6	215	0.1
Endorsements and testimonials	130	0.1	355	0.1	355	0.2	355	0.1
Sponsorship	8,864	3.8	8,170	3.4	9,018	3.9	4,192	1.7
Coupons	12,156	5.2	11,524	4.8	10,686	4.6	28,622	11.4

Table 5.6 Continued

	2002		2003		2004		2005	
	Expenditures ($)	**As % of total**	**Expenditures ($)**	**As % of total**	**Expenditures ($)**	**As % of total**	**Expenditures ($)**	**As % of total**
Retail value added—bonus smokeless tobacco	13,686	5.8	16,004	6.6	14,950	6.5	9,310	3.7
Retail value added—nonsmokeless tobacco bonus	466	0.2	556	0.2	2,650	1.1	4,430	1.8
Company Web site	18	0.0	15	0.0	877	0.4	272	0.1
Internet—other	54	0.0	25	0.0	16	0.0	413	0.2
Telephone	169	0.1	374	0.2	231	0.1	120	0.0
Other	4,480	1.9	6,832	2.8	9,006	3.9	8,011	3.2
FTC total	234,645		242,514		231,084		250,792	

	2006		2007		2008	
	Expenditures ($)	**As % of total**	**Expenditures ($)**	**As % of total**	**Expenditures ($)**	**As % of total**
Newspapers	NA	—	NA	—	NA	—
Magazines	16,591	4.7	13,913	3.4	17,122	3.1
Outdoor	166	0.0	334	0.1	219	0.0
Audiovisual	NA	—	NA	—	NA	—
Direct mail	9,575	2.7	12,205	3.0	7,579	1.4
Point of sale	20,824	5.9	29,318	7.1	55,295	10.1
Price discounts	203,692	57.5	249,510	60.7	324,647	59.3
Promotional allowances—retail	3,731	1.1	5,349	1.3	6,416	1.2
Promotional allowances—wholesale	9,047	2.6	12,383	3.0	18,578	3.4
Promotional allowances—other	NA	—	NA	—	NA	—
Sampling	41,979	11.9	35,113	8.5	29,936	5.5

Table 5.6 Continued

	2006		2007		2008	
	Expenditures ($)	**As % of total**	**Expenditures ($)**	**As % of total**	**Expenditures ($)**	**As % of total**
Specialty item distribution—branded	NA	—	NA	—	509	0.1
Specialty item distribution—nonbranded	34	0.0	NA	—	3,079	0.6
Public entertainment—adult only	0	0.0	NA	—	14,300	2.6
Public entertainment—general audience	144	0.0	NA	—	NA	—
Endorsements and testimonials	NA	—	NA	—	NA	—
Sponsorship	NA	—	10,462	2.5	9,319	1.7
Coupons	16,133	4.6	15,452	3.8	29,474	5.4
Retail value added—bonus smokeless tobacco	12,047	3.4	8,497	2.1	10,464	1.9
Retail value added—nonsmokeless tobacco bonus	1,406	0.4	626	0.2	4,514	0.8
Company Web site	891	0.3	3,110	0.8	2,085	0.4
Internet—other	944	0.3	2,050	0.5	2,538	0.5
Telephone	NA	—	NA	—	NA	—
Other	16,920	4.8	12,917	3.1	11,802	2.2
FTC total	354,123		411,239		547,873	

Source: Federal Trade Commission (FTC) 2011b.

Note: Because FTC reported zero expenditures in all years in the transit category, it was omitted from this table. Because of rounding, in any year the sum of the individual expenditures may not equal total expenditures and the sum of percentages may not equal 100. Expenditures denoted "NA" are included in the "other" category to avoid potential disclosure of individual company data. "—" = not available.

Table 5.7 Smokeless tobacco company marketing expenditures, by major category, in millions of dollars, 1988–2008

Year	Advertising ($)	Promotion and other ($)	Total ($)	Per unit ($)	Advertising as % of total	Total, 8/11 ($)	Per unit, 8/11 ($)
1988	19.0	49.3	68.2	0.07	27.8	130.6	0.13
1989	19.5	*61.7*	81.2	0.08	24.0	148.4	0.14
1990	24.1	*66.0*	90.1	0.09	26.7	156.2	0.15
1991	23.2	*80.8*	104.0	0.10	22.3	173.0	0.16
1992	22.4	*93.0*	115.3	0.11	19.4	186.3	0.17
1993	22.6	*96.6*	119.2	0.11	19.0	186.9	0.17
1994	25.1	*100.9*	126.0	0.12	19.9	192.6	0.18
1995	28.3	*99.0*	127.3	0.12	22.2	189.3	0.17
1996	30.7	*93.2*	123.9	0.11	24.8	178.9	0.16
1997	33.2	*117.2*	150.4	0.14	22.1	212.3	0.19
1998	48.6	*96.9*	145.5	0.14	33.4	202.2	0.19
1999	47.8	*122.4*	170.2	0.16	28.1	231.5	0.22
2000	31.5	*193.1*	224.6	0.20	14.0	295.5	0.27
2001	41.2	*195.5*	236.7	0.21	17.4	302.8	0.27
2002	40.9	193.8	234.6	0.21	17.4	295.5	0.26
2003	44.1	198.4	242.5	0.21	18.2	298.6	0.26
2004	48.6	182.5	231.1	0.20	21.0	277.1	0.24
2005	42.4	208.4	250.8	0.21	16.9	290.9	0.24
2006	37.6	316.5	354.1	0.29	10.6	397.9	0.33
2007	43.6	367.7	411.2	0.34	10.6	449.3	0.37
2008	72.6	475.2	547.9	0.43	13.3	576.5	0.45

Source: Federal Trade Commission (FTC) 2011b. Adjusted to 2011 dollars using the Consumer Price Index (U.S. Bureau of Labor Statistics 2011).
Note: Italicized figures represent estimated expenditures in these categories/years. "Advertising" includes expenditures on newspapers, magazines, outdoor, transit, and point of sale. "Promotion and other" includes expenditures on all other categories reported by FTC, including promotional allowances, retail value added, price discounts, specialty item distribution, sampling, public entertainment, direct mail, endorsements and testimonials, Internet, and other; new categories have been added and others disaggregated over time. Expenditures per unit are obtained using annual data on units sold for 2002 through 2008, with unit data for earlier years estimated from pounds sold and the trend in the weight of the average unit for 2002–2008.

Table 5.8 Smokeless tobacco company marketing expenditures, by major category, in millions of dollars, 1988–2008

Year	Advertising ($)	Public entertainment ($)	Placement ($)	Price discounts ($)	Merchandise ($)	Other ($)	Total ($)
1988	19.0	*17.5*	*1.1*	*20.8*	*4.2*	5.7	68.2
1989	19.5	*19.6*	*1.4*	*26.9*	*4.8*	9.0	81.2
1990	24.1	*20.3*	*1.7*	*29.1*	*3.1*	11.9	90.1
1991	23.2	*21.1*	*2.5*	*36.2*	*4.2*	16.9	104.0
1992	22.4	*21.5*	*1.9*	*40.7*	*3.1*	25.8	115.3
1993	22.6	*22.9*	*2.2*	*41.6*	*4.7*	25.2	119.2
1994	25.1	*25.4*	*1.7*	*38.2*	*10.8*	24.8	126.0
1995	28.3	*26.7*	*1.4*	*37.1*	*10.3*	23.4	127.3
1996	30.7	*22.7*	*2.1*	*48.3*	*12.5*	4.9	123.9
1997	33.2	*28.9*	*2.5*	*60.6*	*19.2*	6.0	150.4
1998	48.6	*25.4*	*2.5*	*51.7*	*4.1*	13.1	145.5
1999	47.8	*22.1*	*5.2*	*78.5*	*3.5*	13.1	170.2
2000	31.5	*11.2*	*7.6*	*149.0*	*2.5*	22.7	224.6
2001	41.2	*18.1*	*10.2*	*141.8*	*1.7*	23.6	236.7
2002	40.9	*10.3*	*20.0*	*150.6*	*0.9*	11.9	234.6
2003	44.1	*9.8*	*17.8*	*156.5*	*0.6*	13.7	242.5
2004	48.6	*10.4*	*15.5*	*137.8*	*2.7*	16.2	231.1
2005	42.4	*4.5*	*16.0*	*165.8*	*4.6*	17.5	250.8
2006	37.6	0.1	12.8	273.9	1.4	28.3	354.1
2007	43.6	10.5	17.7	308.6	0.6	30.3	411.2
2008	72.6	23.6	25.0	394.5	8.1	24.0	547.9

Source: Federal Trade Commission (FTC) 2011b; author's calculations.
Note: Italicized figures represent estimated expenditures in these categories/years. "Advertising" includes newspapers, magazines, outdoor, transit, and point of sale. "Public entertainment" includes general audience and adult-only public entertainment and sponsorships reported in a single category in earlier years and reported separately beginning in 2002. "Placement" includes promotional allowances paid to retailers, wholesalers, and others, reported separately beginning in 2002 and estimated for earlier years from the percentage of the combined promotional allowances category accounted for by these categories in 2002. "Price discounts" include price discounts and retail-value-added bonus smokeless tobacco products (reported separately beginning in 2002), coupons (reported separately beginning in 1996), and sampling. Estimates for earlier years are based on shares in the previously aggregated categories that included those in the first year's data that are reported for disaggregated categories. "Merchandise" includes branded and nonbranded specialty item distribution (reported as a single category before 2002 and separately beginning in 2002), and nonsmokeless tobacco bonus (reported separately in 2002 and estimated for earlier years from the share of combined retail value added as reported in 2002). "Other" includes all other categories reported by FTC, including direct mail, telephone, Internet (company Web sites and other), and other.

Table 5.9 Smokeless tobacco company marketing expenditures, percentage of total by major category, in millions of dollars, 1988–2008

Year	Advertising (%)	Public entertainment (%)	Placement (%)	Price discounts (%)	Merchandise (%)	Other (%)	Total ($)
1988	27.8	*25.7*	*1.6*	*30.5*	*6.1*	8.4	68.2
1989	24.0	*24.2*	*1.7*	*33.2*	*5.9*	11.1	81.2
1990	26.7	*22.5*	*1.9*	*32.3*	*3.4*	13.2	90.1
1991	22.3	*20.3*	*2.4*	*34.8*	*4.0*	16.2	104.0
1992	19.4	*18.6*	*1.7*	*35.3*	*2.7*	22.4	115.3
1993	19.0	*19.2*	*1.8*	*34.9*	*3.9*	21.1	119.2
1994	19.9	*20.2*	*1.4*	*30.3*	*8.6*	19.7	126.0
1995	22.2	*21.0*	*1.1*	*29.1*	*8.1*	18.4	127.3
1996	25.3	*18.8*	*1.8*	*39.9*	*10.3*	4.0	123.9
1997	22.1	*19.2*	*1.6*	*40.3*	*12.7*	4.0	150.4
1998	33.4	*17.5*	*1.7*	*35.5*	*2.8*	9.0	145.5
1999	28.1	*13.0*	*3.0*	*46.1*	*2.1*	7.7	170.2
2000	14.0	*5.0*	*3.4*	*66.3*	*1.1*	10.1	224.6
2001	17.4	*7.6*	*4.3*	*59.9*	*0.7*	10.0	236.7
2002	17.4	*4.4*	*8.5*	*64.2*	*0.4*	5.1	234.6
2003	18.2	*4.0*	*7.3*	*64.5*	*0.2*	5.7	242.5
2004	21.0	*4.5*	*6.7*	*59.6*	*1.2*	7.0	231.1
2005	16.9	*1.8*	*6.4*	*66.1*	*1.8*	7.0	250.8
2006	10.6	0.0	3.6	77.3	0.4	8.0	354.1
2007	10.6	2.5	4.3	75.0	0.2	7.4	411.2
2008	13.3	4.3	4.6	72.0	1.5	4.4	547.9

Source: Federal Trade Commission 2011b; author's calculations.
Note: Italicized figures represent estimated expenditures in these categories/years. Percentages are based on the actual and estimated expenditures reported in Table 5.8. Italicized figures represent estimated percentages in these categories/years. Expenditure categories are as defined in the notes to Table 5.8.

companies and have developed new smokeless tobacco products. These include snus, a dry, spitless snuff product in a sachet, and dissolvable products containing nicotine, such as sticks, strips, and orbs. Between 2006 and 2007, the major U.S. cigarette companies began marketing new smokeless tobacco products with popular cigarette brand names, such as Camel Snus and Marlboro Snus, in nationwide test markets. These products have been promoted as a temporary way to deal with smoke-free policies in public places (Carpenter et al. 2009; Mejia and Ling 2010; Mejia et al. 2010). In 2009, RJR introduced dissolvables with the Camel cigarette brand name. In 2011, Altria introduced Marlboro and Skoal sticks.

For many years, public entertainment (e.g., sponsorships) was a key technique for marketing smokeless tobacco products, accounting for about one-fifth of overall spending in the 1990s. In recent years, however, this percentage has fallen sharply, given the restrictions on sponsorships included in the Smokeless Tobacco Master Settlement Agreement in 1998, although this decline seems to have leveled off and recently increased. As with cigarette marketing after the Master Settlement Agreement, the constraints on marketing contained in the smokeless tobacco agreement appear to have shifted most marketing of smokeless tobacco into efforts to reduce prices and gain more favorable placement for these products at the point of sale (Tables 5.8 and 5.9).

Brand Choices and Brand-Specific Marketing

In Chapter 3, "The Epidemiology of Tobacco Use Among Young People in the United States and Worldwide," of this Surgeon General's report (see Appendix 3.1, Tables 3.1.9 and 3.1.10), Marlboro, Newport, and Camel are the top three cigarette brands for each age group presented. Among young people, these three brands account for more than 80% of the choices of favorite brand; for older smokers (26 years and above), they account for just over one-half.

Although the cigarette companies report expenditures on marketing activities to FTC by brand, the fact that these data are not reported publicly makes it difficult to relate brand-level marketing to the specific consumption choices of youth, young adults, and adults. However, Pollay and colleagues (1996), using brand-based data, found that responsiveness to cigarette advertising was three times higher for adolescents than for adults. Limited data on advertising expenditures by brand are reported by NCI (2008); the available data suggest that advertising expenditures for Marlboro are well above those for other brands, with expenditures for Newport generally second, followed by Camel. As discussed in a later section, research has demonstrated the association between brand-specific advertising and brand choices, confirming the relationship suggested by these data.

Summary

Manufacturers of cigarettes and smokeless tobacco products spend a great deal of money to market their products in the United States. Efforts to constrain marketing by tobacco companies, such as the ban on broadcast advertising of cigarettes in 1971, the comparable ban on broadcast advertising of smokeless tobacco in 1986, and the bans and restrictions contained in the 1998 Master Settlement Agreement and Smokeless Tobacco Master Settlement Agreement, appear to have had the opposite effect: total expenditures on marketing for both cigarettes and smokeless tobacco rose in the years following the implementation of these constraints as companies changed their strategies in response. The impact of these restrictions on the tobacco companies' marketing activities and on tobacco use among youth is discussed more fully in Chapter 6, "Efforts to Prevent and Reduce Tobacco Use Among Young People," of this report. The remainder of the present chapter focuses on the effects of the marketing activities of tobacco companies and depictions of smoking in movies on the use of tobacco among young people.

Advertising and Other Promotional Activities Used by the Tobacco Companies to Promote Tobacco Use Among Young People

Introduction

There is strong, consistent evidence that advertising and promotion influence the factors that lead directly to tobacco use by adolescents, including the initiation of cigarette smoking as well as its continuation (USDHHS 1989, 1994, 1998, 2000; Lynch and Bonnie 1994; *Federal Register* 1996; Lovato et al. 2003; NCI 2008). The effects of tobacco advertising on tobacco use have been addressed by reports of the Surgeon General (USDHHS 2000, 2001) and an NCI monograph (NCI 2008). As documented in these reports, promotion and advertising by the tobacco industry *causes* tobacco use, including its initiation among youth. This conclusion has been buttressed by a multitude of scientific and governmental reports, and the strength of the evidence for causality continues to grow.

Tobacco companies recruit new smokers, and their advertising campaigns appeal to the aspirations of adolescents (most smokers start as adolescents or even earlier) (Perry 1999; Lovato et al. 2003; *United States v. Philip Morris USA*, 449 F. Supp. 2d 1, 980 [D.D.C. 2006]; NCI 2008). There is strong empirical evidence that tobacco companies' advertising and promotions affect awareness of smoking and of particular brands, the recognition and recall of cigarette advertising, attitudes about smoking, intentions to smoke, and actual smoking behavior. In fact, children appear to be even more responsive to advertising appeals than are adults (Pollay et al. 1996). As with all advertising, tobacco advertising frequently relies on imagery to appeal to an individual's aspirations and conveys very little, if any, factual information about the characteristics of the product. Advertising fulfills many of the aspirations of adolescents and children by effectively using themes of independence, liberation, attractiveness, adventurousness, sophistication, glamour, athleticism, social acceptability and inclusion, sexual attractiveness, thinness, popularity, rebelliousness, and being "cool" (NCI 2008). A 2003 systematic review of the published longitudinal studies on the impact of advertising concluded "that tobacco advertising and promotion increases the likelihood that adolescents will start to smoke" (Lovato et al. 2003, p. 2). Both the industry's own internal documents and its testimony in court proceedings, as well as widely accepted principles of advertising and marketing, also support the conclusion that tobacco advertising recruits new users during their youth (Perry 1999).

In the 1998 Master Settlement Agreement, the major cigarette companies agreed to some limitations on advertising and promotions targeted directly at youth, yet the industry has continued to market tobacco heavily through traditional advertising and promotion with an increased emphasis on one-on-one approaches, such as direct mailings and online marketing. Although youth are no longer exposed to some forms of advertising, such as advertising on television or on outdoor billboards, they are still exposed to some direct marketing efforts (King and Siegel 2001; Siegel 2001). In addition, industry marketing efforts directed at young adults, which are permitted under the agreement, have indirect spillover effects on youth through young adults who are aspirational role models for youth (Kastenbaum et al. 1972; Montepare and Lachman 1989; Zollo 1995). Marketing efforts directed at young adults may also have an impact on tobacco initiation rates within this population, in that the campaigns have been shown to encourage regular smoking and increase levels of consumption (Ling and Glantz 2002). There is also evidence that from 2002–2009 increasing numbers of young adults are initiating smoking though that increase leveled off in 2010 (Substance Abuse and Mental Health Services Administration [SAMHSA], unpublished data, 2005–2010; see also Chapter 3, Appendix 3.1, Table 3.1.31).

In her landmark 2006 ruling that the tobacco industry violated the *Racketeer Influenced and Corrupt Organizations (RICO) Act* (1970), Judge Gladys Kessler concluded that cigarette marketing recruits youth to smoke and that the major cigarette companies know it:

> Cigarette marketing, which includes both advertising and promotion, is designed to play a key role in the process of recruiting young, new smokers by exposing young people to massive amounts of imagery associating positive qualities with cigarette smoking. Research in psychology and cognitive neuroscience demonstrates how powerful such imagery can be, particularly for young people, in suppressing perception of risk and encouraging behavior. Slovic WD, 53:22-63:11. Defendants' own statistics demonstrate how successful they have been in marketing their three main youth brands: Philip Morris's

Marlboro, RJR's Camel, and Lorillard's Newport (*United States v. Philip Morris USA*, 449 F. Supp. 2d 1, 980 [D.C. 2006]).

In reviewing the evidence that explains how tobacco industry marketing affects adolescent smoking behaviors, this section will rely on the Theory of Triadic Influence (TTI) (Figure 5.1), which was introduced in Chapter 4, "Social, Environmental, Cognitive, and Genetic Influences on the Use of Tobacco Among Youth," and will also be used in Chapter 6, "Efforts to Prevent and Reduce Tobacco Use Among Young People." The TTI provides an organizing structure that allows assessment of the impact of marketing and advertising in conjunction with other important risk factors, such as peer and parental influence (including smoking or nonsmoking behavior), emotions, and cognitive processes. In brief, the industry uses marketing and advertising, which overtly shape sociocognitive factors, to influence tobacco use behavior.

Conceptual Framework

The processes by which tobacco marketing affects tobacco use among youth are complex and dynamic but can be conceptualized according to existing theories of health behavior (Figure 5.1). The TTI assumes that health and risk behaviors are direct products of intentions. Behaviors such as experimentation with smoking and initiation, in turn, underlie the process to begin to smoke or not smoke. This assumption is consistent with concomitant theories such as the Theory of Reasoned Action and the Theory of Planned Behavior that demonstrate a strong link between intentions and behavior (Ajzen 1991; Armitage and Conner 2001).

Factors that promote or deter smoking, as well as other health behaviors, generally can be organized into three interacting but distinct streams: intrapersonal, social-contextual, and cultural-environmental. The intrapersonal stream involves biological and personality-related factors that serve as risk or protective factors for adolescent smoking. These factors can include propensity to take risks, self-concept, and self-esteem. The social-contextual stream starts with social situations, which provide context for dynamic interactions with other people, their actions, and their beliefs, and ends with adolescents' social normative beliefs that directly influence their behavioral intentions. The cultural-environmental stream encompasses macrolevel factors and processes, including cultural convention, societal practices, and public policy. These macrolevel factors then influence adolescents' attitudes and perceptions about tobacco use.

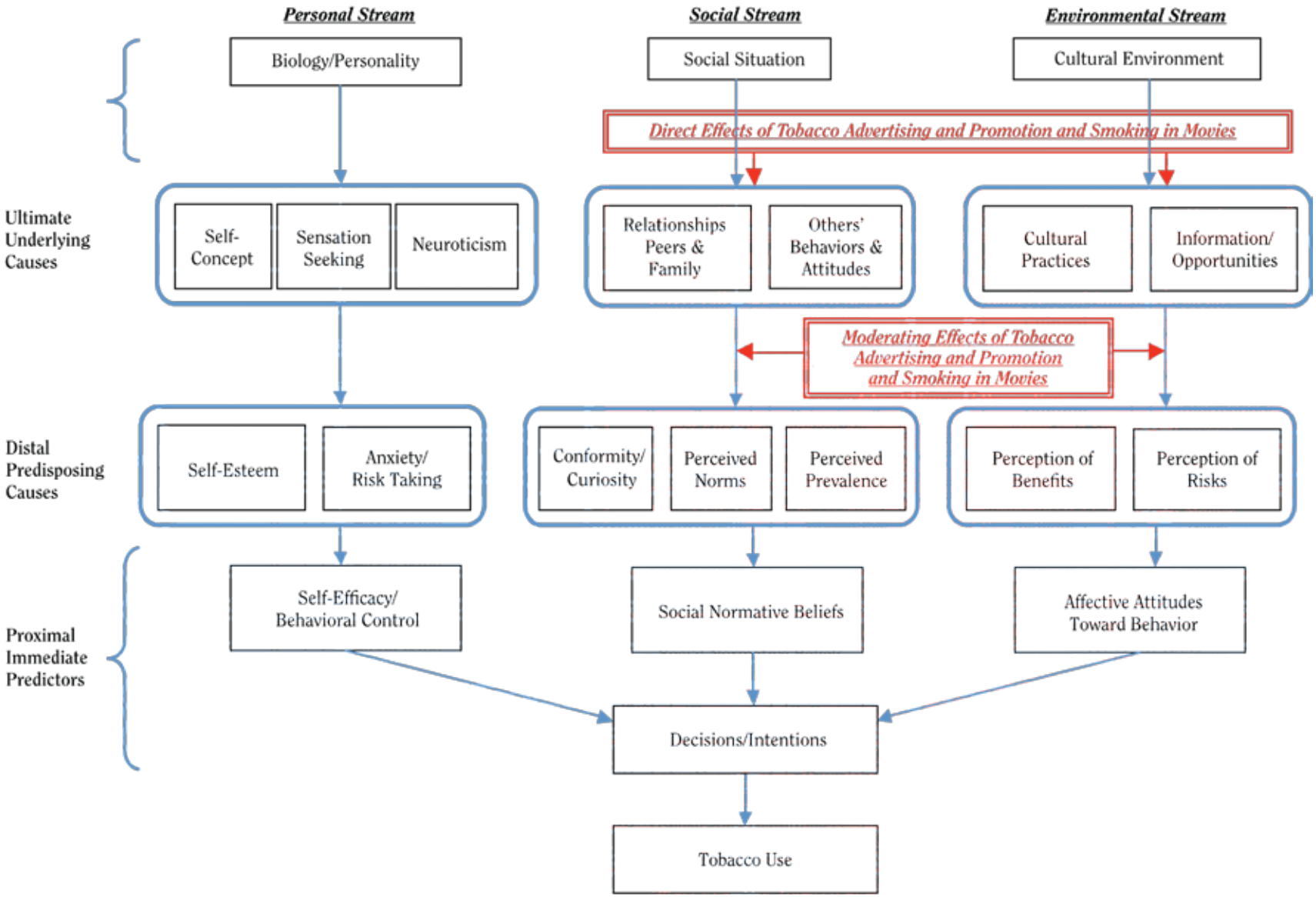
One example of the interaction of streams of influence is seen in the suggestion from the literature that congruence (or incongruence) between an adolescent's self-image and her or his stereotype of a smoker predicts whether that young person will become a smoker (Aloise-Young and Hennigan 1996). Here, stereotypes of a smoker, which come from the social and environmental streams of influence, interact with the intrapersonal stream to influence adolescent tobacco use.

Variables or factors that might influence smoking can be said to be at three distances from actual smoking behaviors: ultimate, distal, and proximal. Ultimate factors represent the underlying causes of health and risk behaviors, including smoking. Distal factors include those that predispose youth to smoking, including peer influence, self-esteem, and cultural norms. Proximate factors are components of the process that more immediately precede behavioral change, including attitudes, beliefs, and intentions.

Much of the tobacco industry's efforts to promote smoking, including advertising and direct marketing as well as industry-sponsored youth smoking prevention advertisements (Landman et al. 2002; Wakefield et al. 2006c), act at multiple levels and points within this triadic framework. Tobacco promotion can directly influence both social-contextual and cultural-environmental streams. In addition, promotion can have an influence very early in the development of adolescents' tobacco use when they are forming attitudes and beliefs about tobacco. At this level, the influence of tobacco advertising and promotion is through mediated pathways. Advertising, promotion, industry-sponsored antismoking ads, and smoking in movies all directly influence distal-level factors, such as exposure to other smokers, peer attitudes, cultural practices, and beliefs about smoking consequences (both positive and negative). As a consequence, studies that treat peer and family smoking as independent variables understate the effects of advertising. These distal-level factors carry the influence of the tobacco industry all the way down to actual intentions and behavior. These pathways of influence are consistent with Flay's (1993) five stages of the initiation and continuation of smoking among adolescents as described in the 1994 Surgeon General's report (USDHHS 1994).

Industry marketing activities can also act as a moderator of processes at lower levels in the conceptual framework. Specifically, repeated exposures to advertising, promotion, and smoking in the movies can amplify the effects of the industry's influences on the social-contextual and cultural-environmental streams of influence. For example, some industry-sponsored antismoking ads seem to influence adolescents' perceptions and attitudes about smoking (proximal factors) in ways that

Figure 5.1 Structure supporting the effect of marketing on youth smoking based on the Theory of Triadic Influence



Source: Adapted from Flay et al. 2009 with permission from John Wiley & Sons, Inc., © 2009.

encourage smoking; this is an example of influencing the cultural-environmental stream. Smoking in the movies can influence both social-contextual and cultural-environmental streams. (Industry-sponsored youth smoking prevention advertisements and smoking in the movies are discussed in later sections of this chapter.) In all three cases, the relationship between industry marketing, depictions of smoking in movies, and youth smoking are moderated mediation pathways: the influences of advertising, promotion, and smoking in the movies are mediated by distal factors (e.g., peer influence, family, culture), and that mediation effect on proximate factors is moderated by more exposure to the influence of the tobacco industry and depictions of smoking (Muller et al. 2005). The effectiveness of antitobacco media campaigns (discussed in detail in Chapter 6) also supports this model for the effectiveness of protobacco advertising and promotion, as antitobacco media operate through the same channels. Anti-industry messages in particular tend to blunt the tobacco industry's ability to shift attitudes toward smoking and tobacco use, and they create momentum against tobacco use. Evaluation of all components of this framework are essential, particularly the monitoring of tobacco companies' activities and efforts to prevent young people's tobacco use (Cruz 2009; Farrelly 2009).

Awareness of Smoking and the Recognition of Brands

Many studies from the early 1990s found that young children were frequently familiar with cigarette logos. For example, Fischer and coworkers (1991) reported that 30% of 3-year-olds and nearly all (91%) 6-year-old children could correctly match a picture of Joe Camel with a picture of a cigarette. The latter percentage equaled the percentage of 6-year-olds who associated Mickey Mouse with the Disney Channel (Fischer et al. 1991). (This equivalent awareness was all the more remarkable because, unlike Mickey Mouse, Joe Camel did not appear on television, which the average child spends viewing many hours each day.) The study of Fischer and colleagues did not claim to assert a relationship between children's familiarity with cigarette brand logos and their subsequent smoking behavior; it did, however, establish that marketing efforts were reaching very young children and that these children were aware that the Joe Camel cartoon character was associated with cigarette smoking. Earlier studies of 11- to 14-year-olds in Australia found that adolescents who smoked were much more likely to correctly identify advertisements for cigarettes that had words missing and to be able to complete cigarette slogans than were nonsmoking adolescents (Chapman and Fitzgerald 1982). These findings document the association between awareness of cigarette marketing campaigns and smoking behavior. Similar findings were reported in 1985 in Scotland and in 1987 and 2005 in the United States (Aitken et al. 1985; Goldstein et al. 1987; Dalton et al. 2005).

Many studies demonstrate that those young people who are more familiar with tobacco advertising can identify specific advertisements, have a favorite tobacco advertisement, or possess cigarette promotional items are more likely to begin smoking than those who do not have these characteristics (Arnett and Terhanian 1998; Feighery et al. 1998; NCI 2008). For example, Pierce and coworkers (1998) found that among a group of confirmed never smokers (aged 12–17 years) who were assessed in 1993 and followed up in 1996, those who had a favorite cigarette advertisement or who owned or were willing to own a brand promotion item were more likely to have experimented with cigarettes or to intend to smoke than those who did not have a favorite ad or possess promotional items. This continued to be observed at the 5-year follow-up (Pierce et al. 2010).

The 2000 Surgeon General's report on reducing tobacco use stated that "indirect evidence of the importance of advertising and promotion to the tobacco industry is provided by surveys that suggest that most adolescents can recall certain tobacco advertisements, logos, or brand insignia; these surveys correlate such recall with smoking intent, initiation, or level of consumption" (USDHHS 2000, p. 162).

Even earlier, research by Botvin and colleagues (1991) that asked adolescents to identify the brands in cigarette print ads that were stripped of brand information found that those who smoked and those who had experimented with cigarettes were more likely to name the brand associated with the ads than were nonsmoking adolescents. Much later, Hanewinkel and colleagues (2010a) used a similar approach to assess brand recognition and smoking behaviors among German adolescents. In their sample, 55% of adolescents (included both smokers and nonsmokers) were able to recognize Lucky Strike ads, and 34% recognized Marlboro.

The evidence shows that advertising and promotion by the tobacco industry are effective in raising awareness of smoking, increasing brand recognition, and creating favorable beliefs regarding tobacco use. This relationship has been shown not only for adults but also for youth. For example, a 1998 study of students in grades 6–12 concerning cigarette advertisements in seven states found that 95% of the students had seen at least one advertisement featuring Joe Camel or the Marlboro Man, and fully one-half had seen these advertisements six or more times

(Arnett and Terhanian 1998). More than one-half of the students believed that Joe Camel made smoking more appealing, and 40% of the students had the same belief about the Marlboro Man. In another study, adolescents who responded positively to Camel and Marlboro ads also believed the ads made smoking more appealing (Arnett 2001).

This evidence demonstrates how advertisements may influence adolescents at the emotional level (e.g., by producing a positive impression upon exposure to advertisements) and the cognitive level (e.g., making smoking more appealing). Moreover, at the individual level this influence can translate to the proliferation of smoking attitudes and behaviors via the social-contextual and cultural-environmental streams of the TTI model (Figure 5.1).

Advertising and the Desire to Smoke

There is extensive scientific data showing (1) adolescents are regularly exposed to cigarette advertising, (2) they find many of these advertisements appealing, (3) advertisements tend to make smoking appealing, and (4) advertisements serve to increase adolescents' desire to smoke (NCI 2008). The 2001 Surgeon General's report on women and smoking concluded, "Whatever children's view of smoking may be, as they approach the middle-school years, they become increasingly concerned with self-image, and messages contained in tobacco advertising and promotions likely play a role in changing their attitudes and behaviors" (USDHHS 2001, p. 504).

A study among California middle school students found that most students were at least moderately receptive to tobacco marketing materials, and those who were more receptive were also more susceptible to initiating smoking (Feighery et al. 1998). Moreover, susceptibility increased when a parent or friends smoked, but susceptibility also increased as a function of receptivity to promotional items, even when controlling for smoking by friends or parents. Elsewhere, in a randomized study, adolescents given magazines with tobacco advertisements reported more favorable attitudes toward smoking than those who were provided with magazines free of tobacco advertising (Turco 1997). In another experimental study, seventh-grade students who were randomly assigned to view cigarette advertisements were more likely to have positive attitudes about smokers than those who viewed antismoking advertisements or advertisements unrelated to smoking (Pechmann and Ratneshwar 1994).

Influences on Intentions to Smoke

According to many theoretical models of behavior, including the TTI, behavioral intentions are immediate precursors to behavior and are one of the strongest predictors of future behavior. Systematic reviews have determined that behavioral intentions (along with perceived behavioral control, attitudes, and subjective norms) are strong and robust predictors of behavior (Armitage and Connor 2001; Sheeran 2002). Furthermore, research demonstrates that advertising and promotion have affected behavioral intentions toward smoking in a way that leads to increases in the susceptibility of adolescents to the initiation of smoking and progression to established smoking. In a 2002 study, ninth-grade students exposed to cigarette ads were found to have significantly more positive beliefs about smokers as well as more positive intentions to smoke in the future than did those not exposed to such advertisements (Pechmann and Knight 2002). A study from Norway found that even in the presence of bans on advertising, limited exposure to tobacco marketing predicted both current smoking and intention to smoke in the future (Braverman and Aarø 2004). Surveys were conducted among 13- to 15-year-old adolescents in Norway in 1990 and 1995 and, despite an advertising ban, 50% of the adolescents in each cohort reported exposure to other kinds of tobacco marketing in the form of tobacco-related paraphernalia, imported newspapers, and broadcasts on television from other countries. After controlling for possible confounding factors, adolescents exposed to tobacco marketing were significantly more likely to be smokers or to expect to smoke by 20 years of age than those not exposed. This study establishes a clear association between early exposure and current and future smoking status, even when most forms of advertising are limited. These delayed effects help explain why limited restrictions on marketing so often have limited effects. A 1991 study of 640 children in Glasgow, Scotland, found that children aware of cigarette advertising at baseline were more likely to report increasing intention to smoke over the course of a year than were children less aware of or less interested in the ads. The latter group reported decreasing intention to smoke (Aitken et al. 1991).

Behavioral intentions can also predict continued nonsmoking. Lack of a firm commitment to abstain from smoking is considered to be a cognitive susceptibility to smoking (Spelman et al. 2009). In a longitudinal study of 637 California adolescents, participants who did not express a firm commitment to not smoke were two to three times as likely to smoke at a 2-year follow-up (Unger et al. 1997). A longitudinal study using Monitoring the Future (MTF) data has illustrated the importance

of intentions not to smoke and the need for young people to develop and sustain firm future intentions not to smoke (Wakefield et al. 2004). After analyzing the data, Wakefield and colleagues (2004) concluded that "having a firm intention not to smoke in 5 year's (*sic*) time exerts a generally protective effect upon the likelihood of future established smoking" (p. 918, 921) that "has a protective effect, regardless of the level of current smoking experience" (p. 921). Even so, there is also evidence from the MTF data suggesting that intentions do not predict future quit behaviors. In two MTF-based studies, a large proportion of students who smoked believed they would not be smoking in 3 years, but approximately two-thirds were still smoking 5–9 years later (Lynch and Bonnie 1994; Johnston et al. 2002). These last two studies demonstrate that, like most adults, adolescents underestimate the risk of addiction (Slovic 2001; Halpern-Felsher et al. 2004). As a rule, adolescents do not expect to smoke in the future and discount the power of nicotine addiction when projecting their future smoking status. Moreover, these studies demonstrate that even slight shifts away from firm commitments to abstain from tobacco use increase the risk of adolescent smoking. In this regard, tobacco advertisements can exert an indirect influence on actual smoking behaviors by decreasing adolescents' intentions to abstain from tobacco.

Influence on Actual Smoking Behavior

There is strong and consistent evidence that marketing influences adolescent smoking behavior, including selection of brands, initiation of smoking, and overall consumption of cigarettes (Lovato et al. 2003; DiFranza et al. 2006; Goldberg 2008; NCI 2008). This section reviews the empirical data from econometric studies, studies of brand preference, and studies on changes in the initiation of smoking among adolescents and their consumption of cigarettes. Some studies have looked at the association between expenditures for advertising and promotion and overall cigarette consumption, while others have looked at the relationship between such expenditures and brand preference. Still others have looked at the effect of marketing on children's and adolescents' smoking behavior.

Evidence from Econometric Studies

Econometric analyses can be used to examine the relationship between the independent variable of marketing expenditures and the dependent variable of overall cigarette consumption over time, controlling for possible confounding or extraneous variables. In a 1992 econometric analysis, the Economics and Operational Research Division of the United Kingdom Department of Health issued what became known as the Smee Report (Department of Health 1992), which analyzed the results of 19 time-series studies of cigarette advertising from the United States, the United Kingdom, New Zealand, and Australia. This report concluded that "the great majority of results [of aggregate statistical studies] point in the same direction – towards a positive impact [on tobacco consumption]. The balance of evidence thus supports the conclusion that advertising does have a positive effect on consumption" (p. 22).

There are several limitations to econometric analysis, however, that make it difficult to quantify the relationship between advertising and use of tobacco. Because econometric analyses typically rely on aggregate marketing expenditures as a measure of the effect of marketing, the qualitative aspects of advertising, particularly the use of imagery, are not captured. In addition, econometric analyses have limited value when marketing expenditures are extremely large, in substantial measure because the marginal effect of additional dollars is difficult to assess. Some economists suggest that disaggregated data would have more variance and would more likely allow for assessing the relationship between changes in specific marketing expenditures and changes in cigarette consumption (Saffer and Chaloupka 2000). For studies of adolescent smoking, a specific problem with using econometric analyses is that the studies use overall cigarette consumption (all ages) as the outcome variable, and adolescents consume a very small proportion of cigarettes sold. Indeed, adolescents likely smoke less than 5% of the cigarettes consumed in the United States, in part because they smoke fewer cigarettes during the stages before or at the beginning of the period when they become addicted (than they do later) (DiFranza and Librett 1999).

A study (Keelor et al. 2004) on the combined effect of advertising and price on cigarette consumption following the Master Settlement Agreement in 1998 analyzed the effect of increases in cigarette prices and relatively large changes in advertising in the years around the settlement and concluded that the increase in advertising and marketing expenditures that occurred immediately before and following the settlement blunted the reduction in consumption that would otherwise have been observed as a result of the price increase. In other words, this analysis documented a simultaneous bolstering of cigarette consumption (2.7–4.7%) as a result of increased marketing expenditures and a relatively greater downward movement in consumption that was driven by price (-8.3%). The authors state:

> Results show that the increase in cigarette prices stemming from the Settlement reduced per capita cigarette consumption in the USA by 8.3%. However, the cigarette companies also increased advertising in the years immediately preceding and following the Settlement. This study estimates that this increased advertising partially offsets the effects of the higher prices, increasing cigarette consumption by 2.7 to 4.7%, and hence blunting the effects of the price increase by 33–57% (Keelor et al. 2004, p. 1623).

Lewit and colleagues (1981) were able to avoid some of the limitations in econometric analyses of the impact of advertising on youth smoking in their study of the link between cigarette advertising on television in the late 1960s (such advertising ended on January 2, 1971) and the level of adolescent smoking. These authors analyzed a series of annual surveys with 12- to 17-year-olds from 1966 to 1970, when television was the dominant medium for tobacco advertisers, and found a significant relationship between the level of exposure to tobacco advertising on television for the 12 months before each measurement of tobacco usage and the likelihood of being a current smoker at the measurement point. Holding all other factors constant, for every 10 hours per week the adolescent watched television (and so, tobacco advertising) in the previous year, he or she was 11% more likely to be a current smoker. This study is valuable because, once adult smoking is established as a result of nicotine addiction, it is unlikely that one would see large changes in smoking behavior as a function of year-to-year changes in the level of advertising. Smoking patterns were more changeable, in contrast, in the adolescents Lewit and colleagues studied (Goldberg 2008).

Another way to evaluate the effect of advertising on overall cigarette consumption is to use econometric or time-series techniques to investigate whether bans on advertising and promotion lead to a reduction in cigarette consumption. The studies in this area have generally found that partial bans have a much smaller impact on cigarette consumption, primarily because marketing dollars flow to other outlets for advertising and promotion that are not regulated or banned. Total bans on advertising and promotion, in contrast, have been associated with a reduction in cigarette consumption. An econometric analysis of 22 Organisation for Economic Co-Operation and Development (OECD) countries by Saffer and Chaloupka (2000) reported a potential 7.4% reduction in cigarette consumption if all OECD countries had enacted a comprehensive ban on advertising and promotion. The findings of Braverman and Aarø (2004) reinforce the conclusions of Saffer and Chaloupka and the importance of a comprehensive ban on all tobacco marketing. More recently, Blecher (2008) evaluated the impact of bans on tobacco advertising in developing countries and concluded that both partial and complete advertising restrictions are effective in reducing tobacco consumption, with complete bans being more effective, and that bans in developing countries may be even more effective in reducing tobacco use than are bans in developed countries.

A few studies, however, have concluded that there is no evidence that advertising bans affect cigarette consumption or the prevalence of smoking among youth. For example, Lancaster and Lancaster (2003) concluded that there is no evidence of an effect of bans directed at marketing expenditures and advertising on the consumption of cigarettes. Nelson (2003a) has even suggested that advertising may reduce the consumption of cigarettes because of (1) the addition of the cost of advertising to the price of a pack of cigarettes and (2) the communication through advertising of mandatory health warnings on the cigarette packs; he states, "[a]dvertising…increases the cost of cigarettes and many advertisements contain mandated health warnings. Thus, a ban of advertising could increase consumption by reducing prices or reducing awareness of health risks" (p. 1). In contrast to Nelson's assertion, there is some evidence (Tremblay and Tremblay 1999) that advertising bans raise the market power of existing firms by creating entry barriers; as a result, competition is reduced and prices are higher. Elsewhere, Nelson (2003b) reported no relationship between restrictions on advertising and the prevalence of adolescent smoking by using prevalence of smoking at a single point in time rather than from multiple points over time, which is more typical of econometric or time-series analyses.

In addition to methodologic issues, the validity of these studies has been questioned because some were sponsored by the tobacco industry. Industry efforts to undermine the existing science on the health effects of smoking and exposure to secondhand smoke is well-documented (e.g., see Warner 1991; Bero et al. 1993, 1994, 1995, 2001, 2005; Bero and Glantz 1993; Barnes et al., 1995; Glantz et al. 1996; Barnes and Bero 1997, 1998; Kennedy and Bero 1999; Hirschhorn 2000; Ong and Glantz 2000, 2001; Bialous and Yach 2001; Drope and Chapman 2001; Hirschhorn et al. 2001; Muggli et al. 2001; Gunja et al. 2002; Hong and Bero 2002, 2006; Tong and Glantz 2004; Bitton et al. 2005; Garne et al. 2005; Landman et al. 2008).

In conclusion, econometric studies are not the most sensitive way to assess the influence of tobacco advertising on adolescent smoking. However, these studies generally provide support for a finding that the marketing of tobacco promotes its use by adolescents.

Changes in the Initiation of Smoking and Consumption of Cigarettes Among Adolescents

The previous section presented data from econometric analyses to evaluate the impact of advertising and promotion on overall consumption (i.e., all ages, children and adults combined) as well as their effects on youth. Other literature has examined whether advertising and promotion are associated with increased cigarette consumption among adolescents in both cross-sectional and longitudinal studies. As shown below, both lines of inquiry demonstrate the influence of tobacco marketing.

Cross-sectional studies have associated adolescent smoking with awareness of cigarette advertisements and promotions, recognition and approval of such ads, and exposure and receptivity to them (Armstrong et al. 1990; Aitken et al. 1991; Evans et al. 1995; Schooler et al. 1996; Gilpin et al. 1997). These studies also found among adolescents a relationship between receipt or ownership of a promotional cigarette item and (1) a feeling that cigarette advertising may make them want to smoke a cigarette and (2) actual smoking status.

Several longitudinal studies have examined the relationship between exposure to cigarette marketing and subsequent changes in adolescent smoking behavior while controlling for possible confounding factors. In one, a prospective study by Pierce and colleagues (1998) of California adolescents who had never smoked, the authors found that those who had a favorite cigarette advertisement, or who possessed or were willing to use a cigarette promotional item, were significantly more likely to progress toward smoking as marked by increased susceptibility and greater intention to smoke than were those with neither of these characteristics. Pierce and associates (1998) estimated that, in 1993, 34% of experimentation with smoking by adolescents in California could be attributed to tobacco advertising and marketing.

A few years later, Choi and colleagues (2002) studied the smoking status in 1996 of nearly 1,000 California adolescents who had experimented with smoking in 1993. As in the previous studies, this study found that exposure to marketing increased the likelihood that adolescents would progress to established smoking. Although having peers who smoked and poor relationships with family members were both associated with progression to established smoking, the strongest predictor was related to the effects of cigarette marketing. Specifically, the authors found that adolescents who were willing to use a promotional item and who believed they could quit at any time progressed to established smoking at a higher rate (52%) than adolescents who did not believe they could quit smoking at any time and were minimally or moderately receptive to advertising (20–25%).

Additional longitudinal studies on adolescents outside of California have produced similar results. For example, Biener and Siegel (2000), who surveyed Massachusetts adolescents in 1993 and resurveyed them in 1997, found a significant relationship between the combination of owning a promotional tobacco item and having a favorite cigarette advertisement and subsequent smoking. In this study, the odds of becoming an established smoker were more than twice as great for those with both characteristics as they were for those with neither. Also in New England, a longitudinal study of a cohort of rural Vermont students that collected baseline data in 1996 and conducted follow-up in 1997 and 1998 revealed that being receptive to cigarette advertising (as indicated by owning or being willing to own an item promoting cigarettes) at baseline was associated with higher smoking rates 18 months later (Sargent et al. 2000). After controlling for possible confounders, the authors found the probability of initiating smoking was nearly double for those adolescents who were receptive to advertising compared with those who were not receptive (odds ratio [OR] = 1.9; 95% confidence interval [CI], 1.3–2.9).

In a longitudinal investigation conducted in California after the 1998 Master Settlement Agreement, Gilpin and colleagues (2007) compared two cohorts of 12- to 15-year-old adolescents, one measured in 1993 and the other in 1996. Both cohorts were reassessed 3 and 6 years later as young adults. Although there were more young adult established smokers in the 1993 cohort than in the 1996 group, the two groups exhibited the same relationship between receptivity to tobacco advertising and smoking. In both, having a favorite cigarette advertisement and owning or being willing to use a tobacco promotional item increased the adjusted odds of future young adult smoking (OR = 1.46; 95% CI, 1.1–1.9; OR = 1.84; 95% CI, 1.2–2.9, respectively).

Pierce and colleagues (2010) also assessed whether cigarette advertising campaigns conducted after the 1998 settlement continued to influence smoking among adolescents. The authors used a national longitudinal cohort of boys and girls who were 10–13 years old when they were enrolled in 2003 and asked the brand of their "favorite" cigarette advertisement (if they had one). The fifth interview with this cohort was conducted after the start of RJR's "Camel No. 9" advertising campaign in 2007. Youth who reported any favorite cigarette ad at baseline (mean age = 11.7 years) were 50% more likely to have smoked by 2008 (adjusted OR = 1.5; 95% CI, 1.0–2.3). For boys, the proportion with a favorite ad was stable over all five interviews, as it was for girls across the first four surveys, which were conducted before the start of the "Camel No. 9" campaign. After the start of that campaign, the proportion of girls who reported a favorite ad increased by

10 percentage points, to 44%. The Camel brand appears to have accounted for almost all of this increase. (The proportion of each gender that nominated the Marlboro brand remained stable.) These findings suggest that after the Master Settlement Agreement, cigarette advertising continues to reach adolescents, that adolescents continue to be responsive to cigarette advertising, and that those who are responsive are more likely to initiate smoking.

In summary, the literature on tobacco marketing and the initiation of smoking by adolescents demonstrates the continued presence of this marketing and its effect on adolescent smoking at the individual level. It is important to note that, in the TTI framework, influence at the individual level also translates to distal-level factors (Figure 5.1). Specifically, as more individuals use tobacco, they continue to influence social groups and the cultural norms for nonsmoking adolescents.

Changes in Brand Preference

In 1991, DiFranza and colleagues published the first wide-coverage study of brand recognition among youth (DiFranza et al. 1991). As discussed in more detail in the next section, having a favorite brand provides another measure of receptivity to advertising that predicts smoking behavior among youth.

In 1999, researchers in Massachusetts who studied the relationship among adolescents (aged 12–15 at baseline), between the magnitude of brand-specific cigarette advertising in magazines in 1993 and brand-specific smoking behavior 4 years later among the same group found strong, significant correlations between exposure to brand-specific advertising and the brand these young people started smoking and the brand they currently smoked (Pucci and Siegel 1999).

Elsewhere, analyses of brand-specific advertising patterns in magazines revealed that those brands disproportionately preferred by adolescents were more likely to be advertised in magazines with a higher proportion of youth readers (King et al. 1998). Similarly, in these magazines, the tobacco companies were more likely to advertise cigarette brands most popular among youth than to advertise the range of adult brands (King et al. 1998).

Tobacco companies are very interested in initial brand preference because they know it is highly associated with subsequent brand selection. The tobacco companies know that youth are very brand loyal, and once they have chosen a brand, most will continue with it. For example, a previously confidential Philip Morris document states as its "underlying premise" that "The smokers you have are the smokers you are most likely to keep" (Peters 1999, Bates No. 2070648930/8964, p. 25).

Among the other tobacco industry documents confirming the importance of brand loyalty among youth is a 1984 RJR Secret Strategic Research Report subtitled "Younger Adult Smokers: Strategies and Opportunities" that observed:

> Once a brand becomes well-developed among younger adult smokers, aging and brand loyalty will eventually transmit that strength to older age brackets.…Thus, even if a brand falls from favor among younger adult smokers, the younger adults it attracted in earlier years and their increasing consumption can carry the brand's market share for years, significantly extending its overall life cycle (Burrows 1984, Bates No. 501928462/8550, p. 11, 13).

The success of Philip Morris' Marlboro brand was the major catalyst for the creation by its rival, RJR, of the Camel campaign. Specifically, RJR's marketing plan showed that it sought to "build preference by leveraging Camel's appeal among adult smokers 18-34 years of age, particularly those with an 'irreverent, less serious' mind set, gradually breaking down the pervasive peer acceptance of Marlboro" (Young & Rubicam 1990, Bates No. 508827386/7401, p.5). According to RJR's 1991 communication, the strategy was to catch Marlboro smokers' attention through the Joe Camel persona:

> Joe is the hero in all of CAMEL's communications. But he's not a spokesman, a salesman, or a shill. He is the larger-than-life personification of all that we, in our moments of playful fantasy, aspire to be. Always the winner, on top of the situation, beating the system, and covering the scene, whatever he does he does with a style and joie de vivre all his own. The twinkle in his eye and that 'cat that ate the canary' expression on his face say it all (Young & Rubicam 1990, Bates No. 508827386/7401, p. 11).

Companies continue to profile their customers and compare them with their competitors' customers, particularly their younger ones (Ling and Glantz 2002; *United States v. Philip Morris USA*, 449 F. Supp. 2d 1, 1006 [D.D.C. 2006]).

Systematic Reviews

The Cochrane Database of Systematic Reviews is the largest and most comprehensive assessment of the scientific evidence in medicine and public health. In 2003, it published its first systematic review of the impact of

tobacco marketing on smoking behaviors among adolescents. Because the review found that experimental studies on the effect of marketing on adolescent smoking behavior could not ethically or practically be conducted, the authors relied on longitudinal studies, nine of which met their acceptance criteria. These studies were conducted in Australia, England, Spain, and the United States between 1983 and 2000. The authors concluded:

> Longitudinal studies consistently suggest that exposure to tobacco advertising and promotion is associated with the likelihood that adolescents will start to smoke. Based on the strength of this association, the consistency of findings across numerous observational studies, temporality of exposure and smoking behaviours observed, as well as the theoretical plausibility regarding the impact of advertising, we conclude that tobacco advertising and promotion increases the likelihood that adolescents will start to smoke (Lovato et al. 2003, p. 2).

The authors also noted that the cross-sectional studies that were considered (they viewed longitudinal studies as being stronger) also supported the conclusion that advertising influences adolescents to begin smoking (Lovato et al. 2003).

In another systematic review of the existing literature on tobacco industry marketing and smoking by adolescents, DiFranza and colleagues (2006) arrived at several major conclusions that support the conclusion that marketing by the tobacco industry causes adolescents to smoke. First, there is a dose-response relationship between exposure to tobacco marketing and initiation of tobacco use by adolescents. Second, exposure to tobacco marketing precedes initiation of tobacco use. Third, across a wide variety of promotion types, populations, and research designs, the evidence clearly points to a causal relationship between promotion by the tobacco industry and adolescent tobacco use. Finally, the scientific literature provides an understanding of the mechanisms by which tobacco marketing influences tobacco use among adolescents.

NCI's tobacco control monograph, *The Role of the Media in Promoting and Reducing Tobacco Use* (NCI 2008), also examined the evidence on how tobacco marketing efforts affect tobacco use among adolescents. Using numerous studies and tobacco industry documents, the report concluded that even brief exposure to tobacco advertising influences attitudes and perceptions about smoking and adolescents' intentions to smoke. In addition, the evidence showed that exposure to cigarette advertising influences nonsmoking adolescents to begin smoking and move toward regular smoking.

The Position and Behavior of the Tobacco Industry

The tobacco companies have consistently denied that their marketing efforts have had any effect on the smoking behavior of adolescents and contend instead that the sole purpose of marketing by individual companies has been to influence existing adult smokers to smoke the company's brands of cigarettes rather than those of a competitor. In addition, the industry has claimed that there is no evidence that cigarette marketing affects the smoking behavior of youth and that the definitive study on this matter has not yet been conducted. This section reviews the evidence on the industry's position regarding the purpose of marketing and the industry's actual behavior in using imagery to appeal to youth.

The Tobacco Industry's Position on the Purpose of Marketing: Switching of Brands by Adults

Tobacco companies have consistently stated that the purpose of spending billions of dollars on cigarette marketing is to attract and hold current adult smokers to their brands of cigarettes (Tye et al. 1987). In addition, the companies deny that marketing campaigns are intended to increase demand for cigarettes among existing smokers or to encourage young people to initiate smoking (Cummings et al. 2002). The economic value of the amount of brand switching that occurs, however, does not justify the magnitude of marketing expenditures (Tye et al. 1987; Siegel et al. 1994). Indeed, because most brands are owned by a few tobacco companies, most switching of brands would not have a substantial impact on any one company's profits. The most plausible justification for advertising expenditures at the levels that have been observed would be to attract new customers to generate a long-term cash flow for the companies (Tye et al. 1987). In addition, the nature of the imagery used in the advertisements clearly appeals to the aspirations of adolescents, suggesting that they are a target (Perry 1999).

Across industries, marketing is intended to sell existing products and to facilitate the introduction of new ones into the marketplace. In 1986, Emerson Foote, former chief executive officer (CEO) and founder of McCann-Erickson, a global advertising agency, said,

> The cigarette industry has been artfully maintaining that cigarette advertising has nothing

> to do with total sales. This is complete and utter nonsense. The industry knows it is nonsense…. I am always amused by the suggestion that advertising, a function that has been shown to increase consumption of virtually every other product, somehow miraculously fails to work for tobacco products (Foote 1981, p. 1668).

The tobacco industry aggressively pursues marketing strategies to build national and global brands geared toward young adults (Cohen 2000; Hafez and Ling 2005). RJR based Joe Camel on a popular French campaign depicting a stylized French cartoon camel (Cohen 2000) that was appealing to a younger audience. Philip Morris' strategy for Marlboro encompassed three principal foci: psychographic segmentation, brand studies, and advertising/communication (Hafez and Ling 2005). The company's strategy now appears to be translated into a standardized global strategy.

Despite the industry's arguments about brand loyalty and inducing existing smokers to switch brands, there are times when cigarette company executives themselves have acknowledged that marketing reaches and influences underage adolescents. For example, in 1997, Bennett S. LeBow, CEO of the holding company that owns Liggett, stated: "Liggett acknowledges that the tobacco industry markets to 'youth', which means those under 18 years of age, and not just those 18–24 years of age" (LeBow 1997b, Bates No. VDOJ31357/1375, p. 6).

Later that year, in litigation in Minnesota, Mr. LeBow further testified that cigarette companies targeted young people "to try to keep people smoking, keep their business going" (LeBow 1997a, Bates No. LG0312696/3542, p. 343). Draper Daniels, who first created the Marlboro man for Philip Morris, wrote in his 1974 book entitled *GIANTS, pigmies, AND OTHER ADVERTISING PEOPLE*,

> …successful cigarette advertising involves showing the kind of people most people would like to be, doing the kind of thing most people would like to do, and smoking up a storm. I don't know any way of doing this that doesn't tempt young people to smoke, and in view of present knowledge, this is something I prefer not to do (Daniels 1974, p. 245).

After Harley-Davidson USA, a manufacturer of motorcycles, had licensed its name to Lorillard Tobacco Company for a cigarette brand to be called Harley-Davidson, the company expressed its concern about cigarette advertising to Lorillard in a letter dated August 17, 1993. Timothy K. Hoelter, vice president and general counsel for Harley-Davidson, wrote to Ronald S. Goldbrenner, associate general counsel of Lorillard, stating, "The recent California and FTC attacks on the Joe Camel advertising campaign are alarming and compel us to be sure that our Property will not be used to recruit underage smokers, intentionally or otherwise (Hoelter 1993, Bates No. 91058719/8720, p. 1). Mr. Hoelter went on to state: "We need to know what ads will be used, in what publications and on what billboards. This will help us assess the likelihood that children may be targets or so close to the intended targets as to be 'in harm's way'" (Bates No. 91058719/8720, p. 2).

Following correspondence from Lorillard, Harley-Davidson commissioned a firm with expertise in child behavior to conduct an independent study of the likely appeal of Lorillard's promotional campaign to children. The research firm conducted focus groups, group discussions, individual interviews, and telephone surveys and concluded that "Lorillard's intended promotional campaign for Harley-Davidson cigarettes would appeal to… children who are below the legal age to buy or smoke cigarettes" (Harley-Davidson 1993, Bates No. 93791722/1760, p. 30, 33). In addition, in legal filings Harley-Davidson noted that "Lorillard continued to refuse to reveal its test data and analysis about the likely effects of its promotional campaign, and Harley-Davidson inferred that the withheld data and analysis would have suggested possible or likely recruitment of underage persons" (Harley-Davidson 1993, Bates No. 93791722/1760, p. 34). As a result, the Harley-Davidson campaign was not developed.

In a 1983 confidential report, RJR emphasized the importance of "younger adults" to the industry as a whole:

> Why, then, are younger adult smokers important to RJR? Younger adults are the only source of replacement smokers. Repeated government studies (Appendix B) have shown that:
> - Less than one-third of smokers (31%) start after age 18.
> - Only 5% of smokers start after age 24.
>
> Thus, today's younger adult smoking behavior will largely determine the trend of Industry volume over the next several decades. If younger adults turn away from smoking, the Industry must decline, just as a population which does not give birth will eventually dwindle. In such an environment, a positive RJR sales trend would require disproportionate share gains and/or steep price increases (which could depress volume) (RJR 1983b, Bates No. 503473660/3665, p. 1).

Imagery

As is the case with all advertising, a substantial portion of tobacco advertising consists of imagery that conveys little factual information about the characteristics of the product. In effect, tobacco advertising fulfills many of the aspirations of young people by effectively using themes of independence, liberation, attractiveness, adventurousness, sophistication, glamour, athleticism, social acceptability and inclusion, sexual attractiveness, thinness, popularity, rebelliousness, and being "cool" (*United States v. Philip Morris USA*, 449F. Supp. 2d 1, 980 [D.D.C. 2006]; NCI 2008).

The use of Joe Camel is an exemplar for understanding the importance of imagery to reposition a brand for a younger age group. RJR conducted extensive studies on initiation of smoking by adolescents and factors behind the choice of their first brand (Cohen 2000). This research was geared toward repositioning Camel for a younger market, or as is said in the RJR documents, "youthening" the brand (Carpenter 1985, Bates No. 506768857, p. 1).

In fact, RJR's documents are replete with references to the importance of imagery in reaching the Camel target market, including comments such as the following:

> In order to stimulate [younger adult smokers] to think about brand alternatives, the advertising and brand personality must 'jolt' the target consumer. Since CAMEL does not have a demonstrably different or unique product (rational) benefit to sell, this jolt needs to be based on an emotional response and is unlikely to be accomplished with advertising which looks conventional or traditional. Studies have shown that the so-called 'hot buttons' for younger adults include some of the following themes: Escape into imagination.… Excitement/fun is success: Younger adults center their lives on having fun in every way possible and at every time possible. Their definition of success is 'enjoying today' which differentiates them from older smokers (RJR 1986a, Bates No. 506768775/8784, p. 9).

A 1988 Lorillard study entitled "Newport Image Study" concluded that "in all areas Newport smokers were viewed as party-goers, those that do their own thing and [are] fun-loving" and "in all areas Newport smokers were viewed younger and more fun-loving than Kool and Salem smokers" (Lorillard 1988, Bates No. 92272605/2665, p. 48). A 1991 Lorillard "Newport 1992 Strategic Marketing Plan" discussed the importance of the "Alive with Pleasure" advertising campaign, coupled with price promotions, to "generate interest and trial among entry level smokers" (Lorillard 1991, Bates No. 92011118/1156, p. 20). In addition, the industry capitalized on themes of rebellion to attract younger customers. For example, a report for an RJR Canadian subsidiary described young male smokers as "going through a stage where they are seeking to express their independence and individuality [smoking] (Pollay 1989, p. 240). In another document, it was noted that "Export A ... appeals to their rebellious nature..." (Ness Motley 1982, Bates No. 800057286/7321, p. 14). Moreover, a 1978 B&W document stated, "Imagery will continue to be important in brand selection for teenagers" (B&W 1978, Bates No. 667007711/7714, p. 1). These efforts to encourage brand loyalty by building brand image are particularly relevant for youth and young adults. Tobacco lifestyle-oriented marketing messages targeting young males have served to connect tobacco brand image with the user's self image and simultaneously portray risk-taking behavior as a normal part of masculinity (Cortese and Ling 2011). As previously discussed, the "Camel No. 9" campaign theme is geared to young women (Pierce et al. 2010). In addition, RJR employed a campaign geared toward young adult social trendsetters, who are commonly referred to as "hipsters" (Hendlin et al. 2010).

The Interplay Between Cigarette Marketing and Peer Pressure

The relationships between social relationships and youth smoking are well established through previous research and reviews, including the 1994 Surgeon General's report on preventing tobacco use among young people (USDHHS 1994). That report summarized the particularly strong association between smoking by siblings and peers and initiation of smoking among youth. The relationship between adolescents' perceptions and their use of tobacco is also well documented. As demonstrated in both cross-sectional and prospective longitudinal studies, the perceptions of youth about their social environment, including peer norms, perceived cultural norms, and perceived parental expectations, strongly predict smoking in this age group (Chassin et al. 1986; Conrad et al. 1992; USDHHS 1994).

Peer and parental influences are both associated with the decision of an adolescent to begin smoking, but it is important to understand the relationship between initiation of smoking and peer influence. Peer influence is a factor that has been consistently demonstrated to affect the onset and maintenance of smoking. As discussed earlier and in Chapter 4, it is also important to consider that, to the extent that tobacco industry marketing and promotional activities stimulate peers and parents to smoke, these influences contribute to smoking by adolescents (USDHHS 1994). Therefore, peer and

parental influences are acting as mediating variables between advertising and adolescent smoking. Thus, including peer influence only as an independent variable in studies that examine the direct effect of cigarette advertising on adolescent smoking will lead to an underestimate of the total (direct and indirect, mediated by peer smoking) effect of cigarette advertising and other protobacco media influences, such as exposure to on-screen smoking in movies (Wills et al. 2007, 2008; Ling et al. 2009).

Young people want to be popular, to be seen as individuals by their friends, and to resemble those they most admire. Cigarette advertising exploits these adolescent desires, using imagery to create the impression of popularity, individuality, and kinship. There is substantial evidence that advertising of tobacco affects adolescents' perceptions of the attractiveness and pervasiveness of smoking, and the weight of the evidence suggests that cigarette marketing, particularly image-based advertising, and peer influence have additive effects on adolescent smoking (USDHHS 1994). A study by Evans and colleagues (1995) in California that examined the relationship between exposure of adolescents to tobacco marketing and susceptibility to smoking also examined such factors as smoking by peers and family and perceived school performance. In this study, tobacco marketing increased the susceptibility of adolescents to smoking in a way that was independent of exposure to friends or family who smoked. When combined, minimal exposure to tobacco marketing and exposure to other smokers increased the likelihood of susceptibility to smoking fourfold (Evans et al. 1995).

Additional research has examined the intricate relationships between tobacco marketing, peer relationships, and adolescent smoking behavior. Specifically, tobacco marketing may affect the selection of peer groups, which, in turn, influence smoking behavior among adolescents. Pechmann and Knight (2002) reported the results of a randomized experiment that compared two conditions: exposure to cigarette ads (vs. noncigarette ads) and exposure to peers who smoked (vs. peers who did not smoke). Both exposure to cigarette ads and peers who smoked had main effects on adolescents' positive stereotypes of smokers and intentions to smoke. When considered concurrently, however, the data revealed a mediation relationship for cigarette ads. Specifically, the significant influence of cigarette advertising on intentions to smoke became nonsignificant when positive stereotypic beliefs about smokers were considered, suggesting that cigarette ads increase favorable attitudes about smokers, which increase an adolescent's intention and susceptibility to smoke. These results also provide support for the idea that tobacco advertising affects adolescent smoking across multiple levels of influence (Deighton 1984; Pechmann 2001; Pechmann and Knight 2002). Advertising primes positive attitudes and beliefs about smokers; as Leventhal and Keeshan (1993) observed, adolescents may then be drawn to peers who smoke and who mirror those positive attitudes primed by advertisements. The idea that adolescents choose their peer group on the basis of their attitudes about smoking and their smoking behavior has been supported by numerous studies that aim to explain the homogeneity of peer groups (Ennett and Bauman 1994; Engels et al. 1997; Kobus 2003; de Vries et al. 2006; Mercken et al. 2007).

The preceding studies demonstrate the importance of two processes underlying the role that peers play in adolescent smoking: socialization and selection. Peers who smoke socialize the nonsmoking members of a social network by increasing perceptions of the prevalence of smoking, by modeling the behavior, and through the process of peer acceptance. Adolescents who believe smoking to be prevalent are more likely to smoke (Chassin et al. 1984; Sussman et al. 1988; Botvin et al. 1993). Moreover, adolescents who hold positive beliefs about smokers or who smoke themselves choose peers who affirm those beliefs and attitudes that were primed by tobacco marketing. In this regard, tobacco marketing, socialization, and the selection of friends contribute to a dynamic system that serves to increase adolescent smoking social networks (Kobus 2003). From internal industry documents, depositions, and trial testimony, it is clear that the tobacco industry understands the need to be accepted, particularly among youth, and has attempted to exploit this need through its marketing efforts. For example, in a 1984 report, a Philip Morris scientist stated that

> …we need not try to understand why young people have a herd instinct. From their choices of food, clothes, transportation, entertainment, heroes, friends, hangouts, etc., it is clear that they do. More important to us (and probably to many other product categories) is why they make certain choices instead of others (Tindall 1984, Bates No. 2001265000/5045, p. 28).

In a deposition for the U.S. Department of Justice case, Nancy B. Lund, a Philip Morris executive, testified "…at least what we know about young adult smokers, for some of them, the fact that Marlboro is a popular brand may be a factor in why they choose Marlboro" (Philip Morris USA 2004a, Bates No. 5001054172/4245, p. 35). A 1998 confidential document of Leo Burnett (Philip Morris' advertising agency that developed the Marlboro Man) recommended adding camaraderie (peer appeal) to the core values of Marlboro Country (Philip Morris USA 1998). As recently as 1999, a Philip Morris "National Market Structure Study" reported, "The attributes associated with brand choices are very different from those stated

to be important – popularity is key" (Philip Morris USA 1999b, Bates No. 2702700028B/0028BP, p. 12). Plans by Philip Morris to market its Parliament cigarettes to 18- to 24-year-olds in 1987 included the following statement:

> This younger age group is more likely to make decisions based on peer pressure. To convey the idea that everyone is smoking Parliament, the brand should have continuous high levels of visibility in as many pack outlets as possible (Philip Morris USA 1987, Bates No. 2045287048/7092, p. 16).

Heavy exposure leads to overestimates of smoking prevalence among adolescents, and this is understood to be a significant risk factor in leading adolescents to smoke (Botvin et al. 1993).

Philip Morris was not the only company to understand the importance of peer pressure and its relevance to marketing campaigns. RJR studied the success of Marlboro and attributed some of that success to peer acceptance. A 1986 RJR document stated, "Marlboro's key strength relates to peer acceptability and belonging…. Marlboro is perceived by younger adult smokers as a brand which provides a sense of belonging to the peer group" (RJR 1986a, Bates No. 505938058/8063, p. 7). In a 1986 RJR document about the Joe Camel campaign, vice president for marketing R.T. Caufield stated:

> Overall, CAMEL advertising will be directed toward using peer acceptance/influence to provide the motivation for target smokers to select CAMEL (Caufield 1986, Bates No. 503969238/9242, p. 1).

In another example, this one from 1984, in developing marketing materials for its upcoming Tempo brand, RJR characterized the target group as

> …extremely influenced by their peer group… influenced by the brand choice of their friends. Third Family (the code name for Tempo) will differentiate itself from competitive brands by major usage of imagery which portrays the positive social appeal of peer group acceptance. Third Family imagery portrays relaxing and enjoyable social interaction where acceptance by the group provides a sense of belonging and security (J. Walter Thompson 1984, Bates No. TCA13320/3333, p. 5).

Pollay observed in an article published in 2000: "Put briefly, it seems that TEMPO's advertising was too trendy and heavy handed in its style and deployment, becoming transparently interested in a youthful market. This backfired because adolescents are decidedly disinterested in symbols of adolescence, wanting symbols of the adulthood they aspire to" (Pollay 2000, p. 143).

Evidence of the industry's understanding in the 1970s, 1980s, and 1990s of the importance of peer approval for adolescent smoking behavior is widespread and well documented. Proceeding from this understanding, marketing campaigns tried to emphasize the popularity of brands, hoping this would translate to their being perceived as more popular among peers. Two passages from the RJR Secret Strategic Research Report subtitled "Younger Adult Smokers: Strategies and Opportunities" are illustrative: "Marlboro's key imagery was not masculinity, it was younger adult identity/belonging" and "This could mean as social pressures tend to isolate younger adult smokers from their nonsmoking peers, they have an increased need to identify with their smoking peers, to smoke the 'belonging' brand" (Burrows 1984, Bates No. 501928462/8550, p. 28).

Lorillard considered Newport to be its "peer brand" among young adult smokers (Brooks 1993; Lorillard 1993b), and a 1999 creative strategy it used with the intention of increasing volume and gaining long-term growth was to

> Develop creative executions that continue to strengthen and refresh Newport's advantage as the peer brand of choice among younger adult smokers by reinforcing the perception that Newport delivers smoking pleasure in social settings relative to their lifestyles. Continue to leverage the Pleasure campaign equity to reinforce the brand's fun, spontaneous, upbeat image through a variety of settings portraying social interaction, spontaneous fun, refreshment and smoking situations (Lorillard 1999, Bates No. 98196920/6942, p. 8).

Judge Kessler concluded that

> According to Shari Teitelbaum, Philip Morris Director of Marketing and Sales Decision Support, Philip Morris has used the term "herd smoker" to refer to smokers of the most popular cigarette brands, like Marlboro, Camel, and Newport, because these brands attract the largest share of young adult smokers. Herd brands are "the most popular, it's for smokers that would be likely to kind of follow the herd, kind of more of a group mentality type of thing" (*United States*

v. Philip Morris USA, 449F. Supp. 2d 1, 1026 [D.D.C. 2006].

Tobacco companies pursued promotions aimed at young adults in bars and nightclubs increasingly through the 1990s (Sepe et al. 2002; Biener et al. 2004; Rigotti et al. 2005), in part because these young adults were viewed as trendsetters who were highly likely to influence the behaviors of their peers (Katz and Lavack 2002; Sepe et al. 2002). A study of young adults in California reported approximately 33% of all young adults go to bars and clubs at least sometimes, and bar and club goers had over three times greater odds to be daily smokers and over three times the odds to be social smokers (Gilpin et al. 2005).

Marketing to young adult trendsetters remains important. In a relevant study, Hendlin and colleagues (2010) used tobacco industry documents and analysis of industry marketing materials to understand why and how RJR and other tobacco companies have marketed tobacco products to young adult consumers who are social trendsetters ("hipsters") to recruit other trendsetters and average consumers, as well as youth who look to hipsters as role models, to smoke. These authors found that since 1995, when RJR developed its marketing campaigns to better suit the lifestyle, image identity, and attitudes of hip trendsetters, Camel's brand identity had actively shifted to more closely convey the hipster persona. Camel emphasized events such as promotional music tours to link the brand and smoking to activities and symbols appealing to hipsters and their emulating masses.

In sum, far from being a completely independent determinant of youth smoking, peer influence is yet another channel for communication on which the industry can capitalize to promote smoking by youth. It is important to note that the tobacco industry routinely attributes smoking to peer pressure, but it does not acknowledge the relationship between advertising and peer influence or the effects of advertising on normative behavior and perceptions of popularity and peer acceptance. Tobacco companies have consistently stated that the purpose of cigarette marketing is to attract and hold current adult smokers to their brands of cigarette, but the evidence reviewed shows that these efforts also affect peer influence to smoke and encourage smoking among young people.

Summary

The continuously accumulating evidence from the studies that have addressed the effect of advertising on smoking is consistent with a dose-dependent causal relationship. Most smokers start as adolescents: cigarette companies need to recruit new smokers from among youth, and their advertising campaigns appeal to the aspirations of adolescents. There is strong empirical evidence that advertising and promotions affect awareness of smoking and of particular brands, the recognition and recall of cigarette advertising, attitudes about smoking, intentions to smoke, and actual smoking behavior. Because youth are brand loyal, attracting them to a particular brand pays off for tobacco companies in the long term. In fact, youth appear to be even more responsive to advertising appeals than are adults (Lovato et al. 2003). The industry's own internal correspondence and testimony in court, as well as widely accepted principles of advertising and marketing, also support the conclusion that tobacco advertising recruits new users as youth and reinforces continued use among young adults.

Taking together the epidemiology of adolescent tobacco use, internal tobacco company documents describing the importance of new smokers, analysis of the design of marketing campaigns, the actual imagery communicated in the $10-billion-a-year marketing effort, the conclusions of official government reports, and the weight of the scientific evidence, it is concluded that advertising and promotion has caused youth to start smoking and continue to smoke.

The Tobacco Industry's Pricing Practices and Use of Tobacco Among Young People

In recent years, the pricing of tobacco products has become a key marketing strategy in the tobacco industry. Historically, markets for tobacco products were characterized by relatively stable prices, with changes in prices for one firm typically matched by changes by other firms (Chaloupka 2007). Moreover, price changes in the industry were infrequent and generally modest, with some exceptions. In recent years, however, price-reducing promotions have been the primary means of price competition among manufacturers, with some evidence that these promotions have been targeted to specific brands or venues that are more important for young people. These

promotions also mitigate the impact of tax increases. This section briefly reviews pricing strategies in the industry and the relatively limited research that has examined the relationships between these strategies (particularly price-reducing promotions) and tobacco use among youth. Given the importance of local, state, and federal taxes in determining price, the more extensive research that examines the impact of taxes and prices on tobacco use among youth will be covered in Chapter 6. As described more fully in that chapter, one key finding demonstrates that youth respond more than adults to price changes in terms of their use of tobacco. This finding is of particular relevance to pricing strategies in the industry and helps to explain some of the changes in price and price-related marketing over the past 15–20 years.

Pricing Strategies in the Industry

Historically, advertising, product design, and other marketing efforts have been the focus of the tobacco industry's competitive activities, with competition by price being relatively limited (Chaloupka 2007). The limited price competition was largely the result of the highly concentrated nature of the markets, with relatively few manufacturers accounting for nearly all production. Price competition was seen in the offering of the "10-cent brands" of the 1930s and the emergence and growth of discount brands in the 1980s, but such competition has been rare (Chaloupka 2007).

Price Leadership

For most of the past century, the pricing of tobacco products has been characterized by price leadership, with one firm (typically the dominant firm) initiating an increase or decrease in price and the others almost immediately matching the change (Chaloupka et al. 2002; Chaloupka 2007). This practice is described in a 1976 report from the Business Planning & Analysis Department of Philip Morris entitled *Pricing Policy* (Philip Morris 1976). The report starts by describing the industry's pricing behavior on the basis of an economic model of organizational behavior in an oligopolistic (highly concentrated) market in which firms are likely to match price cuts of other firms, but not to match price increases:

> The cigarette industry is characterized by economists as a 'kinky oligopoly'…. This charming term implies that the general price level is determined by a small number of firms (price leaders); that no economic advantage can be obtained by any one firm pricing below the general price level; and that major disadvantages accrue to a firm which attempts a price above the general level. In short, the general price level results from some sparring among the potential price leaders, after which the rest of the industry accepts the resulting price structure (Philip Morris 1976, Bates No. 2023769635/9655, p. 4).

The report also describes how Philip Morris had long been one of the followers in the industry, matching the prices set by the American Tobacco Company and RJR, and then goes on to note how its role had changed by the 1970s. In addition to citing the relatively high inflation that emerged in that decade, the report notes that

> The second change which has occurred is the emergence of Philip Morris among the price leaders in the cigarette industry. We no longer follow the market: whether we initiate a price increase or not, our decision is a key factor in establishing a new industry price level, and we must examine any price move in the light of our own judgment of the appropriate level (Philip Morris 1976, Bates No. 2023769635/9655, p. 4).

The report goes on to discuss Philip Morris' pricing strategies in the 1970s as well as the trade-offs between pricing and marketing. For example, the report notes that the relative lack of price competition in the industry provided earnings that could have been invested in other marketing efforts to help gain market share. Similarly, it describes how market prices were below the level that would maximize industry profits but that any attempt to significantly increase prices would "destroy the resiliency of the system" (Philip Morris 1976, Bates No. 2023769635/9655, p. 6) (likely by creating opportunities for new entrants to compete on price) rather than result in higher long-run prices. As Chaloupka and colleagues (2002) discussed, this may have shown the industry's awareness of the greater price sensitivity of young people: if prices were set higher to maximize short-run profits (given the relatively limited price sensitivity of current addicted smokers), the resultant reductions in youth smoking would significantly reduce the number of smokers in the long run, leading to reduced future profits.

Discount Brands and "Marlboro Friday"

One exception to the limited price competition in cigarette markets was seen during the 1980s and early 1990s: The doubling of the federal excise tax in 1983 along with numerous increases in state cigarette taxes reversed the downward trend in inflation-adjusted cigarette prices

that existed for much of the 1970s and early 1980s. The rising inflation-adjusted prices combined with falling incomes during the recession of the early 1980s made cigarettes much less affordable than they had been in many years (Chaloupka et al. 2002); these forces led cigarette companies to rethink their pricing strategies. For example, a 1983 report from RJR stated:

> The outlook for the future suggests that the price-sensitive environment will continue and perhaps worsen. State taxes are likely to increase. Another F.E.T. (federal excise tax) increase is possible. Contrary to our previous efforts and experience, discounted, branded cigarettes may well be successfully introduced and a multi-tiered retail price structure normally associated with "price segregation" may result. There would be heavy competitive activity and differing margins associated with the multi-tier structure (RJR 1983a, Bates No. 501927671/7685, p. 1).

During the same period, early research on differences in the price sensitivity of youth, young adult, and adult smokers began to appear in the academic literature (e.g., Lewit et al. 1981; Lewit and Coate 1982). The industry took note of these findings, which confirmed its own internal research showing that smoking among youth was more responsive to price than was smoking among adults (Chaloupka et al. 2002). This evidence appears to have influenced subsequent pricing strategies in the industry. For example, an RJR 1984 Strategic Research Report discussed the importance of pricing, combined with other marketing efforts, particularly for younger smokers:

> Pricing is a key issue in the industry. Some evidence suggests that younger adult smokers are interested in price, but unlikely to adopt a brand whose only "hook" is price. To maximize the possible pricing opportunity among younger adult smokers, several alternatives should be considered (Burrows 1984, Bates No. 501928462/8550, p. 45).

The report went on to describe the importance of branding in addition to pricing:

> A price/value brand would need a conspicuous second "hook" to reduce possible conflict between younger adults' value wants and imagery wants. The most saleable "hooks" are likely to be based on product quality, since these provide easy-to-explain public reasons for switching. Suitable imagery should also be used (Burrows 1984, Bates No. 501928462/8550, p. 46).

As Chaloupka and colleagues (2002) noted, the combined branding/pricing strategy was adopted by tobacco companies in developing the "branded generics" that came to dominate the discount cigarette markets in subsequent years. All the tobacco companies either developed new brands or repositioned old brands in the discount markets. A three-tiered price structure soon emerged, which included a relatively small number of deep-discount brands, many mid-price discount brands (including several repositioned premium brands), and many higher-priced premium brands.

By early 1993, discount brands accounted for almost 40% of cigarette consumption, with the availability of the lower-priced brands contributing to a slowing of the declines in smoking observed through the 1980s and early 1990s (Kluger 1996; Cummings et al. 1997). The price differences between deep-discount, discount, and premium brands were significant, with list prices as low as $0.65, $0.98, and $1.40 per pack ($1.02, $1.53, and $2.23 in 2011 dollars), respectively, in January 1993 (Tobacco Reporter 2000).

Philip Morris was perhaps most affected by the emergence of the discount brands. Although still the clear market leader in early 1993, the company had seen its overall market share decline despite its efforts to introduce its own discount brands. Perhaps more troubling to Philip Morris was the drop in market share for its Marlboro brand, which had been the industry's leading brand for many years and which had an even larger share of the youth market. In an effort to reverse these trends and to halt the growth in discount brands, on April 2, 1993 ("Marlboro Friday"), Philip Morris announced a variety of price-reducing promotions that reduced Marlboro prices by 40 cents per pack (Chen et al. 2009). Given the potential loss of market share, other companies soon followed with comparable reductions, and the price cuts by Philip Morris were eventually made more permanent through a reduction in its wholesale prices in August 1993.

For Philip Morris, this strategy was particularly effective in that it reversed the decline in its overall market share (its share rose by several points by the end of 1994) and in the share of its Marlboro brand (which rose by more than one-third, to 30% of the market, by the end of 1994). At the same time, sales for discount and deep-discount brands across the industry declined, with combined market share for this sector falling by about one-third over the next few years.

The combination of the price cuts for Marlboro and reductions in price for many other cigarettes all but

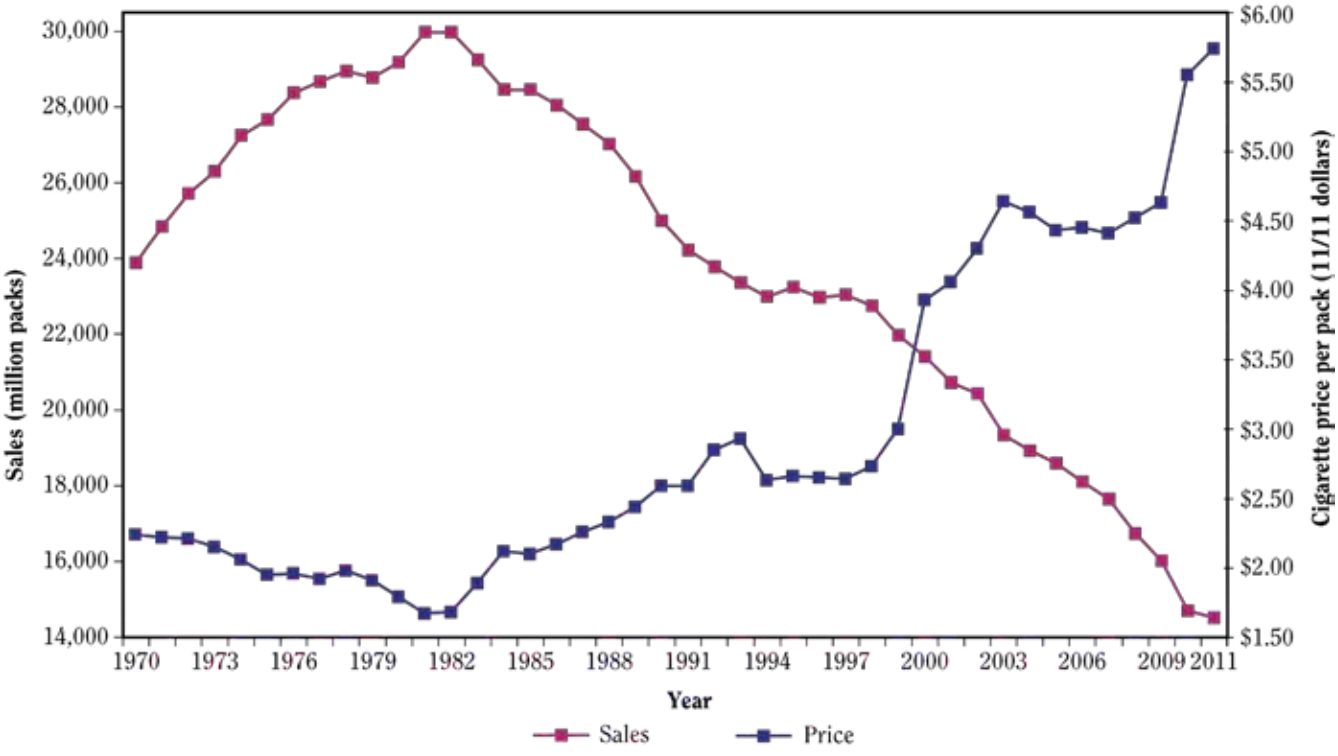
stopped the decline in overall U.S. cigarette sales (Figure 5.2), at least for a few years, while simultaneously contributing to a sharp rise in smoking among youth during the mid-1990s (Figure 5.3) (Grossman and Chaloupka 1997; Gruber and Zinman 2001). Gruber and Zinman (2001), for example, estimated that the "Marlboro Friday" price reductions explained more than one-quarter of the rise in prevalence of smoking among youth observed in the mid-1990s.

The Master Settlement Agreement and Discount Brands

A second wave of price competition followed the industry's settlement of individual lawsuits with Florida, Minnesota, Mississippi, and Texas in 1997 and 1998, and the adoption of the Master Settlement Agreement in November 1998. The settlements with the individual states and the Master Settlement Agreement promoted a sharp rise in cigarette prices between July 1997 and November 1998; these increases were designed to cover the costs of the settlements for the "original participating manufacturers" (OPMs)—Philip Morris, RJR, B&W, and Lorillard—the four leading manufacturers at the time, and the "subsequent participating manufacturers" (SPMs), the other cigarette companies that signed on to the Master Settlement Agreement over time. There are some differences in how OPM and SPM payments are calculated that give SPMs a slight cost advantage, which has helped them gain market share in the years since the agreement was adopted, but the resulting price differences are modest (Chaloupka 2007).

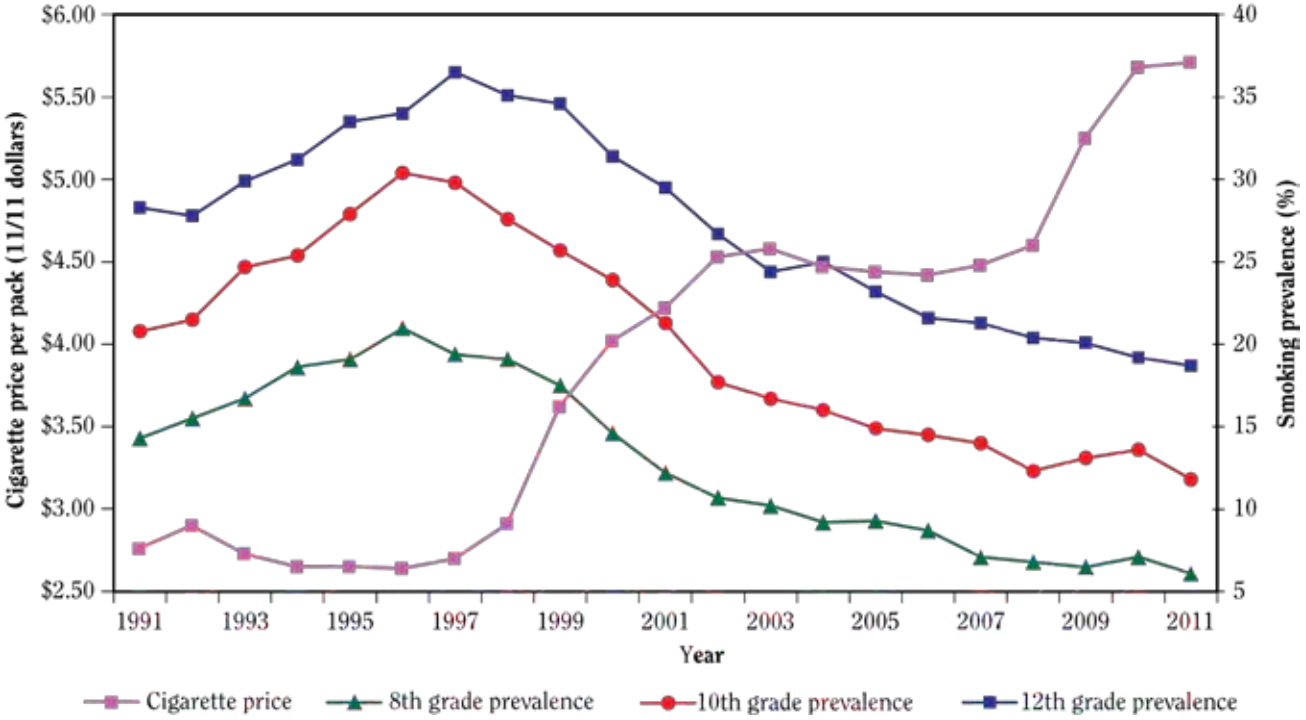
The same has not been true for the price differences between the OPMs/SPMs and the cigarette companies that did not sign on to the agreement—the "non-participating manufacturers" (NPMs). The NPMs are subject to different obligations that have evolved since the agreement was adopted and that have, at least in some states at some times, given them a considerable price advantage over the OPMs and SPMs. The agreement did include provisions to help prevent this, most notably those in Exhibit T, a Model Statute, which called for the settling states to adopt legislation requiring the NPMs to pay an amount equivalent to

Figure 5.2 Cigarette prices and cigarette sales, United States, 1970–2011



Source: Data from Orzechowski and Walker 2011; author's calculations.

Figure 5.3 Cigarette prices and prevalence of youth smoking by grade in school, United States, 1991–2011



Source: Cigarette prices from Orzechowski and Walker 2011; 30-day smoking prevalence data for students in grades 8, 10, and 12 from Monitoring the Future, University of Michigan News Service 2011; author's calculations.

what they would have paid had they joined the agreement, with these payments held in escrow for 25 years against future health care cost claims made against the NPMs. Because states that did not adopt the model statute faced significant reductions in the payments they would receive from the OPMs and SPMs under the agreement, all settling states quickly adopted this model legislation. However, some NPMs may have taken advantage of the lag and their significantly lower costs, as well as some loopholes in the model statute (notably the "allocable share release" provision that returned most escrow payments to NPMs that sold products in a limited number of states), to gain market share at the expense of the OPMs and SPMs (Chaloupka 2007). The market share for NPMs appears to have peaked in 2003 at almost 10%, however, before declining in more recent years as the loopholes in the model statute have been closed, state enforcement efforts targeting NPMs have been strengthened, and prices for OPMs and SPMs have remained relatively stable (Chaloupka 2007).

In contrast to the increased smoking among youth that followed the "Marlboro Friday" price cuts, the more recent price competition led by the NPM brands appears to have had a limited impact on smoking among young people. As shown in Figure 5.3, the prevalence of smoking among youth has continued to decline between 2002 and 2007, despite the leveling off of cigarette prices during this period. However, given the evidence on the price sensitivity of tobacco use among youth that is discussed in detail in Chapter 6, along with the evidence on the impact of tax increases on prices discussed below, it is possible that the observed reductions in smoking among youth would have been even larger had the price increases from state and federal taxes not been offset at least partially by discounting and other price-related promotions by cigarette companies.

Tax Increases and Pricing and Price Promotions in the Industry

An important element of pricing strategies in the industry, particularly with respect to tobacco control efforts, relates to how prices are raised in response to increases in excise taxes on tobacco products. These strategies have changed over time, in part in response to the

negative impact of price increases on smoking among young people. This is underscored by a series of internal documents from the 1980s written by Myron Johnston (a marketing researcher at Philip Morris who focused on smoking among youth) that discuss the doubling of the federal cigarette excise tax in 1983 and an anticipated increase in that tax later that decade. In 1987, in anticipation of a federal tax increase, Johnston recalled the industry's pricing strategy regarding the 1983 doubling of the tax:

> Last time, of course, we increased prices five times between February of 1982 and January of 1983. In less than a year, the price went from $20.20 to $26.90 per thousand ($2.70 more than the tax), and this fact was not lost on consumers, who could legitimately blame the manufacturers for the price increases. While price increases of this magnitude might have been tolerated during the rapid escalation in the overall inflation rate between 1977 and 1981, the increase in the price of cigarettes in 1982–83 was made even more dramatic by the fact that the overall rate of inflation was slowing considerably (Johnston 1987, Bates No. 2022216179/6180, p. 1).

Johnston cited the work by Lewit and colleagues (Lewit et al. 1981; Lewit and Coate 1982) that demonstrated the greater price sensitivity of youth and young adults regarding smoking in concluding that this strategy had a disproportionately negative impact on Philip Morris, given Marlboro brand's large share among young smokers. In anticipation of another increase, Johnston went on to say, "We don't need this to happen again" (Johnston 1987, Bates No. 2022216179/6180, p. 1) and laid out the following strategy:

> I have been asked for my views as to how we should pass on the price increase in the event of an increase in the excise tax. My choice is to do what I suggested to Wally McDowell in 1982: Pass on the increase in one fell swoop and make it clear to smokers that the government is solely responsible for the price increase, advertise to that effect, suggest that people stock up to avoid the price increase, and recommend that they refrigerate their cigarettes 'to preserve their freshness'. …Then when people exhaust their supply and go to the store to buy more, they will be less likely to remember what they last paid and will be less likely to suffer from "sticker shock." As a result, they should be less likely to use the price increase as an incentive to stop smoking or reduce their consumption (Johnston 1987, Bates No. 2022216179/6180, p. 1).

Although the anticipated late-1980s increase in the federal tax never materialized, the tax was increased incrementally several times in the 1990s and early 2000s. Changes in wholesale prices by Philip Morris (as the industry leader) and other companies (which followed) appear to reflect the adoption of the strategy laid out by Johnston, with prices typically increasing by the amount of the tax increase, with some increases (notably the 5-cent increase in 2002) absorbed by the industry. In general, research demonstrates that state and federal tax increases result in comparable or larger increases in the retail prices for cigarettes (USDHHS 2000).

When retail prices rise following tax increases, companies engage in a variety of price-related marketing efforts that appear to be aimed at softening the impact of the increased prices. According to Chaloupka and colleagues (2002), from their review of internal industry documents, these efforts have included increased distribution of coupons (through print ads, point-of-sale promotions, and direct mailings) and multipack discounts, often coupled with efforts to encourage smokers to express their opposition to an additional tax increase through mail or telephone campaigns targeting state and federal legislators.

A combination of these strategies continues to be used in recent years. For example, in response to the large April 2009 increase (almost 62 cents per pack) in the federal cigarette excise tax, Philip Morris increased prices on leading brands (including Marlboro) by 71 cents per pack while raising prices on other brands by 78 cents per pack. At the same time, it reached out to smokers (at least via e-mail and likely through other channels) with the following message:

> On February 4th, 2009, the Federal Government enacted legislation to fund the expansion of the State Children's Health Insurance Program (SCHIP) that increases excise taxes on cigarettes by 158%. As a result, you will see the price of all cigarettes, including ours, increase in retail stores. We know times are tough, so we'd like to help. We invite you to register at *Marlboro.com* to become eligible for cigarette coupons and special offers using this code: MAR1558 (Auerbach 2009).

Tobacco Control Policies and Programs Versus Pricing and Price Promotions in the Industry

There is some evidence that the industry uses its pricing promotion strategies to respond to tobacco

control efforts other than tax increases. For example, in their analysis of annual data from all states for the period from 1960 through 1990, Keeler and colleagues (1996) concluded that the industry engaged in a form of what economists call "price discrimination." Specifically, they found that cigarette prices were lower in states with stronger state and local tobacco control policies, after accounting for differences in taxes, at least in part to offset the impact of these policies on tobacco use. Other researchers have used observational and scanner-based data to describe the increased use of price-reducing promotions following the price increases and marketing limitations resulting from the Master Settlement Agreement in 1998 (Ruel et al. 2004; Loomis et al. 2006); these findings are consistent with the trends in the data on expenditures for cigarette marketing reported by FTC that were described above. Both Slater and colleagues (2001) and Loomis and colleagues (2006) found that the prevalence of price-reducing promotions was greater in states with higher spending on comprehensive tobacco control programs. Similarly, Feighery and colleagues (2008) have documented the increased use of point-of-sale advertising to highlight price-reducing promotions, while Henriksen and colleagues (2004b) have shown more point-of-sale marketing in stores that are frequented more by youth. Given the greater price sensitivity of smoking among young people, this pattern of marketing suggests that the industry's targeted pricing and price-reducing promotion strategies will have their greatest impact on youth and young adults.

Prices, Price Promotions, and Tobacco Use Among Young People

As will be described in more detail in Chapter 6, a growing and increasingly sophisticated body of research has clearly demonstrated that tobacco use among young people is responsive to changes in the prices of tobacco products. Most of these studies have found that usage levels among young people change more in response to price changes than do usage levels among adults. This research includes studies that have looked at the consumption of cigarettes and smokeless tobacco products as well as various stages of cigarette smoking among youth and young adults. Studies that have considered initiation, progression, and/or intensity of use have generally found that price has its greatest impact on youth who are further along in the uptake process, which is consistent with the transition from relying more on social sources for cigarettes to buying one's own cigarettes.

To date, however, few studies have examined the impact of price-reducing promotions on tobacco use among young people, in large part because of the lack of high-quality, geographically disaggregated data on the prevalence and intensity of these promotions over time. Only two studies have considered this issue: one was based on an analysis of internal tobacco company documents (Chaloupka et al. 2002), and the other was based on a combination of observational data on point-of-sale marketing practices and repeated cross-sectional survey data on smoking among youth (Slater et al. 2007).

From their analysis of internal documents, Chaloupka and colleagues (2002) concluded that cigarette companies employ various price-reducing promotions, often in combination with other marketing efforts and with knowledge of the greater price responsiveness of young people, to increase the use of their products. As the authors noted, this strategy was effective for RJR's efforts to promote its Camel brand among young people (particularly young males) during the mid-1980s and early 1990s. For example, one 1986 RJR document states that

> The major factor contributing to CAMEL's dramatic growth among Mid-West 18–24 year old males appears to be the increased level of Mid-West promotional support, and in particular, CAMEL's targeted promotions (which were implemented the same time as the boost in CAMEL's share and completed just prior to the downward trend) (Creighton 1986, Bates No. 505727418/7431, p. 1).

The promotions referred to included "buy three, get three free" ("six pack") discounts, coupons, the "Camel Cash" program, and other retail-value-added strategies. A subsequent report noted that these promotions were necessary to maintain the increase in Camel's market share, describing how Camel's market share among young adult smokers fell by almost 2 percentage points in the more than 1-year period, when this type of promotional support for Camel was reduced. The report stated:

> While "Old Joe" might be able to generate growth by imagery alone, the above patterns suggest that retail pack programs play an important role in maintaining loyalty among the brand's YAS [young adult smokers] franchise during this key stage in brand choice, as well as in generating trial [*sic*] which could stimulate further growth momentum. Thus, reducing CAMEL's pack presence would likely jeopardize the brand's ability to sustain the rate of YAS growth achieved in 1988 (RJR 1989, Bates No. 507533523/3535, p. 6).

This report suggests that the combination of imagery (Joe Camel) and price reductions contributed significantly to the growth in Camel's market share among adolescents and young adults in the late 1980s and early 1990s.

More recently, Slater and colleagues (2007) combined novel data on point-of-sale cigarette marketing collected in the Bridging the Gap project with MTF data on smoking among youth to assess the impact of price-reducing promotions and advertising at the point of sale on uptake of smoking among youth. Data on point-of-sale marketing practices were collected from 17,746 stores in 966 communities from 1999 to 2003; these communities reflected the location of the student population for the second-year half-sample of the 8th-, 10th-, and 12th-grade schools participating in the MTF study during these years. Data on cigarette marketing practices included in-store, exterior, and parking lot measures of advertising; the presence of low-height advertising and functional objects (defined as branded objects that have some use, such as clocks, trash cans, and grocery baskets); the presence of price-reducing and other promotions (cents-off specials, on-pack coupons, multipack discounts, and noncigarette retail-value-added promotions) for the Marlboro and Newport brands; prices for Marlboros and Newports; and product placement (self-service vs. clerk assisted). Marlboro and Newport were selected because of their popularity among young people. Indices reflecting the extent of advertising and promotion in stores located in communities near an MTF survey school were constructed from the store-level data. The measure on smoking initiation was constructed from MTF survey data on current and past smoking behavior and future smoking intentions, as described and validated by Wakefield and colleagues (2004). To fit the available data, this measure was constructed for 26,301 students and reflected six stages of uptake: never smoker; puffer (someone who has smoked once or twice, but not regularly); nonrecent experimenter (someone who has smoked occasionally but not in the 30 days before the survey); former established smoker (someone who has smoked regularly but not in the 30 days before the survey); recent experimenter (someone who has smoked occasionally, but not regularly, in the 30 days before the survey); and current established smoker (someone who has smoked regularly in the 30 days before the survey).

Using statistical methods on models that controlled for students' demographic and socioeconomic characteristics, other tobacco control policies, and other factors, and that accounted for clustering at the community level, Slater and colleagues (2007) found that cigarette marketing has a significant impact on the initiation of smoking among youth. Specifically, they found that an increased prevalence of point-of-sale advertising was associated with a significant increase in the likelihood of progressing from never smoking to experimentation (puffing), with the magnitude of the association falling and becoming insignificant for later stages of intake. In addition, and in contrast to this previous finding, they found a significant association between the prevalence of price-reducing and other promotions and later stages of smoking progression, with the magnitude of the effect and its significance increasing at these later stages. Similarly, Slater and associates (2007) found a significant inverse association between cigarette prices and smoking initiation among youth, with the size and significance of the effect consistent across the different stages of uptake (with the exception that the association for the transition from never smoking to experimentation was not significant). The findings that price and price-reducing promotions have a greater impact as youth progress to established smoking are consistent with those described in more detail in Chapter 6. Given these estimates, Slater and colleagues (2007) performed various simulations to assess quantitatively the impact of point-of-sale advertising and promotions on uptake among youth. They estimated that if none of the stores they observed had cigarette advertising, the prevalence of never smoking in their sample would have been about 9% higher. Similarly, they estimated that if no stores had cigarette promotions, the prevalence of current established smoking in their sample would have been more than 13% lower.

Summary

Tobacco companies have several options for altering the prices of their products, ranging from directly changing the wholesale prices to engaging in a variety of price-reducing promotions such as couponing, multipack discounts, and price discounts. A company that directly changes its prices will have a relatively broad impact, affecting a range of brands, and typically will be matched by other companies (particularly when the price change is made by the industry leader). In contrast, the use of price-reducing promotions can be more targeted, with promotions limited to particular brands, geographic regions, venues, or populations.

Historically, price changes in the industry have usually reflected changes in costs, including increases in federal taxes and costs associated with litigation-related decisions and settlements, resulting in relatively limited price competition. In contrast, there has been a considerable increase over time in the industry's use of price-reducing promotions. As Chaloupka (2004) described, the increased use of price-reducing promotions appears to

have followed the early econometric research demonstrating that smoking among young people is more responsive to price than is smoking among adults, and this strategy accelerated following the Master Settlement Agreement's constraints on other marketing activities. Internal industry documents show clearly that cigarette companies were paying close attention to the early econometric studies, that the findings from these studies were consistent with the industry's internal research, and that this knowledge informed their use of price-reducing promotions (Chaloupka et al. 2002). In considering the numerous studies demonstrating that tobacco use among young people is responsive to changes in the prices of tobacco products, it can be concluded that the industry's extensive use of price-reducing promotions has led to higher rates of tobacco use among young people than would have occurred in the absence of these promotions.

Influence of the Tobacco Industry on Tobacco Use Among Youth: The Packaging of Tobacco Products

Background

Packaging is an integral component of the overall marketing strategy for consumer goods (Slade 1997; Underwood and Ozanne 1998; Shapiro et al. 1999; Palmer 2000; Pollay 2001; Wakefield et al. 2002a; Dewhirst 2004; FTC 2011a). It is particularly important for products such as cigarettes, which have a high degree of social visibility. Unlike many other consumer products, cigarettes are contained in packages that are displayed each time the product is used and are often left in public view between uses (Pollay 2001; Wakefield et al. 2002a). Cigarette packages also serve as a "badge" product. As John Digianni, a former designer of cigarette packages, noted, "A cigarette package is unique because the consumer carries it around with him all day.… It's a part of a smoker's clothing, and when he saunters into a bar and plunks it down, he makes a statement about himself" (Koten 1980, p. 22).

Tobacco Packaging and Brand Appeal

Tobacco packaging seeks to achieve the same general objective as other forms of marketing: to establish brand identity and to promote brand appeal. Research conducted by the tobacco industry consistently demonstrates that the brand imagery portrayed on packages is particularly influential during youth and young adulthood—the period in which smoking behavior and brand preferences develop (DiFranza et al. 1994; Pollay 2000, 2001; Wakefield et al. 2002a). In many cases, initial brand preferences are based less on the sensory properties of using the product than on perceptions of the package and brand: "one of every two smokers is not able to distinguish in blind (masked) tests between similar cigarettes.…for most smokers and for the decisive group of new, younger smokers, the consumer's choice is dictated more by psychological, image factors than by relatively minor differences in smoking characteristics" (British American Tobacco [BAT], n.d., Bates No. 500062147/2159, p. 5). The brand imagery on cigarette packages is effective to the point that large majorities of youth—including nonsmoking youth—demonstrate high levels of recall for leading package designs (Goldberg et al. 1995; Pierce et al. 2010).

Historically, a package's color has also helped to segment brands and establish brand identity. For example, silver and gold colors can be used to convey status and prestige, particularly for "premium" brands (Pollay 2001). Red packages and logos can convey excitement, strength, wealth, and power (Gordon et al. 1994; Kindra et al. 1994), while pastel colors are associated with freshness, innocence, and relaxation and are more common among brands that appeal to females (see example above) (Gordon et al. 1994; Kindra et al. 1994).

Brand descriptors—words that appear on packs and are often incorporated into the brand name—can also promote brand appeal among target groups. For example, "slims" descriptors on packs promote beliefs about smoking and weight control—an important factor in smoking

behavior among young women (USDHHS 2001; Carpenter et al. 2005a). In Canada, research conducted among young women and published in 2010 demonstrated that "slims" brand descriptors are associated with increased brand appeal and stronger beliefs that smoking is associated with thinness (Doxey and Hammond 2010). Other brand names also capitalize on desirable associations with female fashion and sophistication, including names such as Glamour and Vogue.

Similarly, packaging of smokeless tobacco products can communicate the strength of the product or its brand identity. Internal research conducted for U.S. Smokeless Tobacco revealed that smokeless tobacco users widely associated plastic containers with fruit flavors and youthful beginners. The cardboard/pasteboard and metal can packaging was associated with experienced users. Plastic packaging would have solved some of the problems with the smokeless product (retaining moisture, and freshness), but it was not a viable option for experienced Copenhagen users because the "beginner" perception relating to plastic packaging was so strong (B&W 1984).

Packaging and the Perception of Risk

Tobacco companies have made extensive use of cigarette packages to influence consumer perceptions about the potential risks of their products. A central feature of this strategy has been to use misleading brand descriptors. Words such as "light" and "mild" were ostensibly used in the past to denote flavor and taste, but "light" and "mild" brands were promoted in advertisements as "less harmful" (Pollay and Dewhirst 2001; Wakefield et al. 2002a). "Light" and "mild" descriptors were also applied to brands with higher levels of filter ventilation—small holes in cigarette filters (NCI 2001). Not only does filter ventilation dilute cigarette smoke to produce deceptively low tar and nicotine numbers under machine testing (NCI 2001; Kozlowski and O'Connor 2002), but it also produces "lighter tasting" smoke, which reinforces the misleading descriptors on packages. As a result, considerable proportions of adult smokers believed that "light," "mild," and "low tar" cigarette brands lowered health risk and were less addictive than "regular" or "full flavor" brands (Pollay and Dewhirst 2001). Indeed, many health-concerned smokers reported switching to these brands as an alternative to quitting (Gilpin et al. 2002). "Light" and "mild" descriptors may have also promoted the initiation of smoking among youth; one study found that U.S. youth believed that "light" and "mild" brands had lower health risks and lower levels of addiction than "regular" brand varieties, beliefs similar to those of adults (Kropp and Halpern-Felsher 2004). Similar findings were produced from an Australian study conducted in 2005 with secondary school students aged 13–15 years of age (Hoek et al. 2006). In the study, an estimated 50% of the students agreed that "light" cigarettes contain less tar than regular cigarettes, 40% believed that "light" cigarettes were less harmful, and approximately 30% believed that "light" cigarettes are easier to quit than regular cigarettes. Overall, the synergistic but subtle effect of brand descriptors, lower emission numbers, and "lighter" tasting smoke have undermined perceptions of health risk among smokers.

The *Family Smoking Prevention and Tobacco Control Act* (2009) now prohibit the descriptors "light," "mild," or "low" or similar descriptors in tobacco product label, labeling, or advertising unless an FDA order is in effect under the modified risk provisions of the statute. This restriction follows a U.S. Federal District Court ruling in 2006 that the terms "low tar," "light," "ultra light" and "mild" are deceptive (*United States. v. Philip Morris USA,* 449 F. Supp. 2d 1, 32 [D.D.C. 2006]). To date, more than 50 other countries have prohibited the terms "light," "mild," and "low tar" as part of prohibitions on misleading packaging under Article 11 of the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) (Hammond 2009b). However, recent research conducted in Australia, Canada, and the United Kingdom, suggests that prohibiting "light" and "mild" terms may be insufficient to significantly reduce false beliefs about the risks of different cigarette brands (Borland et al. 2008). Indeed, recent evidence suggests that significant proportions of adult smokers and youth in countries such as the United Kingdom continue to report false beliefs about the relative risk of leading cigarette brands (Hammond et al. 2009).

One potential explanation for these findings is the wide range of other descriptors that remain in use, including words such as "smooth" and color descriptors such as "silver" and "blue" (Hammond 2009a). Studies conducted in Canada and the United Kingdom after the removal of "light" and "mild" descriptors suggest that replacement words such as "smooth" have the same misleading effect as "light" and "mild"; as many as one-half of adults and youth in these studies reported that a brand labeled "smooth" would have lower risk than its "regular" counterpart (Hammond and Parkinson 2009; Hammond et al. 2009). In the United States, the names of colors are among the most common replacement descriptors for the terms "light" and "mild." For example, major brands, such as Marlboro, have used "gold" and "silver" to replace "light" and "ultralight," respectively. This same approach has been used by manufacturers in Canada, the European Union, and in other jurisdictions that have prohibited

"light" and "mild" descriptors. From three recent studies that examined consumers' perceptions of color descriptors in Canada, the United Kingdom, and the United States (Hammond and Parkinson 2009; Hammond et al. 2009; Bansal-Travers and Hammond 2010), it appears that consumers perceive the color descriptors in the same way as the "light" and "mild" descriptors they replaced. For example, in one study more than three-quarters of U.S. adults surveyed indicated that a brand labeled as "silver" would have lower levels of tar and less health risk than a "full flavor" brand (Bansal-Travers and Hammond 2010).

The persistence of false beliefs regarding level of risk may also be due to brand imagery and the color of packs (Pollay 2001; Wakefield et al. 2002a). Tobacco industry documents describe this phenomenon: "Lower delivery products tend to be featured in blue packs. Indeed, as one moves down the delivery sector, then the closer to white a pack tends to become. This is because white is generally held to convey a clean healthy association" (Miller 1986, Bates No. 105364841/4951, p. 2). Changing the shade of the same color and adjusting the proportion of white space on the package are commonly used to influence perceptions of a product's strength and potential risk. Indeed, a number of industry studies have shown that the color and design of the package actually influence sensory perceptions from smoking a cigarette, a process known as "sensory transfer" (Wakefield et al. 2002a). For example, when consumers smoke cigarettes placed in lighter-colored packs, they may perceive these cigarettes to taste "lighter" and less harsh than the identical cigarettes placed in darker-colored packs.

The colors of the packages and the brand descriptors they carry have also been closely integrated with the design of the cigarette. Although terms such as "light" and "mild" may have been arbitrary, they were typically applied to brands with greater filter ventilation. Package descriptors and the designs of the cigarettes reinforce the "lighter" taste of these brands and the lower tar numbers in ways that promote the belief that they are less harmful, despite evidence to the contrary (NCI 2001).

Plain (or Standardized) Packaging

Research on the removal of brand imagery on packages—so-called plain packaging—provides another source of evidence on the impact of brand appeal among youth (Freeman et al. 2007). Under a requirement for plain packaging, the appearance of cigarette packages would be standardized through the removal of all brand imagery, including corporate logos and trademarks (see example at right). Packages would display a standard background color, and manufacturers would be permitted to print only the brand name in a mandated size, font, and position. Other government-mandated information, such as health warnings, would remain.

Plain packaging has several potential effects. First, it enhances the effectiveness of health warnings by increasing their noticeability, recall, and believability (Beede and Lawson 1992; Goldberg et al. 1995, 1999; Hammond 2009a; Hammond et al. 2009). For example, in one study, New Zealand youth were significantly more likely to recall health warnings on plain packs than warnings on "normal" branded packages (Beede and Lawson 1992).

Second, plain packaging has the potential to reduce the level of false beliefs about the harmfulness of different brands. Recent research suggests that substantial proportions of youth and adults hold false beliefs that one brand is less harmful or easier to quit than another (Hammond and Parkinson 2009; Hammond et al. 2009). A 2009 study conducted among adult smokers and youth (both smokers and nonsmokers) in the United Kingdom found that when asked to compare varieties of cigarettes from eight different brands, 75% of participants falsely reported differences in risk between at least two of the varieties (Hammond et al. 2009). Removing the color and brand imagery from packages significantly reduced these beliefs. Plain packaging has also been shown to reduce beliefs about the link between smoking and weight control. In a 2010 study conducted among young women in Canada, women who viewed eight female-oriented packs with colors, such as pink, were significantly more likely to report that smoking "helps people stay slim" than women who viewed "plain" versions of the same packs (Doxey and Hammond 2010).

Third, plain packaging makes smoking less appealing. Research to date suggests that plain packages are less attractive and engaging than normal "branded" packs and may reduce the appeal of smoking among both youth and adults (Trachtenberg 1987; Northrup and Pollard 1995; Rootman and Flay 1995; Hammond et al. 2009; Germain et al. 2010). For example, a survey of Canadian youth found that strong majorities "liked" regular packages better than plain packages and indicated that plain packages

are "boring" and "uglier" than regular packages (Northrup and Pollard 1995). About one-third of respondents also reported that people their age would be less likely to start smoking if all cigarettes were sold in plain packages. A similar study of Canadian and U.S. youth found that plain packages reduced positive associations with packages and were associated with more negative associations, such as "boring" (Rootman and Flay 1995). More recent research conducted with adult smokers in Australia found that

> cardboard brown packs with the number of enclosed cigarettes displayed on the front of the pack and featuring only the brand name in small standard font at the bottom of the pack face were rated as significantly less attractive and popular than original branded packs. Smokers of these plain packs were rated as significantly less trendy/stylish, less sociable/outgoing, and less mature than smokers of the original pack (Wakefield et al. 2008, p. 416).

Similar results have emerged from a study of youth and adults in the United Kingdom (Hammond et al. 2009). Marketing research conducted on behalf of the tobacco industry with adult smokers also suggests that plain packaging reduces some of the appeal of smoking, as the following quote indicates:

> …when we offered them Marlboros at half price—in generic brown boxes—only 21% were interested, even though we assured them that each package was fresh, had been sealed at the factory and was identical (except for the different packaging) to what they normally bought at their local tobacconist or cigarette machine. How to account for the difference? Simple. Smokers put their cigarettes in and out of their pockets 20 to 25 times a day. The package makes a statement. The consumer is expressing how he wants to be seen by others (Trachtenberg 1987, Bates No. TA985253/5256, p. 3).

Together, these findings suggest that removing the color and brand imagery from packages reduces the appeal of cigarettes and may reduce their consumption. The position of tobacco companies on regulatory proposals to remove brand imagery also speaks to the importance of brand imagery. In 2008, Citi Investment Research noted,

> In the medium-term, we think plain packaging would go a long way to undermine the power of tobacco brands and it is the brands that make the industry so profitable. In our view, in cigarettes, the pack is the brand. Smokers handle their cigarette packs probably 20 times a day. Consumers pay a premium for certain brands for several reasons, but most would be undermined by plain packaging (Citi Investment Research 2008, p. 2).

Package Shape and Size

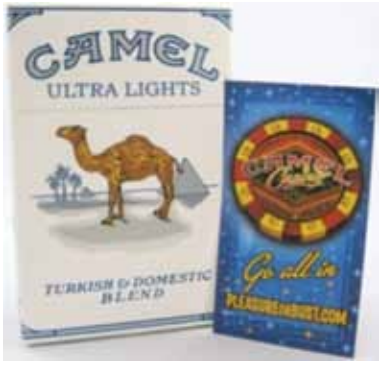
An additional component of mandated plain packaging could include regulations to standardize the shape and size of packages. Tobacco manufacturers have released numerous "special edition" packages, many of which have novel shapes and can open in different ways (Neuber 2009). Novel shapes and sizes may increase the appeal of cigarette brands and might be particularly engaging to youth. In particular, "slim" packages used to market female brands—such as the "purse" pack shown at right—may promote the widespread belief that smoking is an effective way to stay thin and control weight, an important predictor of tobacco use among girls (USDHHS 2001; Carpenter et al. 2005a; Doxey and Hammond 2010). Different shapes and sizes also have the potential to undermine the health warnings on packages. In some cases, the packages are so small and narrow that they either warp the pictures delivering the health warnings or render the text so small as to be unreadable.

Packaging shape may also be a useful marketing tool for smokeless products. The traditional smokeless product has been associated with a round can, but new smokeless tobacco products aimed at expanding the market beyond traditional users have been packaged in containers featuring a wide variety of shapes and sizes. Ariva, Revel, and the snus products have all used different packaging, perhaps to signal that they are not traditional tobacco products and that they are for different users (more urban, female, etc.) (Mejia and Ling 2010).

Tobacco Packaging and Other Forms of Marketing

Cigarette packages serve as both a form of advertising and a link to other forms of tobacco marketing (Wake-

field and Letcher 2002). As described elsewhere in this chapter, packages play a central role in point-of-sale marketing (Donovan et al. 2002; Wakefield et al. 2002b). Displays of packages in retail outlets, commonly referred to as "powerwalls," have high visibility among youth and help to establish brand imagery and social norms at an early age (Wakefield et al. 2002b; Dewhirst 2004, 2009; Pollay 2007). Packages can also be used to increase the reach of "below the line" marketing activities by incorporating references to specific promotional activities through limited-edition packs and plastic overwrapping. Recent examples include packages that promote the Formula 1 racing series, advertise Benson & Hedges Kool MIXX music promotions, and promote various events at nightclubs—all of which have considerable appeal among youth and young adults (Sepe et al. 2002; Carter 2003a; Hafez and Ling 2006) (see examples at right and below). In some cases, this information is printed directly on packs; in others, it is included as an "insert" or "onsert," both of which extend the surface area of the pack. On the basis of evidence in his study, Pollay noted, "The package is the last and most critical link in an integrated chain of promotional communications" (2001, p. 3). Since the *Family Smoking Prevention and Tobacco Control Act* became law in 2009, manufacturers, distributors, and retailers are in most instances prohibited from sponsoring any athletic event, musical, artistic, or other social or cultural events, using the brand name, logo, symbol, mottos, selling message, recognizable color, or pattern of colors of any brand cigarettes or smokeless tobacco. However, firms are permitted to sponsor such events in the name of their corporation, which manufactures the tobacco product (*21 CFR 1140.34(c)*).



Clearly, the package assumes even greater importance when other forms of cigarette marketing are restricted. Package displays in retail outlets typically become more prominent following advertising bans as part of a general increase in point-of-sale marketing (Celebucki and Diskin 2002; Wakefield et al. 2002c; Hammond 2006; Canadian Cancer Society 2008). Indeed, advertising bans have prompted many companies to redesign their packages to maximize their impact at the point of sale. Research on pack design conducted in 1994 for BAT stated, "… given the consequences of a total ban on advertising, a pack should be designed to give the product visual impact as well as brand imagery…. The pack itself can be designed so that it achieves more visual impact in the point of sale environment than its competitors" (Miller 1986, Bates No. 105364841/4951, p. 18). Packages are poised to play an even greater role with the advent of point-of-sale marketing bans, already implemented in countries such as Canada, Iceland, and Thailand. In the 1990s, Philip Morris executives remarked upon this eventuality: "Our final communication vehicle with our smoker is the pack itself. In the absence of any other Marketing messages, our packaging...is the sole communicator of our brand essence. Put another way -- when you don't have anything else -- our packaging is our marketing" (Hulit 1994, Bates No. 2504015017/5042, p. 22).

Packaging strategies can also be used to offset the impact of other tobacco control measures, such as increases in price and taxation. For example, internal tobacco industry documents indicate that packaging cigarettes into smaller, more affordable units (such as 10 cigarettes per package rather than 20) is an effective strategy for targeting price-sensitive youth (Cummings et al. 2002). Legislation in many countries, including the United States, now prohibits the sale of cigarettes in units less than 20; however, innovations in the physical shape and construction of packages (see example)—such as BAT's "wallet packs," which open like a book and can be separated into two smaller packages—have been criticized as an attempt to circumvent these prohibitions.

BAT's wallet packs were banned in Australia after the federal court in that country upheld an injunction against their sale (see picture previous page) (Chapman 2007). Tobacco companies have also explored packaging strategies to minimize the impact of health warnings, including changes in package design to make warnings less distinctive as well as the sale of alternate cases and covers that obscure warnings (Pollay 2001; Wilson et al. 2006). According to later research, further innovation in tobacco packaging is on the horizon: "Advances in printing technology have enabled printing of on-pack imagery on the inner frame card, outer film and tear tape, and the incorporation of holograms, collectable art, metallic finishes, multi-fold stickers, photographs, and images in pack design" (Freeman et al. 2007, p. 10).

Summary

Tobacco packaging provides a direct link to consumers as well as a highly visible form of marketing. In addition to establishing brand identity and appeal, packaging helps to shape perceptions of risk and the sensory experience of smoking. Packaging is influential during youth and young adulthood, the period in which smoking behavior and brand preferences develop. Packaging strategies will continue to evolve in response to restrictions on advertising and promotion as well as the issuance of labeling regulations that mandate larger health warnings and prohibit information deemed to be misleading or deceptive. As the exposure of youth to other forms of marketing becomes increasingly restricted, packaging will assume greater importance as a promotional tool.

The Influence of the Design of Tobacco Products on the Use of Tobacco by Young People

Designing Cigarettes for the Youth Market

Tobacco manufacturers have long recognized through their market research that certain brand features of cigarettes have greater appeal to beginning smokers than to established smokers (Cummings et al. 2002). An analysis of successful first-brand (the brand that is usually or mostly smoked by new smokers) strategies with young, presumably youth smokers, conducted by RJR, attributed Pall Mall's success in the 1940s and 1950s to the brand's promise of mildness that was conveyed by its longer length (Burrows 1984). Similarly, the success of Winston cigarettes with young smokers in the 1950s and 1960s was attributed to increasing awareness of the health effects of smoking, which helped create the demand for filtered cigarettes (Burrows 1984). In the late 1950s, cigarette manufacturers recognized that brands featuring filters were the most popular among young beginning smokers, as illustrated by internal company documents and shifting patterns in the cigarette brands popular with youth smokers between the 1953 and 1964 surveys (Danker 1959; Sugg 1959, 1964; William Esty Company 1964; Burrows 1984). A 1959 Philip Morris market research analysis concluded that "people want mildness.…We also should win more young nonsmokers with mildness" (Danker 1959, Bates No. 1001755243/5244, p. 1).

Creating a Product That Eases Initiation from Harsh Smoke and Nicotine Exposure

Nicotine is one of the harshest chemicals in tobacco smoke and the most important factor in tobacco dependence (Star Scientific, Inc. 2011a). Nicotine is usually highly aversive for first-time users, yet gradual exposure to the drug is the basis for developing dependence. Through trial, experimentation, and finally conversion to regular smoking, tolerance for nicotine develops (Carchman and Southwick 1990; Philip Morris USA 2002; Monell Chemical Senses Center 2003; Kreslake et al. 2008b; Connolly et al. 2011). To enhance initiation, it is important that a product balances the innate harshness of smoke with masking agents that allow inhalation. This can be done by affecting perceptions of potential harm via the stimulation of chemosensory neurons in the head and neck—features that affect the tactile, olfactory, and gustatory perceptions in a first-time user (Perfetti et al. 1984; Harji and Irwin 1992). Such receptors can be affected by stimulating cold receptors via menthol flavoring via the maillard browning process (a form of nonenzymatic browning similar to carmelization), and design features such as increased ventilation (Aulbach et al. 1991; NCI 2001; Peier et al. 2002). Since the first truly blended American cigarette emerged in 1917 with the Camel brand, the cigarette has gone

through a continued evolution to enhance the ability to optimize nicotine dosing both for initiation and maintenance of smoking (Carchman and Southwick 1990; RJR 1991).

In the 1960s, Philip Morris' Marlboro brand began to attract an increasing share of smokers, especially young males. A review of internal documents of the tobacco industry by Stevenson and Proctor (2008) recounts how Philip Morris scientists began experimenting with additives in their brands, including ammonia, diammonium phosphate, and various ethanolamines and carbonates, to improve the flavor of the smoke and enhance its smoothness.

By the mid-1970s, the Marlboro brand had become the dominant youth cigarette, and the other tobacco companies began to focus efforts on competing directly with Marlboro for market share (RJR 1974; Monahan 1977; BAT 1985). One of the strengths of Marlboro over Winston among young smokers was the perception that Marlboro was both smoother than Winston and less strong (Crayton 1971; Teague 1973b; Bernasek and Nystrom 1982; Burrows 1984; Stevenson and Proctor 2008).

In 1971, Philip Morris introduced Marlboro Lights with a ventilated filter to appeal to female smokers who desired a Marlboro blended cigarette that was perceived as less strong (Tindall 1984). By the early 1980s, Marlboro Lights had become the preferred brand among younger female smokers and had gained an increasing share of male smokers. As of 2005, it was the best-selling brand overall in the U.S. market and especially popular among adolescents (O'Connor 2005).

The success of Marlboro did not go unnoticed by competitors. For example, in 1981, RJR stated that Philip Morris had begun routinely using ammoniated reconstituted tobacco sheet in its cigarette brands in 1965, a time that corresponded to an increase in sales for Philip Morris brands, especially Marlboro (Philip Morris 1965; RJR 1981). The RJR report noted that its own market studies had shown better consumer response to brands using ammoniated tobacco sheet in the tobacco blend (Teague 1973a). The ammoniated products produced smoke perceived by consumers as being milder and smoother tasting, with positive flavor characteristics and a stronger physiological impact (Teague 1973b). Reynolds' scientists speculated that ammonia might improve the flavor of tobacco smoke by reacting with sugars to produce potentially flavorful compounds such as pyrazines (Rodgman 1982).

Internal documents reveal that the Marlboro cigarette's smoke, in comparison with RJR's own Winston brand, had a higher pH (higher alkalinity) and hence increased amounts of free nicotine in the smoke and a higher immediate nicotine kick, less irritation of the mouth, less of a "stemmy" taste and less Turkish and flue-cured flavor, and increased burley flavor and character (Crayton 1971; Teague 1973a). Reynolds' scientists noted that competitors' cigarette brands with rising sales, namely Kool and Marlboro, were using reconstituted tobacco sheet in their tobacco blend (Crayton 1971; Moore 1973; RJR 1973, 1981; Casey and Perfetti 1980; Bernasek and Nystrom 1982).

The steady growth of Marlboro, which came largely at the expense of declining sales for Winston, was cause for great concern within RJR management (RJR 1974; Monahan 1977). A 1973 report authored by RJR scientist Claude E. Teague, Jr., noted the importance of product features in successfully capturing a share of the youth smoking market:

> "…if our Company is to survive and prosper, over the long term, we must get our share of the youth market. In my opinion this will require new brands tailored to the youth market; I believe it unrealistic to expect that existing brands identified with an over-thirty 'establishment' market can ever become the 'in' products.… Thus we need new brands designed to be particularly attractive to the young smoker, while ideally at the same time being appealing to all smokers" (Teague 1973b, Bates No. 502987357/7368, p. 2).

Teague identified the following specific characteristics to be used in developing new brands tailored to the youth market: (1) nicotine level of 1.0–1.3 milligrams (mg) per cigarette, (2) pH level of the smoke delivered at a level (5.8 to 6.0) to ensure slow absorption of nicotine, (3) tar content of 12–14 mg per cigarette to achieve the desired taste and visible smoke, (4) bland smoke to address the low tolerance of the beginning smoker for irritation from the smoke, (5) 100-millimeter (mm) length to facilitate lighting, and (6) a reasonably firm rod (the barrel of the cigarette) (Teague 1973b).

A summary of a 1974 meeting of RJR senior scientists discussed cigarettes for beginning smokers, noting that such a cigarette should be "low in irritation and possibly contain added flavors to make it easier for those who never smoked before to acquire the taste for it more quickly" (Donati 1974, Bates No. 508454171/4174, p. 1). In that year, RJR began using ammoniated sheet material in its Camel Filter cigarettes; this material was added to Winston Kings in 1979. Later internal documents from RJR noted increased sales performance for both of these brands associated with the use of ammoniated reconstituted tobacco sheet (Casey and Perfetti 1980; RJR 1981; Bernasek and Nystrom 1982).

According to internal industry documents, Camel's success among young smokers in the late 1980s and 1990s was, in addition to marketing methods, the result of changes in product design to make the brand as attractive as Marlboro by creating a smoother and less harsh cigarette (Cohen 1984; Wayne and Connolly 2002). According to Wayne and Connolly (2002), RJR scientists experimented by using different blends in the front and the end of the cigarette; a puffed tobacco filler (involves a process of puffing leaves); new reconstituted tobacco blends using diammonium phosphate; new humectants (Hystar) to replace glycerin; new flavor additives combining chocolate, vanillin, and licorice at levels below what is traditionally viewed as characterization for food; changes in the circumference and density of tobacco in the rod; and the use of carbowax in the filters to alter sensations in the mouth and the perception of harshness. First-time young adult male smokers were the target group, and the term "smooth" became the main advertising theme for the brand. The use of a cartoon character of a camel called the "Smooth Character" emphasized "smoking pleasure," "smooth taste," and "less harshness." In this case, the design of the cigarette was intentional and interrelated to its marketing (Wayne and Connolly 2002).

Menthol and Other Flavor Additives

The demand for cigarettes that could provide a less harsh taste contributed to the growth of menthol cigarettes in the 1960s and 1970s (Kreslake et al. 2008a,b). By 1974, two menthol brands, Kool and Salem, were the second and third most popular brands among youth smokers (Cummings et al. 2005). Another menthol brand, Newport, was repositioned by Lorillard in the early 1970s by intentionally lowering menthol levels, which smoothed the smoke through action on thermal receptors and did not create aversive effects for new smokers from the high levels that would stimulate pain or nociceptors (Kreslake et al. 2008a).

As a milder, hipper version of Kool cigarettes, by the mid-1980s, Newport had captured a large share of the youth market (Achey 1978; Lorillard 1993a). Since then, Newport has continued to be the preferred brand of cigarettes smoked by African American youth and, overall, is the second most popular brand among adolescent smokers today (O'Connor 2005). When RJR introduced the Uptown brand in Philadelphia in the late 1980s targeting young Blacks, it provided lower levels of menthol similar to Newport (Dagnoli 1989).

Tobacco companies have long known of menthol's ability to mask harshness associated with cigarette smoke, increase the ease of smoking, and provide a cooling sensation that appeals to many smokers, particularly new smokers (Garten and Falkner 2003; Wayne and Connolly 2004; Klausner 2011; Lee and Glantz 2011). First created in 1925, menthol cigarettes were not developed specifically to appeal to youth, but by the mid-1970s tobacco industry market research began to find that they were popular among young smokers because they were perceived as less harsh and easier to smoke (Kreslake et al. 2008a; Klausner 2011; Lee and Glantz 2011). Beginning in the 1970s, tobacco companies investigated the effects of adding different amounts of menthol to cigarettes (Klausner 2011). Kreslake and colleagues (2008a) and Klausner (2011) have shown that the industry adjusted the level of menthol in cigarettes to appeal to younger smokers. For example, in 1986 an RJR document observed:

> …once a smoker adapts to smoking a menthol product, the desire for menthol increases over time. A brand which has a strategy of maximizing franchise acceptance will invariably increase its menthol level. Thus, once a brand becomes successful, its product will evolve in a manner that is not optimal for younger adult nonmenthol smokers/switchers (RJR 1986b, Bates No. 505938058/8063, p. 2).

In 1987, a B&W document noted:

> Switching data … clearly show that KOOL KS [king size] and 100 are not attracting their fair share of starters. Newport, on the other hand, is performing above its fair share. …one basic product difference exists which can possibly explain part of the reason for KOOL's disparity among *starters*. Basically, it is that KOOL's menthol level is too high for *starters* [emphasis added] (Cantrell 1987, Bates No. 621079918/9921, p. 1).

By the late 1980s, all the cigarette manufacturers with major menthol cigarette brands had introduced low-level menthol varieties (Kreslake et al. 2008b). By the 1990s, Lorillard's Newport was the most successful menthol brand and was marketed with a youthful and fun campaign that often depicted young adults engaging in childlike, silly activities (Sutton and Robinson 2004). Again following Newport's successful lead in the youth and young adult markets, other companies, including RJR with its Salem menthol brand, copied the depiction of young people in their marketing materials (Klausner 2011). In 2008, Reynolds American introduced Camel Crush, a flavored extension of the Camel line. Packaged in a visually striking black and blue box, Camel Crush is a regular Camel cigarette (formerly marketed as Camel Light) with a tiny blue capsule inside its filter (Figure 5.4).

Figure 5.4 Camel crush package and filter flavor pellet

Source: Tobacco Labelling Resource Centre 2011a,b. Reprinted with permission from David Hammond.

When smokers squeeze and snap the capsule, it releases menthol. Other cigarette companies, such as Japan Tobacco, have experimented with the "crush" concept.

National survey findings on youth in the United States confirm that menthol cigarette use is disproportionately common among younger and newer teen smokers (Hersey et al. 2006, 2010; Rock et al. 2010). The latest data from the National Survey on Drug Use and Health (NSDUH) find that the rate of past month menthol cigarette use among persons aged 12 years and older has increased significantly from 7.7% in 2004 to 8.2% in 2010 (SAMHSA 2011). The survey found that the use of menthol cigarettes among young smokers aged 18–25 years increased significantly from 13.4% to 15.9% and remained stable among smokers aged 12–17 years, while nonmenthol cigarette use during this same time period in each of these age groups decreased.

Older industry marketing documents openly discuss the use of flavoring agents in cigarettes to attract the interest of young smokers (Teague 1954, 1969, 1973a; Philip Morris 1965; Crayton 1971; Marketing Innovations 1972; Ritchy 1972; Colby 1973; RJR 1973; Donati 1974; Achey 1978; Cohen 1984; Slone and Bonhomme 1993). For example, in 1972, B&W, in a review of new concepts for a youth cigarette, including cola and apple flavors as well as a sweet flavor, stated, "It's a well known fact that teenagers like sweet products. Honey might be considered" (Marketing Innovations 1972, Bates No. 170042014, p. 1). In the same year, RJR was speculating about a product that could target competitor brands (i.e., Marlboro and Kool) that had "exhibited exceptional strength in the under 35 age group, especially in the 14–20 group" (Ritchy 1972, Bates No. 501283430/3431, p. 2). One suggestion included an apple wine cigarette, an idea attributed to the growing popularity of fruit wines among young adults aged 18–25 years (Ritchy 1972).

Even after tobacco manufacturers agreed as part of the 1998 Master Settlement Agreement to discontinue any marketing that might appeal to adolescents, RJR introduced a new line of Camel cigarettes promoting unique flavors; these cigarettes had names such as Crema, Mandarin Mint, Aegean Spice, Mandalay Lime, Warm Winter Toffee, and Kauai Kolada (Sugg 1964; Connolly 2004; Carpenter et al. 2005b; Lewis and Wackowski 2006). In 2003, RJR introduced Salem Silver with flavored varieties such as Dark Currents and Cool Myst, and in the same year, B&W introduced Kool Smooth Fusions, which included flavored cigarettes such as Midnight Berry and Mocha Taboo (Sugg 1964; Connolly 2004; Carpenter et al. 2005b; Lewis and Wackowski 2006). In 2004, RJR and B&W merged to form Reynolds American, bringing all of these flavored brands under a single manufacturer. In 2005, Reynolds American introduced yet another line of Camel cigarettes, this time under the theme "High Roller High Ball," with varieties such as BlackJack Gin, SnakeEyes Scotch, and ScrewDriver Slots (Ashare et al. 2007). In 2006, however, Reynolds American voluntarily stopped selling 28 kinds of Camel, Kool, and Salem cigarettes that featured certain flavors as part of a settlement with state attorneys general who claimed that the marketing of flavored cigarettes violated the Master Settlement Agreement (Campaign for Tobacco-Free Kids 2006).

Cigarette manufacturers have consistently maintained that their flavored cigarette varieties were intended solely for adult smokers and were introduced to capitalize on consumer demand for special flavorings in products such as coffee and liquor (Finucane 2004). And yet, data from two nationally representative surveys conducted in 2004 found that younger smokers were more likely to

have tried a flavored cigarette than were older smokers (Klein et al. 2008). In one of these surveys, overall use of any flavored brands in the past 30 days was 11.9% among smokers aged 17–26 years and 6.7% among smokers aged 25 years and older.

A study of college students who were shown different advertisements for flavored and nonflavored cigarette brands found that they consistently rated the flavored brands more positively regardless of their smoking status (Ashare et al. 2007). Moreover, positive expectancies of a brand were correlated with an increased intention to try the brand, independent of the subjects' smoking status. Thus, the addition of special flavorings, such as those in Camel cigarettes, most likely allowed the manufacturer to make the brand itself (in this case Camel) more attractive to starter smokers.

Under Food Law, "flavor" is defined narrowly as an entity with characterizing or recognizable gustatory effects (Food and Drugs, 21 *CFR* §101.22 [2010]). In the case of menthol, Philip Morris tested an analogue of menthol called W14, developed by Wilkerson Sword Company, that removed the gustatory effects of menthol but retained its thermoreceptor effects (Seligman 1975). In the case of cigarettes, where the flavor may be combusted or combined with other flavors (as is the case with the maillard browning process), much more than gustatory effects play a role in the influence of the flavor on initiation and maintenance of smoking (Wayne and Connolly 2002). These would include olfactory, tactile, and other chemosensory responses. The tobacco industry has long argued that flavors are safe in cigarettes based on ingestion models. However, ingestion models are not necessarily applicable because a combusted flavor that is inhaled into the lungs may be far more dangerous than one ingested orally by the body.

The *Family Smoking Prevention and Tobacco Control Act*, enacted in the United States in 2009, prohibited a cigarette or any of its component parts from containing, as a constituent or additive, certain characterizing flavors (except menthol). The act also mandated the Tobacco Product Scientific Advisory Committee (TPSAC) to produce a report and recommendations on the public health impact of menthol cigarettes, including its use among children and racial and ethnic minorities (USFDA 2011b). The TPSAC concluded that "the availability of menthol cigarettes have an adverse impact on public health in the United States by increasing the number of smokers with resulting premature death and avoidable mortality." Consequently TPSAC made the following recommendation to FDA: (USFDA 2011b, p. 225) "Removal of menthol cigarettes from the maketplace would benefit public health in the United States." However, TPSAC did not recommend any particular action by FDA, noting that there were a variety of actions that FDA might take related to menthol cigarettes. The tobacco companies submitted their industry perspective document to the FDA in March 2011, and argued that menthol cigarettes had no disproportionate impact on public health (Non-voting Industry Representatives of the TPSAC Committee 2011).

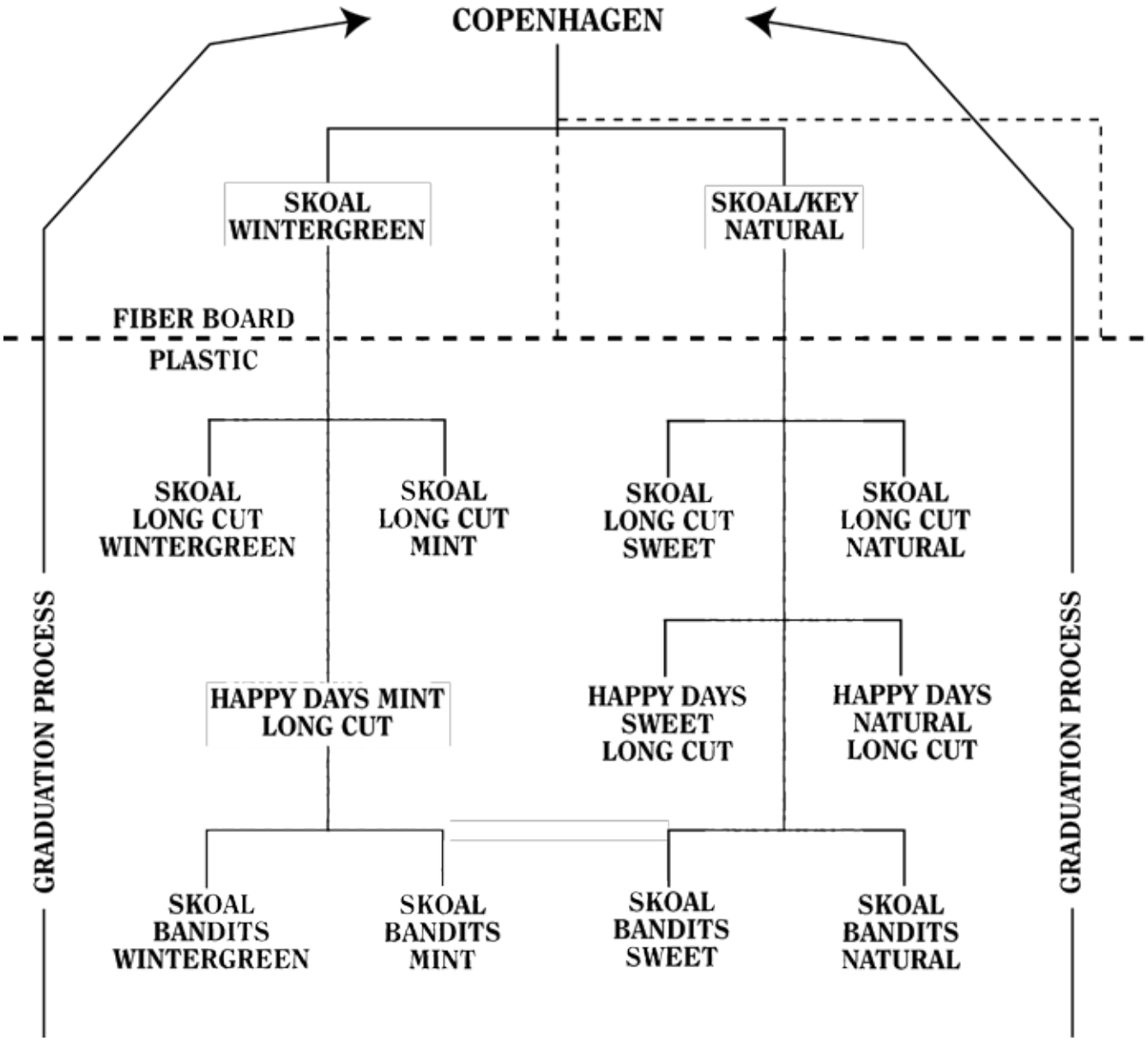
The Design of Other Tobacco Products

Cigarettes are not the only type of tobacco product used by youth; indeed, an increasing percentage of youth report using cigars and smokeless tobacco (Connolly 1995, 2004; Delnevo et al. 2003; Soldz et al. 2003; Carpenter et al. 2009; see Chapter 3). Since 1998, overall sales (all ages) of small cigars and moist snuff have increased, while cigarette sales have declined slightly (see Chapter 3). Much of the growing popularity of small cigars and smokeless tobacco is among younger adult consumers (aged <30 years) and appears to be linked to the marketing of flavored tobacco products that, like cigarettes, might be expected to be attractive to youth (Soldz et al. 2003).

Tobacco companies have long used wintergreen in the development of smokeless tobacco products, and more recently, multiple flavors. By the 1980s, U.S. Tobacco knew that new smokeless users preferred flavors (Connolly 1995) and that pH modifiers could alter pH, thus potentially affecting the level of free nicotine in the product (Manning 1981). In addition, U.S. Tobacco used mint and cherry flavored smokeless products as part of a "graduation strategy" with low free nicotine content to encourage new users to start with particular products and progress to others with higher levels of free nicotine (Figure 5.5; U.S. Smokeless Tobacco 1984). The effectiveness of such manipulations of free nicotine was confirmed in a National Institute on Drug Abuse study that demonstrated higher nicotine blood levels and stronger addictive effects in products with greater free nicotine levels (Fant et al. 1999). This integration of product design with marketing helped to reverse the mid-twentieth century decline in smokeless tobacco use and spurred a rapid increase in smokeless tobacco use by adolescents and young adult males (USDHHS 1986; Connolly 1995; Slade 1995; Tomar et al. 1995).

In 2007, Philip Morris purchased John Middleton Co., maker of the popular and inexpensive Black & Mild flavored cigars, and introduced a new line of flavored smokeless tobacco products using the Marlboro brand name (Carpenter et al. 2009). In 2005, Reynolds American purchased Conwood Tobacco Company (now American Snuff

Figure 5.5 Graduation strategy designed to encourage new smokeless tobacco users to start with products with low free nicotine content and progress to others with higher levels of free nicotine



Source: U.S. Smokeless Tobacco 1984; Connolly 1995.

Company), which manufactures a wide range of tobacco products, including Kodiak and Grizzly moist snuff and Captain Black little cigars, all of which come in a range of flavors. In 2006, Reynolds American began test-marketing Camel Snus, a smokeless tobacco product in three flavors: spice, frost, and original (Carpenter et al. 2009; Mejia and Ling 2010), and began test-marketing Camel dissolvable smokeless products in 2010 (RJR 2010a). Packaging portions of smokeless tobacco in teabag-like porous pouches was also viewed as a product innovation that might ease adoption of smokeless tobacco products among novices (Beetham 1985). This prevented floating of the tobacco in the mouth and the subsequent rapid release of nicotine. The new snus products on the market in 2011 use both

the portion pouch and flavored tobacco strategies. Internal industry documents as well as product testing revealed that, much as they did for cigarettes, manufacturers of smokeless tobacco altered the pH levels of their products to lower free-nicotine delivery in "starter products" that were widely distributed as free samples and were advertised as much less harsh (Connolly 1995; Djordjevic et al. 1995). Once the new user had adapted to low dose products, they were encouraged through marketing to progress to higher free-nicotine brands as dependence ensued. In addition, a recent paper by Carpenter and colleagues (2009) reveals that cigarette manufacturers are promoting smokeless tobacco products as a way for smokers to cope with restrictions on indoor smoking (also see Mejia and Ling 2010; Mejia et al. 2010). The strategy is to provide current smokers with an acceptable alternative they can use to satisfy nicotine cravings in places where smoking is not permitted.

Summary

Tobacco companies have always claimed that they do not want adolescents to use their products (Cummings et al. 2002, 2005). However, for a tobacco company to be profitable over the long term, it must compete successfully for a share of the youth market. As stated succinctly in one of RJR's marketing research documents, "Young adult smokers have been the critical factor in the growth and decline of every major brand and company over the last 50 years" (Burrows 1984, Bates No. 501928462/8550, p. 4). Internal documents and marketing practices from the industry reveal that in the past, manufacturers modified product design to enhance product appeal to novice users, including adolescents and young adults (i.e., 18- to 24-year-olds), a practice the industry has continued (U.S. Department of Justice n.d.).

Until the *Family Smoking and Prevention and Tobacco Control Act* (2009), the design and packaging of products was almost completely devoid of regulatory controls with the exception that package labels bear small text warning statements. (Henningfield et al. 2004). As a result, over the years tobacco manufacturers have relied on altering aspects of the product and its packaging as a way of attracting consumers, including new users. Policy options related to product design that have been suggested for reducing youth initiation include: (1) regulating aspects of product packaging, such as the quantity (e.g., mandating cartons only), (2) child proofing the package, (3) changing the look of the package (e.g., no color or images), and (4) modifying product design so the product itself becomes nonaddictive (e.g., limits on nicotine) and/or less palatable (e.g., no filter vents, no flavors). There are also methods that could be employed so the ingredients allow a smoker to continue but create aversion among a nonuser (Henningfield et al. 2004; Cummings et al. 2005, 2006). Making tobacco products nonaddictive, at least for youth, would have the positive effect of halting initiation quickly and permitting regular tobacco users to quit over time, which most would do (Teague 1972).

Tobacco Product Marketing at the Point of Sale

Introduction

Tobacco companies use the retail environment extensively to advertise and stimulate sales of their products (FTC 2011a). This section reviews the tobacco industry's point-of-sale strategies, the quantity and nature of retail tobacco marketing, young people's exposure to the industry's marketing messages and its impact on their smoking behavior, and policy options for affecting tobacco marketing in this environment.

The signing of the Master Settlement Agreement stimulated a dramatic shift of the industry to point-of-sale marketing, one of the few venues not affected by advertising restrictions. However, industry executives have recognized the importance of using displays and advertising at the point of sale for decades (Carter 2003b; Lavack and Toth 2006; Pollay 2007). Marketing expenditures reported by cigarette companies to FTC indicate that in 2008 tobacco companies spent approximately 84% of their marketing dollars in stores, including point-of-sale advertising, price discounts, retail promotional allowances, and retail-value-added items (see Table 5.1 for definitions and Table 5.2 for line item amounts; FTC 2011a).

Cigarette companies reach both current and future customers by advertising and promoting their products in stores (Carter 2003b; Lavack and Toth 2006); consumers, regardless of age, can be exposed to prosmoking messages in stores (Rogers et al. 1995). Most cigarettes and ads are strategically placed around checkout counters to ensure maximum exposure and stimulate impulse purchases (Pollay 2007). Like other companies in the retail sector, tobacco companies advertise, offer special sales, and try to

motivate retailers to sell their products by offering volume discounts, in-store branded displays, and payments for prime shelf space; these strategies are designed to move products off the shelves quickly (Belch and Belch 1995). When tobacco products are displayed and featured with a price cut, sales increase by up to 30% (Liljenwall and Maskulka 2001).

Point-of-Sale and Industry-Sponsored Programs That Influence Product Location

Industry documents confirm that tobacco companies have sought to make their products easily visible and readily accessible to customers to stimulate impulse purchases (Pollay 2007). To reach customers, tobacco companies often engage retailers in contractual agreements (Dewhirst 2004). These contracts secure the placement of packs and cartons in highly visible locations around the counter where consumers will notice them; in return, the companies provide volume discounts and other financial incentives to retailers so their products can be offered at lower prices than those of their competitors.

Cigarette companies exert substantial control over product location, advertising, and pricing in return for the financial incentives they provide to retailers. A Philip Morris contract for its Retail Leaders included several options for retailers to select their level of participation (Philip Morris USA 2004b); the options varied by the amount and type of financial incentives offered to the retailer and the amount of control over retail space that the retailer relinquished to the company (Bloom 2001). Financial incentives include volume discounts, special sales on the companies' current inventory, and multipack discounts. In return, the retailer is required to advertise sales and promotions, accept merchandising fixtures (branded shelving units and displays), follow a detailed marketing plan that includes allocation of shelf space and brand location on shelves, and agree to inspections, reviews of inventory, and audits by the tobacco company.

In one study, a majority of tobacco retailers from small retail outlets (62.4%) in California reported receiving financial incentives from one or more tobacco companies; the comparable figures for soda companies and snack food companies in similar outlets were 16% and 6.9% (Feighery et al. 1999). On average, in 1997 stores received $3,157 from tobacco companies. A nationally representative sample of retailers reported similar results: in 2001, approximately 65% of the retailers participated in at least one cigarette company incentive program, and nearly 80% reported control by the cigarette company over location of marketing materials in their stores. Furthermore, stores that reported receiving more than $3,000 from incentive programs in the previous 3 months engaged in significantly more advertising than did those receiving no money (Feighery et al. 2004). Earlier, Bloom reported substantially higher annual benefits of up to $20,000 paid to convenience stores for fully complying with the marketing programs of tobacco companies (Bloom 2001). This finding may indicate that convenience stores receive greater financial incentives because they sell more cigarettes than any other type of store (Center for Tobacco Policy & Organizing 2008).

The Store Environment: Point-of-Sale Marketing and Product Location

Marketing expenditures and promotional strategies can shape the retail environment in significant ways. A national study of more than 1,500 stores selling cigarettes in 2000 found that 95% had at least 1 branded cigarette marketing item, with an average of 13 (Clark et al. 2002). In another study, significant increases in the amount of externally visible advertising were observed between 1998 (before the Master Settlement Agreement) and 2000 (after implementation of the agreement) (Celebucki and Diskin 2002). In a longitudinal study of tobacco retailers in California, the mean number of cigarette marketing materials per store increased from 19.1 in 2000 to 26.1 in 2004, then decreased to 17.6 in 2008. The percentage of stores with at least one ad for a sales promotion (price reduction or multipack discount) increased from 68% in 2000 to 78% in 2008 (Roeseler et al. 2010).

Tobacco Marketing in Low-Income and Ethnically/Racially Diverse Neighborhoods

Documents from the tobacco industry reveal that cigarette manufacturers have used advertising to appeal to racial and ethnic minorities (Muggli et al. 2002; Balbach et al. 2003; Hafez and Ling 2006) and children (Perry 1999). Tobacco companies implemented marketing strategies specifically developed for small stores in inner cities and used zip codes to identify and incentivize retailers to reach the target population for menthol cigarettes—that is, "young, black, relatively low income and education" (Hudson 1979, Bates No. 666015851/5864, p. 2). Studies of stores that sell tobacco have confirmed that tobacco

industry marketing differentially appeals to people with the lowest income and education through point-of-sale advertising and that there is more in-store tobacco advertising in predominantly racially diverse and low-income neighborhoods (Wildey et al. 1992; Barbeau et al. 2005; John et al. 2009). A study of neighborhoods in eastern Massachusetts found that 19.4% of retail environments in a low-income neighborhood sold tobacco products, in contrast to only 3.7% of stores in an affluent neighborhood (Laws et al. 2002). In a study conducted in Ontario, Canada, stores in neighborhoods with lower median income contained more tobacco marketing and promotions than those in other neighborhoods (Cohen et al. 2008). In California, the amount of cigarette advertising and the proportion that included a sales promotion rose more rapidly over a 3-year period in stores situated in neighborhoods in which the proportion of African Americans was higher than the statewide average (Feighery et al. 2008). Similarly, menthol cigarettes were more likely to be marketed in stores near schools with higher proportions of African American students (Henriksen et al., in press).

Tobacco Marketing Strategies in Convenience Stores

More cigarettes are sold in convenience stores than in any other type of store (Dipasquale 2002). In 2006, cigarette sales generated nearly $400,000 in revenue per convenience store; these sales accounted for one-third of all sales inside a convenience store (Center for Tobacco Policy & Organizing 2008). About one-third of adolescents shop in convenience stores two or three times a week, and 70% shop in them at least weekly (Chanil 2001; Clickin Research 2005). Convenience stores have more tobacco advertising and promotions than other types of stores, which increases the likelihood of exposing youth to prosmoking messages while they are shopping and which can affect initiation rates among those exposed, particularly if stores are near schools (Centers for Disease Control and Prevention [CDC] 2002; Feighery et al. 2008; Henriksen et al. 2008, 2010). In fact, almost two-thirds of adolescents in the United States report seeing tobacco advertising all or most of the time when they visit convenience stores that do or do not sell gas (CDC National Youth Tobacco Survey [NYTS] public use data sets 2004; Duke et al. 2009).

The effect of tobacco advertising in stores is no doubt accentuated by its location. In most stores, the prime advertising space is around the checkout counter, where impulse buying is encouraged. In California, about 85% of stores were found to have marketing materials for tobacco products within 4 feet of the counter (Feighery et al. 2001). Nationally, a high proportion of tobacco shelving units (85%) and displays (93%) were located in the counter zone (Clark et al. 2002). The concentration of these types of merchandizing fixtures around the counter area suggests the important role played by packs and product displays in promoting sales (Wakefield et al. 2002a).

Another common practice is strategically locating tobacco-related marketing materials where young children will be exposed to them. Tobacco industry executives acknowledge that products and advertising should be placed at eye level (Pollay 2007), but in California, 48% of stores had at least one cigarette marketing item at or below 3 feet from the floor (Feighery et al. 2001). Furthermore, almost 25% had cigarette displays next to candy. In addition, a national study found that about one-third of the stores had low-height interior tobacco ads (Ruel et al. 2004).

Although self-service cigarette displays are prohibited under the 2009 act, that legislation does not prohibit product displays at the counter area. Following bans on counter displays in California, stores in some communities in that state put out contained transparent units with encased cigarette packs that preserved the display of products and brand imagery (Lee et al. 2001). Thus, access to the product may be restricted by the elimination of self-service displays, but exposure to the brand imagery may continue (Clark et al. 2002). Two studies conducted in countries that ban cigarette advertising at the point of sale confirm that exposure of adolescents to pack displays is associated with increased intentions to smoke among youth (Wakefield et al. 2006a; Paynter and Edwards 2009).

Tobacco marketing in stores close to schools is of particular concern because of the increased likelihood of exposure to prosmoking messages as students pass by or shop at these stores. In a study of retail outlets in 163 school catchment areas in the United States, more than 90% had some form of tobacco marketing materials; liquor and convenience stores contained more marketing materials for tobacco products than other types of stores (CDC 2002; Wakefield et al. 2002c). Stores close to schools were found to have more exterior tobacco advertising than stores further away (Rogers et al. 1995; Pucci et al. 1998), and stores where adolescents shop frequently have been found to have more cigarette marketing than other stores in the same community (Henriksen et al. 2004b). In Ontario, Canada, higher amounts of tobacco marketing and promotions were found in stores that were close to schools than in other stores (Cohen et al. 2008).

Immediately following implementation of the Master Settlement Agreement in 1998, significant increases in the prevalence of tobacco advertising and promotions (multipack discounts, gifts with purchase, and special sales) were reported in annual surveys of approximately

3,000 tobacco retailers in 175 school catchment areas (Wakefield et al. 2002c). More specifically, the proportion of stores with tobacco sales promotions increased from 45% in 1999 to 47% in 2002, and stores with interior tobacco advertising increased from 76% to 89% during the same time period (Ruel et al. 2004).

Retail Tobacco Marketing and Adolescent Tobacco Use

There is a growing body of evidence concerning the effects of exposing youth to tobacco marketing in stores. In one study, adolescents who reported frequent exposure to retail tobacco marketing were found to be more likely to attribute positive imagery to users of specific brands (Donovan et al. 2002). Elsewhere, in two experimental studies, students who saw photos of stores with tobacco displays and advertising were more likely to overestimate the percentage of adolescents and adults who smoke and to believe that tobacco is easier to buy than were those who saw photos without retail tobacco materials (Henriksen et al. 2002; Wakefield et al. 2006a). In another study, youth smokers preferred the brand most heavily advertised and promoted in the convenience store closest to school (Wakefield et al. 2002b).

Several cross-sectional studies have found relationships between exposure to retail tobacco marketing and experimentation with smoking (Schooler et al. 1996; Redmond 1999). Furthermore, in California, self-reported frequent exposure to retail cigarette marketing was independently associated with a significant increase in the odds of ever smoking (Henriksen et al. 2004a; Feighery et al. 2006). In New Zealand, where retail tobacco advertising is banned, a national cross-sectional study found that greater frequency of visits to stores selling tobacco was related to increased odds of susceptibility to smoking and experimentation among 14- to 15-year-olds (Paynter et al. 2009). In Canada, higher levels of advertised cigarette promotions and lower prices in stores situated in school neighborhoods were related to higher prevalence of smoking in those schools (Lovato et al. 2007). In the United States, a multiyear cross-sectional study of 8th-, 10th-, and 12th-grade students found a correlation between the amount of tobacco advertising and promotions in convenience stores near their schools; more specifically, higher levels of advertising, lower cigarette prices, and greater availability of cigarette promotions in stores all predicted smoking uptake among youth, and the availability of sales promotions increased the likelihood that youth would move from experimentation to regular use (Slater et al. 2007).

In a study that relied on a longitudinal survey of sixth graders in California, perceived exposure to cigarette advertising in stores and to actors smoking on television were both associated with greater susceptibility to smoking at follow-up, but this study did not examine the independent effect of retail cigarette advertising on smoking behavior (Weiss et al. 2006). Significantly, a later longitudinal study of more than 1,600 adolescents aged 11–14 years found that the odds of initiating smoking more than doubled for adolescents reporting that they visited the types of stores that contain the most cigarette advertising (convenience stores, liquor stores, and small grocery stores) two or more times a week. Although this study was limited by being conducted in a single California community, it was the first longitudinal study to document that exposure to retail cigarette advertising is a risk factor for initiation of smoking, after controlling for risk factors typically associated with uptake of smoking such as smoking by family and friends (Henriksen et al. 2010).

A systematic review of eight cross-sectional studies on the impact of tobacco promotion at the point of sale consistently found significant associations between exposure to point-of-sale tobacco promotions and initiation of smoking or susceptibility to that behavior. The authors concluded that the addictiveness of tobacco, the severity of the health hazards posed by smoking, the evidence that tobacco marketing and promotion encourages children to start smoking, and the consistency of the evidence that it influences children's smoking justify banning advertising and displays of tobacco products at the point of sale (Paynter and Edwards 2009).

Density of Retail Outlets and Tobacco Use by Adolescents

In addition to the amount and placement of in-store tobacco advertising and promotions, the number and location of stores that sell cigarettes must be considered (Ashe et al. 2003; Bonnie et al. 2007). Local zoning laws may be used to limit the total number of tobacco outlets as a way of reducing the availability of cigarettes and the visibility of cigarette ads; these laws may also require that tobacco outlets be located away from areas frequented by children (Ashe et al. 2003). Studies that have linked the density of alcohol outlets around college campuses to higher rates of drinking (Weitzman et al. 2003) and higher levels of adolescent drinking and driving (Treno et al. 2003) have set a precedent for the use of zoning laws to reduce adolescent smoking.

Neighborhoods that are more densely populated with stores selling tobacco may promote adolescent smoking not only by increasing access but also by increasing

environmental cues to smoke. Two studies found that the density of tobacco outlets in high school neighborhoods was related to experimental smoking but not to established smoking among high school (Leatherdale and Strath 2007; McCarthy et al. 2009) and middle school (Pokorny et al. 2003) students. In Chicago, Illinois, youth in areas with the highest density of retail tobacco outlets were 13% more likely to have smoked in the past month than those living in areas with the lowest density of outlets (Novak et al. 2006). In a California study, the prevalence of current smoking was higher in high schools with the highest density of tobacco outlets in their neighborhoods than in high schools in neighborhoods without any outlets; the density of retail cigarette advertising in school neighborhoods was also associated with smoking prevalence (Henriksen et al. 2008). The associations found between density of cigarette retail outlets and advertising and adolescent smoking, supported by studies linking the density of retail alcohol outlets and youth's alcohol use, support the recommendation of the Institute of Medicine to restrict the number and location of retail outlets for cigarettes in communities (Bonnie et al. 2007).

Summary

Research supports the policy option of regulatory control over the retail tobaco environment. Studies show that tobacco use is associated with both exposure to retail advertising, and relatively easy access to tobacco products. Because tobacco companies use powerful financial incentives to influence the retail environment, voluntary strategies may prove ineffective in reducing youth and young adult exposure to retail tobacco marketing. However, venues such as supermarkets, which derive a relatively small portion of their overall profits from tobacco sales, may be receptive to eliminating tobacco sales from their stores. In 2008, Wegmans, a regional food chain in the United States, voluntarily eliminated tobacco sales in its stores, attributing the company's decision to the deleterious effects of smoking on health (Wegmans 2008).

Pharmacies may also be receptive to eliminating tobacco sales because of the incongruity between their primary role in health care and the negative effects of tobacco products on health. A majority of pharmacists are against tobacco sales in pharmacies (Hudmon et al. 2006), but chain community pharmacies are generally opposed to restrictions on tobacco sales in this venue. Indeed, Walgreens, a chain drugstore, has challenged a San Francisco, California, law prohibiting tobacco sales in drugstores (Egelko 2010).

Unfortunately, voluntary, partial efforts to modify retail tobacco marketing will most likely do little to reduce youth smoking. Comprehensive restrictions on advertising and sales promotion have been found to significantly reduce cigarette consumption, but partial bans are often circumvented (Saffer and Chaloupka 2000). A wide variety of product displays, which are an important communication device, can be used as advertising (Chapman 1994; Fraser 1998; Barnsley and Jacobs 2000; Wakefield et al. 2002a). Thus, Article 13 of the FCTC calls for comprehensive bans on tobacco advertising and promotions (WHO 2003).

The growing body of evidence linking exposure to tobacco marketing at the point of sale to youth smoking behavior has created pressures to regulate tobacco marketing in this environment (Bonnie et al. 2007; NCI 2008; Paynter and Edwards 2009). Efforts to restrict the exposure of U.S. children to the marketing of tobacco products have been uneven, however, and narrowly focused on specific contexts and venues, such as those described in the Master Settlement Agreement (Kunkel 2007). Comprehensive bans on tobacco advertising and product displays at the point of sale, such as those in Iceland, Ireland, Thailand, and several Canadian provinces, are notable examples of a stronger approach (Hammond 2006; Lavack and Toth 2006).

The landmark *Family Smoking Prevention and Tobacco Control Act* (2009) granted authority to FDA to regulate the manufacturing, marketing, and distribution of tobacco products; this authority establishes a number of restrictions on tobacco marketing and sales to youth.

Chapman and Freeman (2009) have argued for examining the regulatory controls that are used for pharmaceutical sales in terms of their applicability to the tobacco retail environment. Such controls could involve restricting the number and location of tobacco retail outlets, the banning of tobacco retail displays, minimum price controls, and nontransferable retail licenses that could be revoked for noncompliance with laws. Other possibilities include banning price reduction strategies, eliminating tobacco sales from specific types of stores such as pharmacies, restricting times during which tobacco may be sold, and making mandatory the posting of anti-tobacco signage with quitline information (Ribisl 2010).

In conclusion, tobacco marketing at the point of sale is associated with the use of tobacco by youth. Because point-of-sale marketing is an important channel for the tobacco companies, with very few restrictions, consumers, including children, are unavoidably exposed to prosmoking messages when they shop or when they are simply passing by stores. Policy options include limiting the use of the retail environment by tobacco companies to reach youth, including both potential and current users of its products.

Digital Tobacco Marketing

Introduction: The New Digital Marketing Landscape

Although traditional tobacco marketing remains a potent force, the rapid growth of the Internet and the proliferation of digital media are fundamentally transforming how corporations do business with consumers—particularly young people—in the twenty-first century. Digital marketing has established a new paradigm that is transforming advertising and marketing as we know it (Chester and Montgomery 2007). Marketers reach across platforms, from mobile devices to personal computers, with highly interactive techniques such as viral video, "gamevertising," polls, contests, and the creation of "avatars," or electronic alter egos, which travel in online digital worlds (Moore 2006).

The key objective of digital marketing is to keep the user engaged and interacting with the brand. According to Montgomery and Chester (2009), the six key features of digital marketing are ubiquitous connectivity, personalization, peer-to-peer networking, engagement, immersion, and content creation. Each feature enables marketers to keep viewers in contact with the brand to a heretofore unprecedented degree and, in many cases, makes marketing and personal communications indistinguishable.

The techniques of digital marketing are part of sophisticated behavioral targeting in which the marketer collects data on the users' every move (e.g., every click of the mouse, sign-up for a contest, forwarding to a friend) to enable ever more precisely targeted marketing. Social media applications, in particular, are desirable for marketers who gain access not only to detailed profiles about users but also to those of their friends. Marketers seek to create "brand ambassadors," who promote the product in the context of their online communications, whether or not such promotions are recognized by the users or receivers as marketing. The effect is to blur the distinction between marketing communications and market research (Dewhirst 2009). The next section describes how tobacco companies have entered the digital media world.

The Tobacco Industry Online

In 2008, tobacco companies reported spending $13.2 million on their Web sites, but the FTC report outlining industry marketing and promotion expenditures did not identify additional spending on any other Internet advertising for cigarettes, such as banner ads or direct mail advertising to e-mail accounts (FTC 2011a). Internet advertising is relatively inexpensive compared to traditional forms of marketing, in part because companies garner brand exposures at no cost when, for example, site users forward links to friends. In the case of digital marketing, exposures may be a better measure than expenditures.

Numerous researchers and tobacco control advocacy organizations closely track industry marketing efforts. The tobacco companies' corporate Web sites tend to be neutral in tone and provide factual content such as public education and information for shareholders (Cruz 2009; Ribisl et al. 2009). For example, the RJR official Web site features career opportunities and news updates, and the Web site of Philip Morris USA carries information on company highlights, recent developments in tobacco legislation and regulation, and a section on smoking cessation.

Web sites that promote specific brands and engage in electronic mail marketing could potentially have greater appeal to youth than do the companies' corporate Web sites. In 2004, B&W launched its Kool MIXX hip-hop ad campaign and included a Web component for that campaign (Hafez and Ling 2006; Ribisl et al. 2009). The Web site, called the House of Menthol, provided information about a national disk jockey battle, free software demonstrations, the history of hip-hop, and lists of retail stores where smokers could purchase the special-edition Kool MIXX cigarette packs. B&W voluntarily pulled the Kool MIXX ad campaign, including the Web site, after several state attorneys general threatened to sue, claiming that the campaign violated the Master Settlement Agreement because it targeted youth.

RJR has established Web sites at which smokers can participate in online surveys and be entered into sweepstakes as an incentive for their participation (Lewis et al. 2004). For example, RJR successfully used the Internet to elicit consumer feedback in the redesign of its Camel brand and Camel Signature Blends (Freeman and Chapman 2009). The Camel Web site (RJR 2010d) reportedly boasted that more than 5 million smokers were invited to participate in this process (Freeman and Chapman 2009). Although Camel relied on password-protected sites for consumer input, researchers Freeman and Chapman reported that they obtained passwords to the site without ever having to provide proof of age or identity. In addition, Camel's Web site has featured lifestyle content for young adults and spotlighted brand-sponsored events (Cortese et al. 2009).

In 2011, the branded Web sites for Marlboro and Camel promoted both cigarettes and the cigarette-branded smokeless tobacco products (Philip Morris USA 2011; RJR 2011). This practice could increase with the rising number of alternative tobacco products, including snus, dissolvables, and other smokeless products, which some advocates fear could be attractive to youth (Campaign for Tobacco-Free Kids 2010a). In addition, features on brand Web sites for tobacco products in 2011 included "instant win" sweepstakes, interactive games, participatory activities, blogs, message boards, and coupons (Philip Morris USA 2011; RJR 2011).

So far, however, the tobacco industry's overt presence on the Web seems to be less than that of the alcoholic beverage industry (Center on Alcohol Marketing and Youth at Georgetown University 2007; Mart et al. 2009; Chester et al. 2010) or the food industry (Chester and Montgomery 2007; Montgomery and Chester 2009). In addition, federal law prohibits the advertising of cigarettes or smokeless tobacco on "any medium of electronic communication subject to the jurisdiction of the Federal Communications Commission" (FCC) *Public Health Cigarette Smoking Act of 1969* (1970). Moreover, with the 2009 legislation granting FDA regulatory authority over tobacco products, the cigarette manufacturers may be cautious about raising their Internet profile to avoid potential imposition of restrictions on Internet marketing.

Three basic categories of tobacco-related Web sites are discussed below: those that sell tobacco, the industry-sponsored brand name or corporate image sites, and the loosely defined social networking sites (including personal Facebook pages that mention tobacco, discussion groups, and YouTube videos).

Online Sales of Tobacco

Typing "discount cigarettes" into a Google search in late 2011 yielded more than one-half million Web sites (Google 2011). Selling cheap tobacco over the Internet is both a big business and a significant challenge to those wishing to promote public health.

The tobacco-for-sale sites are used to advertise or market cigarettes as well as to sell tobacco products at discount prices that increase demand among both youth and adults; these prices generally reflect successful attempts to avoid taxes. Indeed, cigarette prices on the Internet rarely include state excise or local sales taxes and frequently do not include the applicable federal and local excise taxes (Connolly 2001). Online retailers usually purchase huge quantities of cigarettes in states with low excise taxes or from American Indian reservations or foreign countries (about one-half of the cigarette-sales Web sites are based outside the United States) and then sell at a significantly lower rate than consumers would pay at brick-and-mortar retail outlets.

Most Web sites carry some warning that sales to people under the age of 18 years are not allowed, but there is generally little if any enforcement (Ribisl et al. 2001). Moreover, Malone and Bero (2000), in examining 141 Web sites that marketed cigars, found that those sites offered low prices, and 32% accepted payment methods accessible to youth such as money orders or cashier's checks; nearly 30% featured elements with youth appeal, such as cartoons, music, or moving images.

Ribisl and colleagues (2001, 2009) identified 88 Internet cigarette vendors (ICVs) in January 2000 and about eight times that number (775) in 2004. Researchers have found that most online tobacco vendors have sold to consumers without verifying their age. In a 2001 survey of purchases, for example, youth aged 11–15 years were successful in 76 of 83 attempts (92%) in purchasing cigarettes from 55 Internet vendors (Ribisl 2003). In addition, Jensen and colleagues (2004) found that 96.7% of minors aged 15–16 years were able to find an Internet cigarette vendor and place an order in less than 25 minutes, with most completing the order in 7 minutes or less. In that study, 77% of youth successfully received their orders, with 91% of the packages delivered without requests for proof of age.

Several epidemiologic studies have examined the prevalence of buying cigarettes online among youth who smoke. According to one such study, in 1999–2000, 2% of 1,689 current smokers under 18 years of age in California reported attempting to purchase cigarettes online (Unger et al. 2001). Those who attempted online purchases were younger, smoked more frequently, and reported greater perceived difficulty in obtaining cigarettes from commercial and social sources than those who did not try online purchases. A 2001 study of 1,323 ninth-grade smokers in three western New York counties obtained similar results, finding that more than 2% of these youth reported having ever purchased cigarettes online (Abrams et al. 2003). Those who had been refused cigarette sales at retail outlets in the previous month were more than three times as likely to purchase cigarettes online as youth who had successfully purchased cigarettes at a retail outlet in that period. In a follow-up survey, the proportion of ninth-grade smokers reporting ever having purchased cigarettes online rose to 6.5%, with more than 5.2% having purchased online in the past 30 days (Fix et al. 2006).

The legislation that granted regulatory authority over tobacco products to FDA requires that agency to issue new regulations regarding the sale and distribution of tobacco products that occur through means other than a direct face-to-face exchange; it also mandates the issuing

of regulations to address the promotion and marketing of tobacco products distributed through means other than a face-to-face exchange (*Family Smoking Prevention and Tobacco Control Act* 2009). The total number of cigarettes sold over the Internet is unknown; similarly, it is not known exactly how many of these sales are to youth, but the ease with which underage buyers can get cigarettes online suggests that the number could be substantial. As of late 2011, it did not appear that online sales sites are owned, directly or indirectly, by tobacco companies.

In March 2005, major credit card companies and PayPal banned the processing of sales for ICVs and, later that year, private carriers such as UPS and FedEx agreed not to deliver products from ICVs. Ribisl and colleagues (2011), who sought to determine the effect on ICVs of shipping and credit card bans implemented in 2005, visited ICV Web sites in 2003, 2005, 2006, and 2007. The authors found that after the shipping and credit card bans, the proportion of vendors accepting credit card payments decreased from 99.6% to 37.4%, but they found that the proportion of ICVs accepting checks or money orders increased from 29.6% in 2004 to 78.3% in 2006. Similarly, the proportion of vendors shipping via UPS, FedEx, or DHL decreased from 27.0% in 2004 to 5.6% in 2006; the proportion of vendors shipping via the United States Postal Service (USPS) increased from 69.4% to 92.7% in the same timeframe. In addition to the changes in payment and shipping methods, the authors found that visitor traffic for the 50 most popular ICVs decreased at a 16% monthly rate from March 2005 until October 2005; from October 2005 until January 2007, these same ICVs experienced a 2.5% monthly rate of decline.

Despite the relative ease with which youth can purchase tobacco from Internet sites, there is little evidence that these commercial sites are being actively marketed to youth (Jenssen et al. 2009). The new trend in advertising and marketing to youth is through other methods, such as social media (Idaho Department of Health and Welfare 2011). The *Prevent All Cigarette Trafficking Act of 2009* (2010), effective as of June 29, 2010, which is designed to reduce tax evasion from online sales, as well as online sales to youth, may also hinder online marketing to youth (Campaign for Tobacco-Free Kids 2010b). Research is needed to understand the actual effects of the new law (Ribisl et al. 2011).

Tobacco Industry Corporate and Brand Web Sites

In addition to the corporate Web sites of the tobacco companies, some Web sites are dedicated to particular brands. For example, the top-selling Marlboro brand has its own site (Philip Morris USA 2011), but accessing the site is difficult (Freeman and Chapman 2009). Some consumers are invited to register on the site via information collected from other promotions, such as coupons or face-to-face giveaways, and these people are given a special code for signing in. However, others must register separately and go through a cumbersome process to verify that they are 21 years of age or older. Other companies take a similar approach (see, e.g., RJR's "tobacco pleasure" site) (RJR 2010c).

There are also many Web sites for specific brands of smokeless tobacco (see, e.g., Web sites for Copenhagen and Skoal [U.S. Smokeless Tobacco Co. 2010a,b], Red Man [Pinkerton Tobacco Co. 2010], snus [RJR 2011], and other tobacco products—including dissolvables [RJR 2010a; Smokers Only 2010]). All of the sites now require registration; most include videos, games, contests, and message boards that could appeal to youth and young adults.

The creativity of the companies and their marketing advisors pose challenges to efforts to prevent youth's tobacco use. In 2008, two industry informants provided Australian tobacco control researchers a copy of a marketing presentation by a brand management company that had assisted RJR in developing an open source marketing campaign for its Camel cigarette brand (Freeman and Chapman 2009). "Open source marketing" is a term that evolved from the early development of computer software by volunteers who helped develop and then publicize new, free software applications. In marketing, however, the term refers to the blurring of market research and marketing itself. In this case, consumers were solicited online to take an active part in developing new packaging designs for RJR's Camel cigarettes. The project eventually gathered input from 30,000 participants and led to four new variations in packaging for Camels. Because of potential problems arising from the packages' cartoon-like designs, however, RJR's new Camel packages were never used.

This sort of campaign strategy is used regularly by other major marketers (Montgomery and Chester 2009; Chester et al. 2010). For example, PepsiCo's DEWmocracy campaign, an aggressive social media marketing campaign for Mountain Dew, encouraged its youth target market to become brand cocreators with a video contest to select flavors, names, colors, and other marketing details (BevReview 2008; Chester et al. 2010). The fan-created flavor sold 11 million cases (Burns 2009). The tobacco industry was an early pioneer in developing interactive customer involvement marketing (Anderson and Ling 2008).

Corporate-Sponsored Pages: RJR's "My Smokers' Rights"

The site for RJR's smokers' rights group (RJR 2010b), established in 2003, aims to be a clearinghouse

for tracking efforts in tobacco control policy throughout the country at the state and local levels. The site features a U.S. map on which users can click to see the status of tobacco control policy efforts in their state.

The site requires users to fill out a fairly detailed registration form that asks for their name, birth date, e-mail address, home address, and telephone number and their opinion on current tobacco control issues (e.g., whether tobacco taxes unfairly target a minority of the population and whether efforts to curtail public smoking have gone too far). Once the form is filled out, confirmation is sent via e-mail, and the company has contact information for its database.

The site encourages interaction and extended engagement. Once people are members, a personal page with the user's state and federal legislators is established. Users are then asked to contact the appropriate legislators to voice their opinion about pending tobacco control policies. Letting their state senator know that they oppose an increase in excise taxes on tobacco, for example, requires just the click of a button.

The focus of the site appears to be encouraging opposition to tobacco control policies; there is no information about RJR's brands or off-topic diversions such as games or other links. The site is consistent with the tobacco companies' well-documented efforts to foster political activism that has the appearance of being independent of the industry (Traynor et al. 1993; Smith and Malone 2007).

Internet Marketing of Cigars and Smokeless Tobacco

To date, there is still little information regarding Internet marketing and the sales of cigars and other tobacco products beyond cigarettes. A 1998 study conducted by Malone and Bero (2000) examined Web sites used to market cigars and found that only about one-fourth prohibited sales to minors and that almost one-third of the sites featured cartoon characters or employed other marketing techniques that appeal to youth; very few sites (3.5%) explained the health effects of cigar use (Malone and Bero 2000). Last, Wackowski and colleagues (2011) analyzed the Camel Snus message boards and found that this product appealed to both current smokers and users of other smokeless products. These researchers also found that users of the message boards shared their experiences with Camel Snus and urged a national release of the product. Wackowski and colleagues (2011) determined that the message boards provided beneficial marketing research to RJR for its new Camel Snus product.

E-Cigarettes

Ads for electronic cigarettes (e-cigarettes), which are not currently sold under existing cigarette brands, are prevalent on the Web. Information about e-cigarettes is disseminated widely through Internet ads, blogs (e.g., Electronic Cigarette Tavern [2010] and Electronic Cigarette Magazine [2010]), and commercialists (e.g., Electronic Cigarettes, Inc. [2010] and SmokingEverywhere [2011]). Electronic cigarettes are battery-powered devices that heat a liquid nicotine solution inside a cigarette-shaped tube that users draw on to inhale a nicotine-filled vapor. They have been sold primarily over the Internet through commercial Web sites (Noel et al. 2011) and, to a lesser extent, through mall kiosks and tobacco stores. Web-based searches using the terms "electronic cigarette," "e-cigarette," and "e-cig" retrieve hundreds of sites that sell and/or promote electronic cigarettes, including retail marketing sites, electronic cigarette advocacy sites, blogs, advertorials, press releases, and sponsored articles. Commercial electronic cigarette Web sites include a variety of messages to promote the products, including that they are a safer, and/or healthier, alternative to smoking tobacco cigarettes (Blucigs 2011; Direct E-cig 2011; Smoking Everywhere 2011). Other messages are that electronic cigarettes are a new or modern way to smoke (Smoking Everywhere 2011), and can be used in places where tobacco smoking is not allowed (Gamucci 2011; Smoking Everywhere 2011). Many sites include instructional how-to videos (Blucigs 2011; Greensmoke 2011), testimonials about the benefits of using electronic cigarettes (Blucigs 2011; Gamucci 2011), and imagery of people using the products in venues that are covered by smoke-free laws (Blucigs 2011). Some of the sites also use social networking features, such as Facebook and Twitter, to encourage visitors to support, or "like," their products or to connect with other users (Blucigs 2011). The products are offered in various flavors, including tobacco, menthol, coffee, fruit, and candy-like flavors such as Turkish delight (Henningfield and Zaatari 2010). The U.S. Court of Appeals for the District of Columbia ruled that these products could not be regulated as drug delivery devices unless they are marketed for therapeutic purposes (USFDA 2011a).

Tobacco Social Networking Web Sites

The Internet makes it easy to find a group, blog, or individual page with a positive message about the use of tobacco. These messages might include expressions of individual appreciation and support of a favorite brand, advocacy against restrictions on smoking, or assertions

that someone is sexually attracted to smoking and smokers. The origin of this content is often unknown, and it could simply reflect the actions of independent individuals or be content that is disseminated by tobacco companies or their allies (Ribisl 2003; Freeman and Chapman 2009). At the same time, the content and structure of the sites further tobacco industry interests in the same manner as smokers' rights magazines or campaigns promulgated by the Tobacco Institute did in the past (Cardador et al. 1995; Smith and Malone 2003, 2007; Lopipero and Bero 2006).

At least some of these sites could be considered appealing to youth; many are well maintained, regularly updated, and followed by very large numbers of people. Ribisl (2003) reviewed 30 Web sites on smoking; in all, 35% of the sites promoted cigarette brands, and 95% of the photographs featured people who were modeling smoking behavior. These sites also highlighted smoking scenes in popular movies and smoking by celebrities. Elsewhere, Hong and Cody (2002) conducted a content analysis of 318 protobacco Web sites and found that only 11% featured any type of health warning. Smoking was frequently associated with "glamorous" and "alternative" lifestyles, and the sites contained numerous images of young male and young, thin, attractive female smokers.

Smoking Promotion Web Sites

Yahoo!, Facebook, and Google all host smoker's groups for youth on their Web sites. A July 2010 search on Yahoo! Groups using the term "smoking" produced more than 5,000 results, including many cessation sites but also some that linked to groups that take a positive view toward tobacco. These include clubs with names such as HappySmokers and Smokerhouse1, which provide commentary on the virtues of smoking and often depict youth enjoying cigarettes. Other groups, such as Male Celebrities Smoking 3, glamorize smoking in the media and include photos of celebrities smoking, many of whom are popular with youth audiences.

A few of the prosmoking blogs are described below:

- The Smoker's Club (2010), a clearinghouse for protobacco information, includes clippings from newsletters, forums, chat rooms, and advice for opposing advocates for tobacco control.

- RJR's My Smokers' Rights page (described earlier in this section) (2010b) provides state-by-state as well as federal and local information on current efforts in tobacco control policy and suggestions for opposing these efforts.

- Smoking Lobby (2010) is a forum where people can discuss how to oppose smoking bans, identify places where people are still allowed to smoke in public, and obtain information on discount cigarettes online. In addition, visitors to the site can purchase merchandise, such as smokers' rights t-shirts.

There are countless group pages on Facebook, MySpace, Yahoo!, and similar sites that range from efforts to organize local prosmoking supporters (Yahoo! Groups 2010a,b) to pages simply dedicated to an individual's appreciation for smoking (Facebook 2010a). A very basic search of any social networking site quickly reveals hundreds or thousands of similar sites. Many are either clearly the product of individual consumers or attempts to share information about tobacco prices and/or policy. The tobacco social networking sites do not appear to feature the elaborate integrated marketing campaigns that appear on sites for other consumer products, such as alcoholic beverages (Mart et al. 2009; Chester et al. 2010), or on sites designed for children (Moore 2006). However, public health practitioners and researchers should continue to monitor social networking sites because integrated marketing of tobacco products to youth could go undetected.

Smokers' Rights Web Sites

RJR's site for its smokers' rights group is not the only Web site that focuses on this topic. Many of the Web sites that can be found with a search for "cigarettes" or "smoking" appear to have been created by individuals seeking a venue to complain about the treatment of smokers in society and serve as a place for these persons to proudly and unapologetically identify themselves as smokers. The tobacco companies' involvement with these Web sites has not been documented. However, the companies played an important role in getting smokers' rights groups, including the American Smokers Alliance and National Smokers Alliance, organized in the 1980s and 1990s as part of efforts to oppose local and state smoking restrictions and tobacco taxes (Samuels and Glantz 1991; Traynor et al. 1993; Cardador et al. 1995; Stauber and Rampton 2002). The industry also has played an active role in creating the smokers' rights movement, but it has often worked to hide its involvement (Samuels and Glantz 1991; Traynor et al. 1993; Cardador et al. 1995; Stauber and Rampton 2002). Other than the RJR Web site, whether or not tobacco companies play a role in current smokers' rights Web sites is not known.

Similar to the procigarette Web sites, there are several Web sites devoted to policy and advocacy related to electronic cigarettes (CASAA 2011; Electronic Cigarette

Ban 2011; Vapors Network 2011). These Web sites include opportunities for membership, lists of policies related to electronic cigarettes (e.g., whether their sale or import is banned, whether they are included in smoke-free policies), and suggested actions to oppose restricting the sale or use of electronic cigarettes.

There are thousands of Web pages that deal with smokers' rights, but few seem to have garnered a large audience. Although these sites seek to gain demographic and political information from their users, they do not appear to be designed to share information on brands or to nurture brand loyalty among adults or children. Many may be visited or even maintained by minors, but they do not seem to be especially appealing to youth as they lack the games, videos, and interactivity that are common on sites more overtly designed for youth.

The global Facebook Smokers' Rights (2010b) page, which was created in 2007, had only 300 members as of January 2010, but was one of the more popular pages of this type on the Web (based on a Web search, July 2010); in contrast, a generic Facebook page titled "Smoking" (2010c) but not linked specifically to smokers' rights had 101,888 people who "liked" it ("liked" is a Facebook term for page approval, with links back to a Facebook member's page). The 300-member smokers' rights group that developed through Facebook was founded with the objective of defending and looking after the "rights of smokers all around the globe" and has as its slogan, "It is not my cigarettes that might kill you, Please go search for other reasons and I am sure that there are many" (Facebook 2010b). The site features photographs, comments from visitors, and two videos: an old television commercial for Winston cigarettes featuring characters from "The Flintstones" and a comedy routine decrying the eroding rights of smokers. Other than its subject matter, this site is similar to other individual Web pages in that it is low tech and features no interactive or special features common to commercial sites. There is no information about specific tobacco brands on the site and, apart from a few comments from individuals, no call for advocacy to support smokers' rights.

At this time, the sheer number of individual Web pages that mention tobacco makes it very difficult to track them comprehensively. Verifying that none of them has been established by tobacco companies is extremely difficult. In a 2009 study that tracked a random group of 346 adolescents for 30 days, the authors found that of the approximately 1.2 million pages these youth viewed, 8,702, or less than 1%, contained smoking or tobacco content (Jenssen et al. 2009). Even though these pages constituted a small minority of total pages viewed and included antitobacco as well as protobacco messages, there is an obvious incentive for companies to participate in these virtual communities; interest in the products offered by the tobacco industry is evidenced by the number of hits returned by a search.

Exposure of Youth to the Marketing of Tobacco on the Internet

The studies examining the exposure of youth to online tobacco marketing have included surveillance surveys based on self-reports and content analysis of the archival Internet content typically viewed by youth. The 2004 NYTS conducted by CDC found that 34.1% of middle school students and 39.2% of high school students reported seeing advertisements for tobacco products on the Internet (CDC 2005). Using NYTS data, the exposure of youth to protobacco messages in various channels was compared between 2000 and 2004: exposure to protobacco messages declined in all channels studied (e.g., point of sale, newspapers, and magazines), except for the Internet, where 33% reported seeing tobacco advertisements in 2004 versus 22% in 2000 (Duke et al. 2009).

In the study by Jenssen and colleagues (2009) referenced above, in the 8,702 pages viewed by the adolescents about one-half of the tobacco-related content derived from social networking sites. Forty-three percent of the adolescents in this study were exposed to prosmoking imagery, with a median of three pages of exposure per month for this group. Tobacco products were sold on 50 of the pages viewed, and 242 pages contained links to Internet tobacco vendors. Forty-five percent of the adolescents were exposed to antismoking messages (Jenssen et al. 2009).

Although Cohen and colleagues (2001) have called for studies to determine the effects of Internet-based tobacco advertising on tobacco-related knowledge, attitudes, and behaviors, no research has been published to date on the impact of such exposure. Ribisl and colleagues (2007) have noted that given the engaging and interactive nature of Internet content, research is needed to understand how its impact compares with print marketing and exposure to smoking in movies. In addition, because interactive digital marketing encourages users to become "brand ambassadors" by sharing information among themselves, those concerned about tobacco marketing should track exposures as well as expenditures.

Summary

New media channels provide both promise and challenges for preventing youth tobacco use. Monitoring and

countering the tobacco industry's uses of new media will be an ongoing challenge for researchers and regulators, but must become an essential element of tobacco control. The tobacco-related content that currently exists on the Web—thousands of pages with some kind of prosmoking or protobacco sentiment—potentially exposes huge numbers of youth and young adults to tobacco at little expense to tobacco companies. Interest in the tobacco companies' products and brands is already there, with a consumer base that is actively using the Internet to share information and extol its favorite brands to the wide world of the Web. These consumers act as "brand ambassadors," as marketers have dubbed them. But unlike the brand ambassadors a tobacco company may send out in person to promote cigarettes in bars or clubs, virtual brand ambassadors cost nothing. In fact, with or without support from the tobacco companies, the industry has achieved a prized goal in digital marketing: consumer-to-consumer chat, recommendations, and brand promotions, all at very little or no expense. Online tobacco marketing is almost completely "viral," or spread by consumers themselves as they use the social networking features of various Web sites.

Other Tobacco Company Activities and Tobacco Use Among Youth

Introduction

This section summarizes those tobacco industry programs with the stated purpose of preventing smoking among youth; those programs began emerging in the 1980s. A review of industry documents made public under the terms of legal settlements shows that the focus of these programs and their timing has been in response to mounting public concern about the industry's marketing practices and an attempt to forestall legislation or regulation that would restrict its activities (Landman et al. 2002; Mandel et al. 2006; Sebrié and Glantz 2007; Apollonio and Malone 2010). For example, a confidential presentation by the Tobacco Institute (which was dissolved in 1998 as a result of state litigation against the tobacco industry) that Landman and colleagues (2002) surmised was written around 1982–1983 indicates that the Tobacco Institute considered

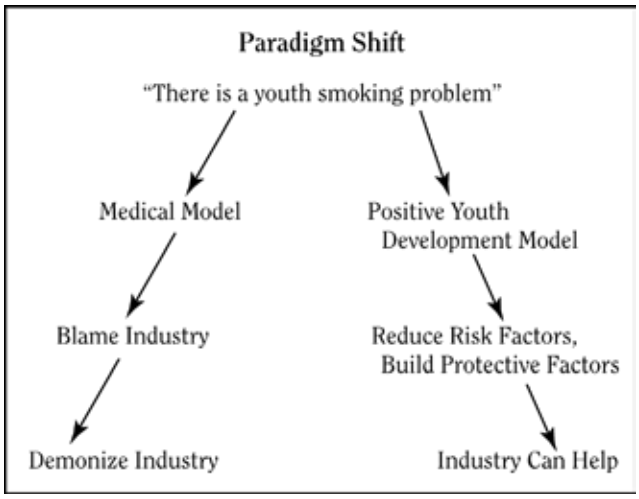
> "the potential positive outcomes of adopting programs of this nature [youth smoking prevention] may be … a more sophisticated understanding by government regulators of the needs/behaviors of our industry. For example, a program to discourage adolescents from smoking (an adult decision) might prevent or delay further regulation of the tobacco industry" (Tobacco Institute, n.d., Bates No. TIMN0018970/8979, p. 7).

Sussman (2002) has provided a useful chronology of the industry's youth smoking prevention programs, which reports that these efforts have tended to focus on parental and peer influences on youth smoking, general decision making and life skills, and issues concerning youth access to tobacco, especially the notion that underage smoking is illegal. It is notable, according to Sussman, that the prevention activities and educational programs developed and supported by the industry ignore the influence of tobacco advertising and promotion on the uptake of youth smoking, the importance of parents not smoking or quitting to provide nonsmoking role models for their children, and an explanation about addiction to tobacco and the problem of serious smoking-related illnesses. In brief, the industry's youth smoking prevention activities fall broadly into five main categories: (1) family involvement self-help booklets, (2) school-based smoking prevention programs, (3) programs to prevent youth from accessing tobacco, (4) mass media campaigns advocating that youth not smoke, and (5) community-based programs for youth. These activities rarely, if ever, include more effective messages that concentrate on the industry's behavior (Figure 5.6; Mandel et al. 2006) and, consistent with industry advertising themes that present smoking as a way to join the adult world, stress that smoking is an "adult choice" or "adult decision."

Self-Help Booklets for Families

In 1984, the Tobacco Institute formed an alliance with the National Association of State Boards of Education (NASBE) to disseminate its *Helping Youth Decide* booklet, which described a program emphasizing the importance of parent-child communication and responsible decision making (USDHHS 1994, pp. 237–8). Although it acknowledged that young people should not smoke, the program offered no specific advice on preventing tobacco use (Coulson 1985). In 1987, a new version of the program focused more clearly on tobacco use, although family communication and decision making were retained as key skills

Figure 5.6 Tobacco industry paradigm shift



Source: Figure A (a tobacco document reproduced as Figure 1 in Mandel et al. 2006).
Note: This slide, from a 1999 Philip Morris (PM) "Key Initiative Update," describes how it hoped to use its youth smoking prevention strategy as it sought a "paradigm shift" (Philip Morris USA 1999a) away from the "medical model," such as the California Tobacco Control Program (California Department of Health Services/Tobacco Control Section 1998), which highlights the industry's deceptive behavior, to a "positive youth development model" that permits the industry to be viewed as a partner in reducing youth smoking. PM selected Life Skills Training (LST) because it believed that LST supported this objective.

required to prevent tobacco use (USDHHS 1994). In 1988, NASBE withdrew its sponsorship of the Tobacco Institute's programs after a growing conflict between the two organizations about content (Landman et al. 2002). The Tobacco Institute then created its own foundation, the Family C.O.U.R.S.E. Consortium (Communication through Open minds, Understanding, Respect and Self Esteem), which was showcased as a "not-for-profit organization comprised of educators, youth organization professionals and other interested parties" (Sparber and Blaunstein 1991, Bates No. TIMN 0188142, p. 1). No evaluation of the "Helping Youth Decide" program or Family C.O.U.R.S.E. is available to the public (USDHHS 1994).

Other parent-based booklets have been created by RJR (*Right Decisions, Right Now*), B&W (on its Web site for preventing smoking among youth), and Lorillard (*Take 10*), with the materials in those booklets similar to *Helping Youth Decide* (Sussman 2002). As of June 2008, Lorillard's program for parents available through its Web site was called "Real Parents. Real Answers" (Lorillard 2010a). The company offered a brochure, digital video discs (DVDs), and podcasts for parents as well as testimonials from parents about talking to kids and resources for organizations to use with parents. Philip Morris went even further with this kind of approach by developing a televised mass media campaign to encourage parents to talk with their children about tobacco that aired between 1999 and 2006 (see "Industry-Sponsored School-Based Prevention Programs" below). From 2007, Philip Morris has relied on information provided through its Web site, including a brochure entitled *Raising Kids Who Don't Smoke* (Philip Morris USA 2010).

Nearly two decades ago, DiFranza and McAfee (1992) expressed concern that by emphasizing smoking as an adult choice and excluding consideration of health consequences and addiction, brochures such as the Tobacco Institute's *Tobacco: Helping Youth Say No* might have adverse consequences by portraying tobacco as a "forbidden fruit" and thereby "help youth to say 'yes' to tobacco." Aside from these concerns about the possible rebound effects of the industry-preferred type of messages, a study of perceptions among youth of the brochure's content found it was rated poorly compared with similar brochures from tobacco control sources.

Somewhat more recently, DeBon and Klesges (1996) compared the Tobacco Institute's *Tobacco: Helping Youth Say No* brochure with one produced by the American Lung Association (ALA). Both brochures stressed the importance of communication, and both discussed peer pressure and responsible decision making. Unlike the Tobacco Institute brochure, however, the ALA brochure also discussed parents as role models for youth (by not smoking, or quitting) and the health consequences and other costs of smoking, and provided tips for quitting. The Tobacco Institute brochure, but not the ALA brochure, discussed smoking as an illegal act for youth. In the study by DeBon and Klesges (1996), seventh-grade students from six schools in Memphis, Tennessee, were presented with "strategy vignettes" covering all of the program components within the two brochures and were asked to rate the effectiveness of the Tobacco Institute and ALA approaches within each of seven program components. The ALA's approach was rated as more effective by students on six of the components (peer pressure, parents as role models, the health consequences of smoking, the costs of smoking, tips for quitting, and responsible decision making), and the Tobacco Institute's was rated as more effective on one (not smoking because it is illegal). Notably, the kind of approach adopted by the Tobacco Institute did not meet the recommended criteria established by NCI (USDHHS 1994) for effective smoking prevention or currently recommended criteria (see Chapter 6).

Industry-Sponsored School-Based Prevention Programs

During 1998, Philip Morris and B&W jointly decided to promote the LifeSkills Training (LST) program in schools throughout the United States (Mandel et al. 2006). This program had been found in National Instute of Health-funded research to prevent the uptake of smoking and also to reduce the use of alcohol and marijuana (Botvin and Griffiths 2002). The school-based curriculum focuses on social risk factors, including media influence and peer pressure, and personal risk factors such as anxiety and low self-esteem (B&W 1997). Three of the 12 LST units (Smoking: Myths and Realities; Smoking and Biofeedback; and Advertising) focus primarily on tobacco—including increasing awareness of the immediate and long-term health consequences of using tobacco and techniques employed by advertisers to influence consumer behavior (the lessons included in the program do not mention tobacco marketing specifically but refer to more general strategies).

An evaluation of the program by Interactive, Inc. (Ashland, Virginia) for the tobacco companies used a cohort design to assess change over time in knowledge, attitudes, and behavior relative to tobacco, alcohol, and other drugs within three groups of sixth-grade students: 1,985 students from a "national treatment sample" of 24 states implementing LST as a result of promotional efforts by APCO Worldwide, a public relations company headquartered in Washington, D.C., that does extensive public relations for tobacco companies (Mandel et al. 2006); 2,452 students from West Virginia, which had implemented the program on a statewide basis; and 547 students in a national control group (Interactive 2000). The study found that, compared to control students, those receiving LST showed improvements in their knowledge about the physiological effects of smoking but registered no change in their attitudes on the social acceptability of smoking and showed reductions in decision-making skills (Interactive 2000). Increases in 30-day smoking were observed in both the LST and control samples. Although it would have been possible to compare the LST and control groups to test whether LST slowed the rate of smoking uptake, this analysis was not done (Mandel et al. 2006). Interactive's explanation was that the control group had characteristics that differed from those of the LST students, and so the comparison could not be done.

A follow-up of these cohorts in year 2 showed increases in knowledge of the physiological effects of smoking in the national sample but decreases on the same measure in the West Virginia sample (Interactive 2001). Both of these LST cohorts showed significant declines in refusal and decision-making skills and significant increases in 30-day smoking. Again, no comparison was made with the control group on these variables (Interactive 2001). Overall, the evaluation did not show positive changes from the LST program and did show some negative changes in relation to youth smoking. No report on year 3 was made public or was located in the tobacco industry documents, but despite the poor results in terms of actual reductions in youth smoking, Philip Morris and B&W continued to disseminate LST (Mandel et al. 2006).

Mandel and colleagues (2006) provide evidence that one goal of the tobacco industry in promoting LST was to encourage states to expend state Master Settlement Agreement funds for the LST program. Companies sought matching state grants to implement the program (Mandel et al. 2006), and Philip Morris publicized how many schools were involved in LST. For example, as of June 27, 2008, the Philip Morris Web site reported that between 1999 and 2007, "we provided more than $37 million to schools and school districts in 24 states for the implementation of LifeSkills Training. With our support, more than one million middle-school students have participated in this program" (Philip Morris USA 2008a).

In 2000, 2 years after its joint decision with B&W to promote the LST program in U.S. schools, Philip Morris provided schools throughout the country with covers for school books with the message "Think. Don't Smoke" that included the company name of Philip Morris (Clegg Smith and Wakefield 2001). Some schools, however, criticized the book covers for delivering an underlying procigarette message, because the book covers were clearly identified as coming from a tobacco company. In a review of transcripts from testimony of tobacco industry witnesses in tobacco litigation cases from 1992 to 2002, Wakefield and colleagues (2006b) presented industry responses to this issue. Ellen Merlo, vice president of corporate affairs at Philip Morris, reported that even though the company had changed, it would "think long and hard, because maybe people are not yet ready for us to supply something like a book cover" (Merlo 2001).

A substantial body of research has demonstrated that antitobacco-industry attitudes reduce the likelihood of future initiation of smoking among youth and young adults (Sly et al. 2000, 2001; Farrelly et al. 2002, 2005, 2009; Hersey et al. 2003, 2005a,b; Thrasher et al. 2004, 2006; Ling et al. 2007, 2009; Davis et al. 2009). At the same time, book covers provided to students by the tobacco industry, as well as other industry-sponsored efforts with the stated purpose of preventing youth tobacco use, could create favorable impressions of the sponsoring tobacco

companies among young people, their parents, or others in the community.

Industry/Community Partnerships on Tobacco Use Among Youth

The tobacco industry has also invested in other community-based programs aimed at youth, such as the national 4-H program ("Head, Heart, Hands, and Health"). 4-H is the youth education branch of the U.S. Department of Agriculture's Cooperative Extension System and a respected organization that emphasizes "learning by doing" (Landman et al. 2002). In March 1999, the National 4-H Council announced a new partnership with Philip Morris as a result of receiving a $1.7 million grant to design and implement a youth smoking prevention initiative (Landman et al. 2002). Despite protests from the public health community and the refusal of 27 of the 50 state 4-H organizations to participate, the national 4-H organization continued its partnership that led to the "Health Rocks" program (National 4-H Council 2010). This program, which includes a Web site, emphasizes general life skills and making healthy choices. Although a longitudinal evaluation of this program in collaboration with Tufts University was discussed in a Philip Morris document in 2001 (Philip Morris USA 2001), no reports were found in the publically available tobacco industry documents on the effects of this program. Philip Morris has also sponsored two programs offered by the Boys & Girls Clubs of America, "Upward Bound" and "SMART (Skills Mastery and Resistance Training) Moves" (Boys & Girls Clubs of America 2010), that had been previously evaluated (U.S. Department of Education 1997; Harvard Family Research Project 2010).

In addition to these programs, tobacco companies have historically given funds to a wide variety of youth-serving organizations (Landman et al. 2002). This practice continued through at least 2010, with grants given by the Altria companies (Philip Morris USA, John Middleton Co., and U.S. Smokeless Tobacco). The 2010 report from Altria stated that its companies gave more than $21 million to positive youth development that year; recipients included the University of Colorado at Boulder, America's Promise Alliance, Corporate Voices for Working Families, The Finance Project, the Forum for Youth Investment, Responsible Retailing Forum, Search Institute, Big Brothers/Big Sisters of America, Caron Foundation, and the University of Virginia (Altria 2011).

Industry-Sponsored Programs to Prevent Youth from Accessing Tobacco

The tobacco industry has aligned itself with efforts to prevent youth from purchasing tobacco since the late 1980s when laws to prevent sales to minors became popular in the United States. The industry has conducted a range of educational programs for tobacco retailers, and it has used the networks developed through its programs to affect legislation it perceived would harm tobacco sales (Landman et al. 2002).

Tobacco Industry Programs in Retailer Education

"It's the Law," a program introduced by the Tobacco Institute in 1990 (Tobacco Institute 1990), was an educational campaign with a primary message that it is illegal for minors to purchase tobacco (Forster and Wolfson 1998); included in the campaign were a series of decals, buttons, and educational materials for retailers. B&W launched a similar program in 1992, called "Support the Law…It Works!," partnering with the United States Junior Chamber (Sussman 2002). The program included store signage as well as a videotape and brochure to train store personnel. In a February 1992 letter to state governors, the president of the Tobacco Institute, Samuel D. Chilcote, Jr., stated that "over one million pieces of program materials have been distributed to thousands of retail outlets across the country" (Chilcote 1992, Bates No. TI41816030/6031, p. 2). In 1992, B&W reported that more than 70,000 stores received its program material on reducing youth access (Sussman 2002).

A far less optimistic view of program implementation and effectiveness was found in a 1991 study of youth aged 13–16 years and 156 retailers in Massachusetts (DiFranza and Brown 1992). This study found that only 7 of the 156 retailers were participating in "It's the Law." Furthermore, six of the seven (86%) participating retailers were found to be willing to sell tobacco to minors (based on successful attempts by youth), and 88% (131 of 149) of the nonparticipating retailers were willing to make such sales (again based on the investigation). Another study compared outcomes of 480 attempted tobacco purchases by youth aged 12–17 years in 40 selected stores participating in "It's the Law" or similar programs with data from 40 stores not participating in these programs (DiFranza et al. 1996). The study found that stores involved in "It's the Law" were as likely to make illegal cigarette sales to these youth as were nonparticipating stores.

Philip Morris took over management of "It's the Law" in 1994 (Landman et al. 2002) and made it part of its "Action Against Access" program in 1995. This program promised to end the distribution of samples, deny slotting fees (fees paid to retailers by tobacco companies to place a tobacco product on retail shelves) to retailers found to be selling tobacco to minors, require cigarettes to be in sight of sales clerks, encourage "reasonable" licensure laws, and require proof-of-age signage (Forster and Wolfson 1998). In 1995, another campaign, "We Card," was launched by the tobacco-industry-created Coalition for Responsible Tobacco Retailing, Inc., and was supported by multiple tobacco companies, including B&W, U.S. Tobacco, and RJR. The campaign included age calendars, employee training videos, and purchase attempts by youth to assess compliance (Forster and Wolfson 1998). This campaign, at least in some states, was accompanied by extensive regional training meetings with retailers.

As in other studies of industry-sponsored youth access programs, the results of evaluations found limited evidence of substantial program implementation or effectiveness. One study found that retail stores selling tobacco products and displaying the tobacco industry's "We Card" signs had average rates of sales to youth roughly equal to those of stores without signs and that the stores with the signs were significantly more likely to make illegal sales to minors than were outlets with government-sponsored signs about not selling to youth (Cowling and Robbins 2000). Tobacco industry documents show that "We Card" was undertaken for two primary purposes: to improve the tobacco industry's image, and to undermine and co-opt retailer compliance programs run by law enforcement and state public health departments (Apollonio and Malone 2010). Apollonio and Malone reported that the tobacco industry and retailers anticipated from the program's inception that "We Card" could be used to block stronger policies restricting youth access to tobacco. Furthermore, industry surveys in 1996 found that retailers considered the blocking of stronger policies to be an excellent use of the program (Sederholm Public Affairs 1996). However, Tobacco Institute lobbyists viewed the program as primarily political, noting in a 1997 report: "Once again, work by the WE CARD Coalition has been instrumental in state efforts to enact reasonable youth access laws" (Chilcote 1997, Bates No. 98876422/6426, p. 3)—that is, state laws preempting stronger local legislation. An audit of "Action Against Access" by former U.S. Senator Warren B. Rudman found that the program was not fully implemented and that retailers did not take it seriously (Campaign for Tobacco-Free Kids 2005). Two years after the program had been put in place, Philip Morris had penalized only 16 tobacco retailers out of the hundreds of thousands illegally selling to youth (Advocacy Institute 1998). In addition, despite Philip Morris' promise to withhold slotting fees from retailers who had been convicted of illegal sales to minors, the company did not respond to the lists of convicted retailers furnished to them by at least four states (Forster and Wolfson 1998).

The Influences of the Tobacco Industry's Youth Access Program on State and Local Tobacco Control Policies

By investing in retailer education programs for compliance with youth access laws, the tobacco industry further leveraged its relationships with groups of retailers, often with results that were detrimental to tobacco control. In a review of the policies and politics of youth access, for example, Forster and Wolfson (1998) found that the tobacco industry used sham citizen groups or its networks of retailers to support bills that would serve to undermine aspects of proposed laws on youth access. This finding is illustrated well by DiFranza and Godshall (1996), who reviewed bills on youth access that were introduced in 12 states by state legislators supportive of the tobacco industry. Provisions of these industry-supported bills included: (1) preemption clauses that prohibited units of local government from passing stricter laws than those passed by the state or federal government; (2) provisions restricting enforcement authority to a single state agency that was ill-equipped to carry out such enforcement (such as a department of agriculture or revenue); (3) provisions that made successful prosecution difficult or impossible (e.g., a requirement that violations of age-of-sale laws involve intent on the part of the merchant to sell tobacco products to a minor); (4) prohibition of compliance checks by individuals or organizations other than law enforcement, such as public health officials, citizen activists, or the press; and (5) prohibition of the purchase of tobacco products by minors, which would halt age-of-sale compliance operations that use youth to attempt to make purchases (DiFranza and Godshall 1996). Other studies indicate the extent to which the industry has been an active proponent of preemption laws to prohibit local government from passing stricter laws than those passed by the state (Siegel et al. 1997).

The tobacco industry has also actively supported laws to penalize youth for possessing, using, and purchasing tobacco—laws that have been criticized because they ignore the responsibilities of the industry and retailers (Wakefield and Giovino 2003). Forster and Wolfson (1998) concluded that the tobacco manufacturers' and retailer organizations' voluntary efforts to educate and train retailers were essentially aimed at exonerating them from any

responsibility for smoking by youth and to focus blame on the minors who attempt to purchase tobacco and the clerks who sell it to them.

In a study of internal documents from tobacco companies, Landman and colleagues (2002) found that the industry used its programs on youth access to undermine tobacco control efforts. For example, a series of e-mails in 1996 between high-level Philip Morris executives revealed that Philip Morris placed ads for "Action Against Access" in locations where legislators would be sure to see them (Merlo 1996), and the company used the presence of programs such as this to argue against the need for government funding of further tobacco control efforts (Slavitt 1992). Furthermore, the tobacco industry used its network of retailers to disseminate information about proposed local ordinances on tobacco control in an effort to rally retailers to oppose them. A confidential 1992 report from the Tobacco Institute stated, "For monitoring purposes, we fund our allies in the convenience store group to regularly report on ordinance introductions and assist in campaigns to stop unreasonable measures.… Promotion of The Institute's 'It's the Law' program and other industry programs play a helpful role as well" (Malmgren 1992, Bates No. 2023959567/9579, p. 5).

Industry documents also reveal that it used its network of retailers to detect and oppose measures related to restrictions on advertising and laws requiring clean indoor air (Ohio Licensed Beverage Association 1995; Riskind and Bradshaw 1995; Hannah Report 1996; Philip Morris USA 1996; Welsh-Huggins 2001). A 1996 Tobacco Institute press release argued that the 1994 FDA proposal to end tobacco advertisements within 1,000 feet of schools, eliminate self-service tobacco displays, and require "tombstone" advertising (advertisements that consist only of black print on a white background, without pictures) for tobacco products was unnecessary because the industry's "We Card" program was "now making a measurable difference" (Tobacco Institute 1996, Bates No. 106018947/8948, p. 2). Philip Morris also used "Action Against Access" as part of its argument that FDA's proposal was unnecessary (Parrish 1995). Apollonio and Malone (2010) concluded that industry programs such as

> "We Card ... are designed to suggest that tobacco companies are part of the solution to the problem of youth tobacco use. In doing so, they also serve to reify youth tobacco use as the prevailing definition of the tobacco policy problem, distracting the public and policymakers from the fact that cigarettes remain the single most deadly consumer product ever made" (p. 1196).

Industry-Sponsored Antismoking Campaigns in the Mass Media

In 1996, Philip Morris launched a $10 million advertising campaign to promote youth smoking prevention (SCARC Action Alert 1996), a campaign that included newspaper and magazine advertisements and highlighted the company's initiatives on restricting youth access. This campaign and others emerged at a time when the company was facing a number of legal challenges alleging corporate misconduct (Wakefield et al. 2006b).

In the late 1990s, two tobacco companies launched televised mass-media campaigns focused on the prevention of youth smoking in the United States. A Philip Morris youth smoking prevention campaign consisting of several television and magazine advertisements carrying the slogan "Think. Don't Smoke" ran from 1998 to 2002 (Sussman 2002); according to the company, the target audience was youth aged 10–14 years (Sussman 2002). In 1999, a second Philip Morris campaign, "Talk. They'll Listen," made its debut on television; this campaign focused on parents talking to their children about smoking and ran until late 2006. Tobacco companies portrayed their allocations of funding as evidence that they were serious about reducing youth smoking. During testimony in the U.S. Department of Justice lawsuit in 2005, Philip Morris indicated that "our budget has fluctuated somewhat from year to year, but on average, we have spent $100 million a year over the last 6 years in the department. The expenditures from 1998 through 2004 total $657 million" (Willard 2005, p. 9). Philip Morris USA Senior Director of Communications, Peggy Roberts, indicated the company had spent "more than $1 billion on youth smoking prevention efforts" (Ascribe 2006).

Between 1999 and 2004, Lorillard's "Tobacco Is Whacko if You're a Teen" campaign appeared widely in youth magazines and on popular cable television, including ESPN, MTV, and Warner Bros. stations (Landman et al. 2002). Eventually, Lorillard replaced its youth campaign with advertisements targeting parents. Formerly known as "*Take 10*," the Lorillard prevention campaign adopted the slogan "Parents. The Best Thing Between Kids and Cigarettes." In 2010, the Lorillard Web site indicated it had spent more than $80 million on efforts to prevent youth smoking (Lorillard 2010b).

The monies invested in these campaigns helped to ensure widespread exposure to the industry's efforts among youth and adults. According to Nielsen media monitoring data from 1999 to 2003, the exposure of adolescents to Philip Morris' and Lorillard's youth prevention ads matched those for antitobacco advertising from all

state and national tobacco control programs (Wakefield et al. 2005b). However, exposure to youth prevention advertisements sponsored by tobacco companies was found to be greatest across adult audience segments and relatively lower among adolescents (Wakefield et al. 2005b). Despite these high exposure levels, the effectiveness of these campaigns in reducing youth smoking is questionable.

Studies of the efficacy of tobacco-company-sponsored advertising have most often used individual ratings of industry sponsored ads, which are compared with ratings of antitobacco ads sponsored by public health organizations or other corporate advertising in a forced-exposure setting. In these studies, youth are exposed individually or in a group setting to a series of ads and then asked to rate each ad immediately after viewing it (e.g., Henriksen and Fortmann 2002; Niederdeppe et al. 2005; Wakefield et al. 2005a; Donovan et al. 2006). Some studies have also required youth to select the ad they perceived to be the most effective or to indicate measures of smoking-related beliefs, attitudes, and intentions following exposure (e.g., Henriksen et al. 2006; Pechmann and Reibling 2006). Others have added follow-up measures of recall and cognitive processing of the ads (e.g., Terry-McElrath et al. 2005). Of the seven studies summarized in Table 5.10, all demonstrate that tobacco-company-sponsored youth prevention ads performed poorly in terms of increased knowledge, perceived effectiveness, and influence on intention to smoke as compared with antitobacco ads sponsored by public health organizations (the seventh study had alcohol-related ads as controls). The studies generally indicate that the ads' low efficacy is due to their message strategy; consistent with other industry youth smoking prevention efforts, both Philip Morris and Lorillard have focused their messages on social themes, such as making a choice about smoking among peers and within the family or presenting the short-term benefits of not smoking. Ads with these kinds of messages generally perform poorly in comparison with ads that feature the serious health effects of smoking and the marketing and promotion practices of the industry (Farrelly et al. 2002, 2005; NCI 2008).

Studies of ninth-graders in schools in California (Pechmann and Reibling 2006) and of Western Australia youth intercepted in shopping malls (Donovan et al. 2006) found that ads with social themes generally did not lower the intention of youth to smoke in the future, but ads focusing on the serious health consequences of smoking (Pechmann and Reibling 2006) or the disgusting aspects of smoking (Donovan et al. 2006) did so. In analyses from the NCI-funded Youth Smoking and the Media study, ads from tobacco companies were found to elicit positive emotions in youth and to be of less interest to that age group than ads sponsored by tobacco control agencies (Wakefield et al. 2005a). In addition, ads that elicited negative emotions such as those with a personal testimonial or negative visceral element were more likely to be recalled, discussed, and thought about by youth at a 1-week follow-up, but ads with these kinds of features were never developed by tobacco companies (Terry-McElrath et al. 2005).

In a study of California adolescents aged 14–17 years, exposure to industry ads engendered more favorable attitudes toward tobacco companies than seeing "truth" ads from the American Legacy Foundation or control ads about drunken driving (Henriksen et al. 2006). Sympathy with the industry was measured by agreement with statements such as "cigarette companies get too much blame for young people smoking" and "cigarette companies should have the same right to sell cigarettes as other companies have to sell their products" (Henriksen et al. 2006, p. 15). In addition, in the study of Western Australia youth described above, which included both smokers and nonsmokers, industry-sponsored ads were rated as highly believable (Donovan et al. 2006). These corporate ads served to increase the credibility of the industry's message that, although unlikely to change attitudes about smoking per se, may increase positive attitudes toward the tobacco industry and, in turn, reduce criticism from youth advocacy groups in the community (Donovan et al. 2006).

Examining the effects of advertising by using forced-exposure designs can be useful for assessing immediate reactions to individual ads and their short-term influences on smoking-related beliefs and intentions, but available studies do not reflect the usual television-viewing environment with its contextual distractions of television programs, competing advertising, and variable viewer attention. Moreover, forced-exposure studies cannot assess the effects of cumulative exposure to campaign messages over time. By comparison, some study designs have relied on naturalistic exposure in the usual viewing environment and attempted to do so with samples of participants more representative of the population. In these studies, exposure to advertising has usually been measured by asking whether participants can recall seeing any antitobacco ads in a specified period and, if so, having them describe the ads they recall to generate a measure of confirmed recall (Biener 2002; Farrelly et al. 2002, 2009; Davis et al. 2007). Some studies, in contrast, have employed gross rating points (an advertising industry measure that involves multiplying the estimated audience reached by the frequency of the message) as a measure of exposure to advertising (Farrelly et al. 2005; Wakefield et al. 2006c).

Three types of naturalistic exposure studies have examined the effects of industry-sponsored media campaigns in the United States (Table 5.11). In the first type, carried out by Biener (2002), respondents were asked to assess the effectiveness of ads. The author found that adolescents aged 14–17 years rated ads that did not focus

Table 5.10 Controlled-exposure studies examining televised messages in the tobacco industry's campaign to prevent youth smoking

Study	Study design/population	Advertisement comparisons	Findings
Teenage Research Unlimited 1999	20 focus groups 7th–10th graders (N = 120) who were susceptible[a] to using tobacco Youth viewed each of 10 ads, rated them, and discussed them as a group Arizona, California, Massachusetts	10 ads produced by state tobacco control programs in Arizona, California, Florida, and Massachusetts, and by Philip Morris	• Youth reported that the Philip Morris ads, which were focused on social influences, provided no new information • Without the negative effects of smoking being mentioned, the Philip Morris ads made little sense to youth and were considered "scripted"
Henriksen and Fortmann 2002	218 18- to 25-year-old undergraduate students Youth were randomly assigned to view 4 ads; they completed baseline ratings of various companies, viewed and made ratings of each ad, and made an overall rating about various companies California	4 Philip Morris Youth Smoking Prevention (YSP) ads, 4 Philip Morris ads about charitable works, or 4 Anheuser-Busch Company ads about preventing underage drinking (the control group)	• Philip Morris YSP and charitable works ads were rated less favorably by those who knew Philip Morris was a tobacco company than by those who were unaware of that • Ads about Philip Morris' charitable works received more favorable ratings than did Philip Morris YSP ads
Niederdeppe et al. 2005	820 13- to 18-year-olds Youth completed an Internet-delivered baseline questionnaire assessing susceptibility to smoking and sensation seeking, viewed 5 randomly ordered antitobacco ads, and completed 6 individual ratings of each ad, which were summed to provide composite ratings of ad evaluations United States	3 ads from American Legacy Foundation (Legacy) "truth" campaign ("Body Bags," "Daily Dose," and "Shredder"), 1 ad from Philip Morris ("My Reasons"), and 1 ad from a state tobacco control program (result not reported)	• Participants in all smoking risk categories rated Legacy's "Body Bags" and "Daily Dose" more highly than Philip Morris' "My Reasons" and Legacy's "Shredder" • Compared with the 2 highest-ranking Legacy ads, the Philip Morris ad received favorable ratings among 13- to 15-year-olds at lowest risk for future smoking, but 16- to 18-year-olds at elevated risk of future smoking responded significantly less favorably
Youth Smoking and the Media Terry-McElrath et al. 2005; Wakefield et al. 2005a	268 8th-, 10th-, and 12th-grade susceptible nonsmokers or experimenters in Boston, Massachusetts, and Chicago, Illinois; the study was replicated in Australia and Britain for a total of 615 8th-, 10th-, and 12th-grade students in all countries combined Youth completed immediate ratings after viewing each of 10 ads in late 2000–early 2001, selected highest "stop and think" ad at end of each session; 1-week telephone follow-up to establish recall, thinking about the ads, and discussion of ads viewed	8 tobacco company YSP ads produced by Philip Morris and Lorillard, 37 public-health-sponsored antitobacco ads, and 5 pharmaceutical company ads for nicotine replacement therapy and bupropion	• Compared with public-health-sponsored antitobacco ads, tobacco company ads were more likely to elicit positive emotions and less likely to elicit negative emotions and be of interest to youth • Tobacco company ads were more likely to feature smoking not being "cool," parental advice not to smoke, and the short-term benefits of not smoking, while public-health-sponsored ads more often featured the serious health effects of smoking or secondhand smoke and deception by the tobacco industry • Tobacco control ads that employed negative visceral elements or personal testimonials were rated more highly by youth; none of the tobacco industry ads used these formats

Table 5.10 Continued

Study	Study design/population	Advertisement comparisons	Findings
Donovan et al. 2006	257 14- to 18-year-olds Youth recruited through interception of shoppers were exposed to a tobacco industry YSP ad or a tobacco control ad, after which they completed ratings of the impact of the ad on their smoking Australia	3 tobacco industry YSP ads produced and adapted for MTV in Australia, 2 youth-directed tobacco control ads featuring smoking not being "cool" or short-term harms of smoking (shown to 14- to 15-year-olds only), and several tobacco control ads portraying smoking as disgusting	• Among 14- to 15-year-olds, tobacco industry ads generally scored lower than the tobacco control ads that portrayed smoking as disgusting but were rated similarly to the other youth-focused tobacco control ads • Among 16- to 18-year-olds, the tobacco industry ads were rated as having less impact than the disgust-oriented tobacco control ads in terms of not wanting to smoke and, among smokers, in thinking about quitting
Henriksen et al. 2006	832 high school students Aged 14–17 years Youth were randomly exposed to view 5 ads; measures included ad perception, intention to smoke, and attitudes toward tobacco companies measured immediately after exposure California	5 tobacco company YSP ads (Philip Morris or Lorillard), 5 Legacy "truth" antitobacco ads, or 5 ads about preventing drunk driving	• Participants rated tobacco company YSP ads less favorably than Legacy "truth" ads • Exposure to tobacco company YSP ads engendered more favorable attitudes toward tobacco companies
Pechmann and Reibling 2006	1,725 9th graders Youth were randomly assigned to view a television program in 2002 in which particular themed ads or control ads were embedded At baseline, personality traits were measured and, after exposure, students were asked about smoking intentions, feelings and beliefs, and appraisal of the ads California	10 ad themes (3 ads of each theme); ads produced by public-health-sponsored agencies featured health effects and manipulation by tobacco industry, while all tobacco industry ads featured social themes	• Ads with social themes, including those produced by tobacco companies, did not significantly lower participants' smoking intentions • By comparison, ads focusing on young victims suffering from serious smoking-related diseases elicited disgust, enhanced anti-industry attitudes, and reduced intentions to smoke • Youth with conduct disorders, who are more likely to smoke, were not influenced by any of the ads

[a]According to criteria developed by Choi and colleagues 2001.

on tobacco-related illness as significantly less effective than ads from the state program that featured the serious health consequences of smoking (Biener 2002). These effects were more pronounced among youth aged 16–17 years than those aged 14–15 years.

The second type of study has involved comparisons of "truth" ads from the American Legacy Foundation in which nationally representative samples of U.S. adolescents aged 12–17 years have been surveyed to determine awareness of the ads, receptivity to them, and tobacco-related knowledge, attitudes, beliefs, and behavior. In the first paper from these studies, reporting a survey conducted 10 months after the launch of the national "truth" campaign, youth who recalled the "Think. Don't Smoke" ads of Philip Morris were significantly more likely than their unexposed peers to have intentions to smoke in the future; in contrast, confirmed recall of the "truth" campaign was associated with lower intentions to smoke (Farrelly et al. 2002). In addition, youth who recalled the "Think. Don't Smoke" campaign were less likely to agree with statements such as "cigarette companies deny that cigarettes cause cancer and other harmful diseases," and "I would like to see cigarette companies go out of business" (Farrelly et al. 2002, p. 904). In subsequent studies using eight cross-sectional telephone surveys, exposure to additional Philip Morris advertisements reinforced these attitudes (Farrelly et al. 2009). Unlike exposure to "truth" ads, which were associated with lower perceptions of the prevalence of smoking, recall of "Think. Don't Smoke" was unrelated to perceived smoking prevalence (Davis et al. 2007). Because the data from this second group of studies were cross-sectional, part of the explanation for the findings may be that adolescents who already held more favorable opinions about cigarette companies and expressed stronger intentions to smoke in the future were more attentive to Philip Morris ads and therefore more likely to recall them.

The third type of study featured population-based survey data linked to naturalistic data on exposure to media. Here, Wakefield and colleagues (2006c) used data from more than 100,000 students (8th-, 10th-, and 12th-grade students) who had completed the MTF school-based surveys from 1999 to 2002, where beliefs about smoking, intentions to smoke, and smoking behavior comprised the study outcomes (Wakefield et al. 2006c). This study measured exposure to advertising using gross rating points for each type of advertising campaign in the 4 months preceding the surveys in the media markets in which the schools were located. The industry-sponsored advertising included the youth prevention campaigns "Think. Don't Smoke" and "Tobacco Is Whacko if You're a Teen" and the Philip Morris parent-directed campaign "Talk. They'll Listen."

Multivariable models examined the relationship between level of exposure to advertising and attitude (beliefs), intentions to smoke, and tobacco use behavior while controlling for demographic and other personal data, region, the real price of cigarettes, an index of smoke-free air, and media utilization. The study found that greater exposure to industry-sponsored youth-directed advertising was associated with stronger intentions to smoke among 8th-grade students, but not with other outcomes for 8th-grade students or with any outcome for those in the 10th and 12th grades. Exposure to the tobacco industry's parent-directed campaign was associated with several undesirable outcomes for 10th- and 12th-grade students, including lower perceived harm from smoking, stronger approval of smoking, stronger intentions to smoke in the future, and a higher likelihood of smoking in the past month.

Wakefield and colleagues (2006c) explained these findings as follows: as adolescents mature, they consider themselves more independent and less reliant on their parents. Thus, messages aimed at parents as authority figures may invite rejection by older adolescents. Despite the sophisticated naturalistic exposure studies available in the literature that have assessed the effectiveness of the industry's advertising campaigns, the substantial investment of industry in these campaigns, and its insistence on the seriousness of its efforts, the tobacco companies have used very weak methods of program evaluation. For example, in court testimonies from 1992 to 2003, company witnesses focused on advertising reach as a measure of effectiveness (e.g., 90% of 10- to 14-year-olds had seen the advertisements) and on qualitative data, rather than on outcomes involving attitudes, intentions, and behaviors (Merlo 2000).

Although Philip Morris withdrew its television advertising campaign directed at parents after the study by Wakefield and colleagues (2006c) was published, it still cites its own weak evaluation data to suggest that its "Talk. They'll Listen" campaign had beneficial effects (Philip Morris USA 2008a). Philip Morris also decreased its "Think. Don't Smoke" campaign from 2002 following the publication of Farrelly and colleagues' (2002) population-based study indicating that exposure to the campaign was associated with increased intentions to smoke among youth. The lack of substantive studies emerging from the tobacco industry on the actual effects of programs (dollars spent and number of youth contacted, rather than changes in smoking behavior) contrasts sharply with the very detailed evaluations used for the company's other marketing efforts, as was revealed during litigation. Furthermore, neither Philip Morris, nor any of the other tobacco companies, has released any data on the effects of

Table 5.11 Naturalistic studies examining the effect of televised campaigns of the tobacco industry on preventing youth smoking

Study	Study design/population	Advertisement comparisons	Findings
Biener 2002	733 youth aged 14–17 years Youth were asked in a telephone survey whether they had seen any antitobacco ads on television in the previous month. If they had, they were asked to describe them in detail and to rate their effectiveness on a 10-point scale Massachusetts	The most prominent antitobacco ads produced by the Massachusetts (MA) Tobacco Control Program and those produced by Philip Morris; 4 categories: illness, outrage, other MA, Philip Morris	• Philip Morris ads ($p < .001$) and MA ads that did not discuss illness ($p < .001$) were rated as significantly less effective by youth than were MA ads featuring the serious health consequences of smoking
Evaluation of national "truth" campaign Farrelly et al. 2002, 2009; Davis et al. 2007	12- to 17-year-olds Nationally representative cross-sectional telephone surveys of youth before launch (N = 6,897) and 10 months after launch of national American Legacy Foundation (Legacy) "truth" campaign (N = 6,233); 2 later studies used data from 35,074 youth in 8 nationally representative cross-sectional telephone surveys from 1999 to 2003; measures included confirmed ad recall, smoking attitudes and beliefs, perceived smoking prevalence, and intention to smoke in next year United States	Legacy "truth" ads featuring manipulation messages of the tobacco industry compared with youth smoking prevention ads by Philip Morris asking youth to "Think. Don't Smoke"	• After 10 months, confirmed exposure to Philip Morris ads was associated with more positive attitudes toward the tobacco industry (generally $p < .05$) and increased intentions to smoke in the future ($p < .05$), while confirmed exposure to "truth" ads was associated with attitudes against the tobacco industry (generally $p < .05$) • After 3 years, perceived smoking prevalence was unrelated to confirmed exposure to the Philip Morris campaign, but it was reduced among those who had confirmed recall of the "truth" campaign (generally $p < .05$) • After 3 years, confirmed exposure to the Philip Morris campaign was associated with more favorable beliefs and attitudes toward tobacco companies and a trend for weaker intentions not to smoke, while "truth" exposure was associated with stronger antitobacco attitudes and intentions not to smoke in the future ($p < .001$)
Wakefield et al. 2006c	103,172 8th, 10th, and 12th graders Data from the 1999–2002 Monitoring the Future school-based surveys were merged by media market on 12- to 17-year-olds' gross rating points for antitobacco ads during the 4 months before survey completion; outcome measures included smoking attitudes and beliefs, intentions to smoke, and smoking in the past 30 days United States	Tobacco company youth-directed youth smoking prevention (YSP) ad campaigns and parent-directed YSP ad campaigns as well as public-health-sponsored antitobacco ad campaigns	• Among 8th graders, greater exposure to industry youth-directed YSP ads was associated with increased intention to smoke (OR = 1.04 [95% CI = 1.01–1.08]), but exposure was unrelated to other outcomes for this age group or for 10th and 12th graders • Among 10th–12th graders, greater exposure to parent-directed YSP ads was associated with lower perceived harm from smoking (OR = 0.93 [0.88–0.98]), stronger approval of smoking (OR = 1.11 [1.03–1.12]), stronger intentions to smoke in future (OR = 1.12 [1.04–1.21]), and greater likelihood of having smoked in the past 30 days (OR = 1.12 [1.04–1.19])

Note: **CI** = confidence interval; **OR** = odds ratio.

these programs on the sales of tobacco products, including the large Philip Morris/B&W funded study that demonstrated that LST was followed by increased smoking by youth (Mandel et al. 2006).

One study has examined the responses of youth to the industry's public relations messages about its corporate responsibility. Henriksen and Fortmann (2002) conducted a controlled-exposure study of 18- to 25-year-old undergraduates in California to determine their perceptions. The authors found that youth who had viewed four ads produced by Philip Morris that contained information on the company's charitable works had improved perceptions of that company's corporate image as compared with a control group. The improvement in perceptions was greatest among those who were unaware that Philip Morris was a tobacco company (Henriksen and Fortmann 2002).

A review of media campaigns on prevention of smoking among youth conducted for WHO concluded that industry-sponsored campaigns do not contain message features found to be effective in reducing smoking behavior among youth (Angus et al. 2008). Further, the review noted that these campaigns tend to increase favorable industry-related attitudes among youth, which is consistent with the industry's broader goal of improving their image and reputation of tobacco companies (Angus et al. 2008). The report concluded that these campaigns may serve to undermine the effectiveness of efforts that seek to increase anti-industry attitudes to deter youth from smoking (Farrelly et al. 2002; Thrasher et al. 2006; Ling et al. 2007, 2009) and pose a risk for youth as they age into adulthood in terms of retaining "an objective and critical perspective on tobacco" (Angus et al. 2008, p. 20).

Summary

The tobacco industry's youth smoking prevention activities and programs have not provided evidence that they are effective at reducing youth smoking. Indeed, unpublished internal industry documents available to the public because of litigation, and published academic studies, indicate that they are ineffective or serve to promote smoking among youth. Because older adolescents rebel against the programmatic message that tobacco is for adults only, these efforts can lead to a greater likelihood of uptake among youth (Donovan et al. 2006; Henriksen et al. 2006; Wakefield et al. 2006c).

Focusing programs on issues such as parenting, decision making by youth, life skills, and reducing youth access helps to focus the responsibility for smoking on the young people themselves and on their family environment and diverts attention from the tobacco industry's marketing efforts and the addictiveness of tobacco products. The industry's approach also positions tobacco as "forbidden fruit," with tobacco use being portrayed as an "adult only" practice (DiFranza and McAfee 1992), a message consistent with industry marketing messages that present smoking as a way to be "adult." The WHO Tobacco-Free Initiative recommends that both governmental and nongovernmental organizations avoid partnering with the industry's youth prevention programs because the programs have been proven to be ineffective and are used to persuade policymakers to opt for weaker legislation (WHO 2004).

The tobacco industry receives five benefits from its youth smoking prevention initiatives:

1. The industry uses these efforts to convey to the public, policymakers, judges, and the members of juries that it is doing something substantial about the issue of youth's tobacco use. In this way, the programs serve to promote positive attitudes about the tobacco industry. Such positive attitudes could help to limit the industry's legal liability and make it easier for its views to be heard on legislative issues.

2. More favorable impressions of tobacco companies among youth and young adults can help to maintain the potential for youth to initiate tobacco use in their young adult years (Thrasher et al. 2006; Wakefield et al. 2006c; Ling et al. 2007, 2009).

3. The industry has been able to use the relationships it has forged through its youth prevention programs to learn of proposed tobacco control legislation and to lobby against that legislation (Forster and Wolfson 1998; Landman et al. 2002; Apollonio and Malone 2010).

4. The industry is able to use its efforts to prevent smoking by youth to argue that there is less need for public-health-funded tobacco control strategies (Mandel et al. 2006).

5. Investment in these programs provides a venue for the industry to conduct research on determinants of smoking among youth for the stated purpose of developing its prevention programs. However, this information could inform the companies' tobacco marketing efforts to youth (Mandel et al. 2006). Tobacco industry research on youth has included Philip Morris' "Teenage Attitudes and Behaviors Study," which tracked the smoking behavior and motivations of approximately 20,000

11–17-year-olds annually, with a total of 180,000 teens being surveyed between 1999 and 2007 (Philip Morris USA 2008b). Although tobacco companies assert that there is a "firewall" between the research done for the department concerned with preventing smoking by youth and their cigarette marketing efforts, Philip Morris has acknowledged that it rotates employees through both departments (Tobacco on Trial 2005).

Images of Smoking in the Entertainment Media and the Development of Identity

This section addresses the impact of images of smoking in the entertainment media—primarily movies—which have been the focus of most of the research in this area. Much of that research involves the impact of depictions of smoking in movies on the uptake of tobacco by adolescents. As described below, from the 1920s to 1989 the tobacco industry entered into a variety of financial arrangements to tie smoking to movies (Mekemson and Glantz 2002). Movies receive greater First Amendment protection than commercial speech such as advertising and promotional materials. Indeed, some argue that tobacco control initiatives should not meddle with moviemakers' intentions to depict the realities of life, including smoking (Chapman 2009). Others argue that the movies to which adolescents are drawn often have nothing to do with reality (e.g., *Avatar*) and that movies are not simply art: they are products created by the entertainment industry to be sold to specific audiences. The rating of the film is part of the marketing effort for the film and the desired rating is generally decided before the film is made so overall content, language, sexual content, and violence can be calibrated to secure the desired rating. Nearly one-half (44%) of top-grossing films in the United States between 2005 and 2010 were rated PG-13, making them easily accessible to youth over the age of 13 years (Nash Information Service LLC 2011). The decision to include smoking in movies ultimately rests with the people who create the movies and the studios that pay for their production and distribution; any effort to affect when smoking is portrayed in movies and other entertainment media is logically focused on the production studios rather than on the tobacco industry.

Images of smoking in the entertainment media are a potentially powerful socializing force among adolescents, in part because they are communicated by people who are identified by youth as media stars (Bandura 1977, 1986). Adolescents actively rely on external information as they seek to shape their own identities, often looking to media stars as models of what to wear and what to do. Adolescents today are highly exposed to entertainment media, which—because they present smoking in the context of a story rather than as a commercial presentation—tend to dispel the skepticism that would attend a commercial presentation. The suspension of disbelief that occurs in viewing entertainment media, and the fact that the message is conveyed by an influential figure, provides a theoretical underpinning for an effect of entertainment media on smoking during adolescence a strong one (Bandura 1977, 1986). More important, because some image advertising has been curtailed by the Master Settlement Agreement, entertainment media are among the few remaining channels for transmission of aspirational images of smoking to large audiences (Kline 2000).

The next section builds on the work of the 2008 NCI monograph, *The Role of the Media in Promoting and Discouraging Tobacco Use* (NCI 2008). Chapter 10 of that work summarizes research (up to 2006) that links depictions of smoking in movies with adolescent smoking.

Images of Smoking in Movies and Adolescent Smoking

Historical Links Between the Tobacco Companies and the Movie Industry

It is generally assumed that smoking was common in early movies, but in fact few content analyses exist for that era. One published study assessed 20 silent movies for episodes of tobacco use and found they occurred at a mean rate of 23.3 per hour (St. Romain et al. 2007). Indeed, the movie industry was viewed as an opportunity for advertising as far back as the nickelodeon era, when movies were silent, cost only a nickel, and ad slides played between reels. By the late 1920s, the tobacco industry considered the male market for cigarettes to be mature and began to position cigarettes in advertising as a way for a man to strike up a conversation with a woman and as a method of weight control for women (e.g., the "Reach for a Lucky Instead of a Sweet" campaign); research has correlated the emergence of these ads with the dramatic rise in smoking among women during the 1930s and 1940s (Pierce and Gilpin 1995). Edward L. Bernays, the architect of many of these marketing campaigns, recognized the "power of film to shape consumer expectations" (Brandt 2007, p. 86). In the 1930s and 1940s, movies frequently showed a lead male actor using cigarettes to engage a lead female actress in conversation (Figure 5.7A, a still from *To Have and Have Not*). Note the similarity between the Humphrey Bogart/Lauren Bacall scene and Figure 5.7B, a cigarette ad from that period. Lum and colleagues (2008) found evidence of commercial relationships between the tobacco and movie industries in tobacco documents dating from as early as 1929. FTC investigations in 1930 ended this practice, and the tobacco and motion picture industries turned to cross-promotion arrangements (termed "tie-ins"), in which endorsements of cigarette brands by movie stars were used to advertise those brands and garner publicity for newly released movies. Figure 5.8 shows a tie-in ad in which film star Spencer Tracy endorses Lucky Strikes and pitches the MGM production *Test Pilot*.

Placement of products in movies, including tobacco, became an integral part of film production with the advent

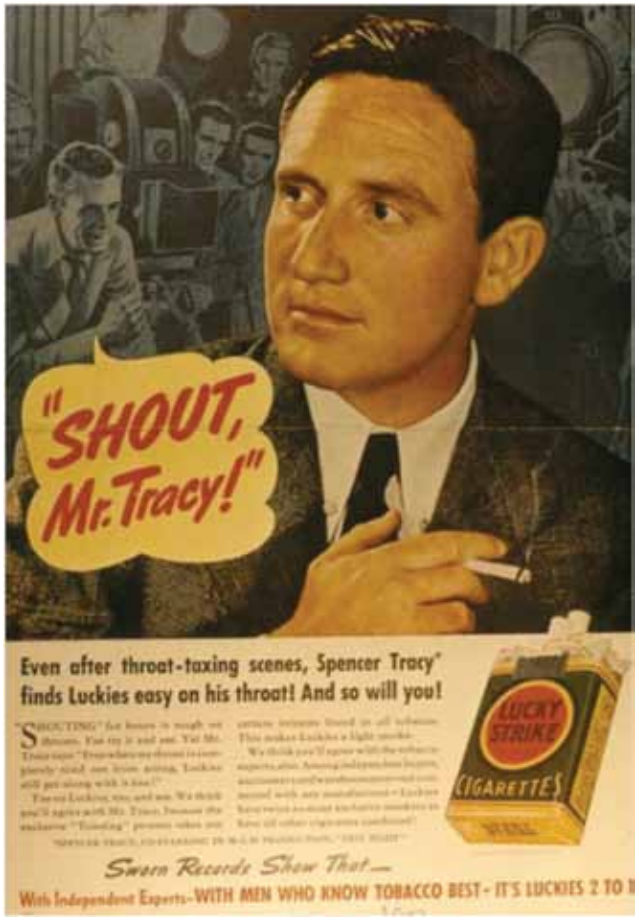
Figure 5.7 Actor engaging an actress with a cigarette

A. Humphrey Bogart lighting a cigarette for Lauren Bacall in *To Have and Have Not*

B. Print advertisement showing Humphrey Bogart and Lauren Bacall engaged over tobacco

Source: Figure 5.7A. mptvimages.com 2011. Reprinted with permission from mptvimages. Figure 5.7B. *Life* September 1951.

Figure 5.8 "SHOUT, Mr. Tracy!": actor enjoying a cigarette



Source: American Tobacco Company 1938.

of product placement agencies in the late 1970s (Mekemson and Glantz 2002; Segrave 2004). For example, a 1987 sales pitch by Liggett & Myers promoted the movie *Eight Men Out* as follows: "… based on its story, cast and subject matter, this film will appeal to young audiences…. Billboard sponsorship provides an opportunity to deliver subtle but powerful institutional and product messages to a young group, still in its stages of forming purchasing habits" (Breidenbach 1987, Bates No. 91753669/3670, p. 1).

Evidence from tobacco company documents has provided confirmation of a commercial relationship between the tobacco industry and film studios that began in the 1920s and lasted until it waned in the 1950s, the era when advertising dollars began flowing away from movies and into television (Lum et al. 2008). There was a resurgence of tobacco product placement in the movies during the 1970s after cigarette advertising was banned on television (Mekemson and Glantz 2002). Some evidence suggests that some companies sought to provide financial backing to movies as "trademark diversification" but with the demonstrated intent of incentivizing tobacco use in movies (LeGresley et al. 2006).

Evidence for the Presence of Tobacco Use in Movies: Content Analysis

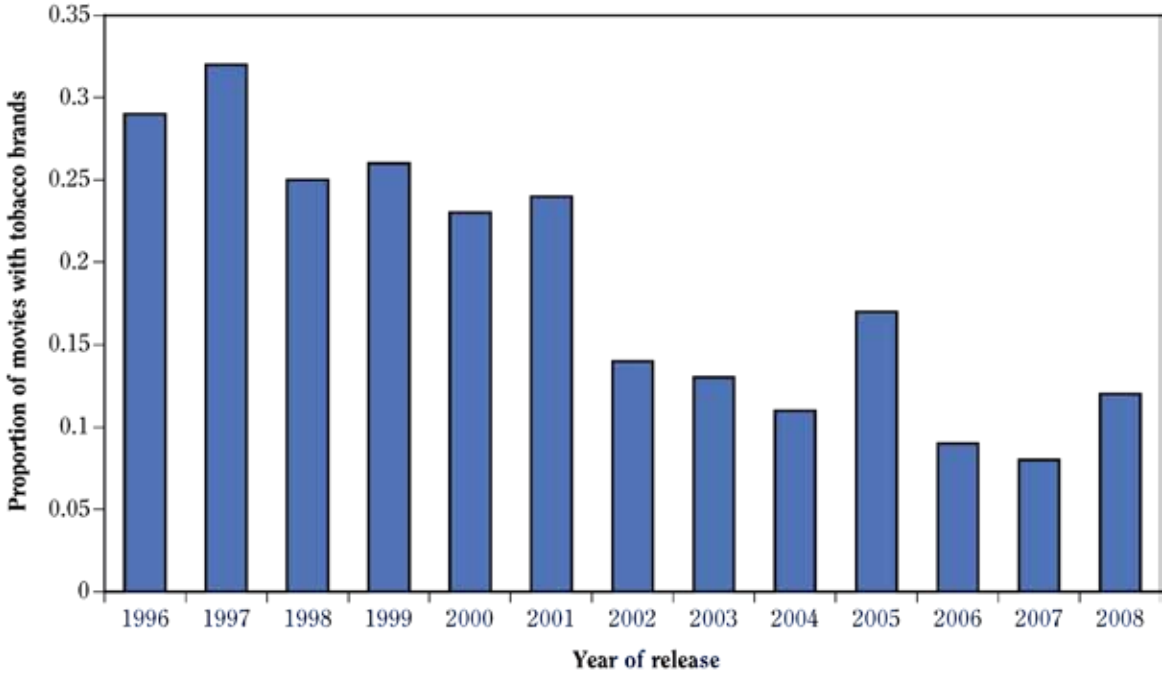
Content analysis is the process by which information about a certain topic is systematically coded by watching or listening to the media source. Typically, the content is determined through a set of rules. The best analyses employ two or more coders and examine inter-rater reliability for an overlapping subset of content to validate the process. Over the years, there have been many content analyses of depictions of smoking in movies. A review conducted by NCI (2008), which summarized the results of 14 content-coding studies, concluded that cigarette and cigar smoking is pervasive in movies but use of smokeless tobacco is not, and it found that identifiable cigarette brands appeared in about one-third of movies released during the 1990s. It also concluded that (1) the prevalence of smoking among contemporary movie characters is approximately 25%, about twice that of movies of the 1970s and 1980s; (2) smokers in movies differ from smokers in the general population, the former being more likely to be affluent and White; (3) the health consequences of smoking are rarely depicted in movies; and (4) smoking in the movies is not related to box office success. Studies of trends in movie content published since 2005 (summarized in Table 5.12) show declines in depictions of movie smoking since the Master Settlement Agreement.

Tobacco Use in Movies

Product Placement

In a section titled "Prohibition on Payments Related to Tobacco Products and Media," the Master Settlement Agreement prohibits payments for branded product placement in motion pictures, television shows, theatrical productions, music performances, and video games (NAAG 1998a). This agreement is binding only on the domestic cigarette companies that signed the agreement, not on their international counterparts or companies outside the United States or nonparticipating domestic tobacco companies.

Figure 5.9 Proportion of movies containing tobacco brand appearances in the top 100 box office hits released each year, 1996–2008



Source: Adapted from Worth et al. 2007.

Individual state attorneys general are responsible for enforcing these and other provisions of the agreement. The agreement is ambiguous, however, on whether the rules apply only to brand placement or to all product placement, including unbranded placements; the attorneys general have sought to enforce only branded placements. Other summaries (Appendix 10C of Chapter 10, NCI Monograph 19; NCI [2008]) have documented enforcement activity, in the form of letters sent from NAAG attorneys to lawyers representing tobacco corporations, asking them to confirm that no exchange of money occurred in return for a particular brand placement. Corporate attorneys representing the tobacco and movie studios have confirmed that no exchange took place. Recent trend studies suggest that enforcement has had the intended dampening effect on the placing of cigarette brands in movies.

Since the signing of the agreement, studies have reported declines in the placement of tobacco products in films (Adachi-Mejia et al. 2005; Worth et al. 2007; CDC 2010, 2011). Figure 5.9 shows the proportion of the top 100 box office hits containing an appearance of a tobacco brand for each year from 1996 through 2008; brands were present in almost 30% of movies at the beginning of the period (Sargent et al. 2001b) and in less than 10% in 2007, followed by a rise to about 12% in 2008. In 2010, the number of on-screen tobacco incidents in youth-rated (G, PG, or PG-13) movies continued a downward trend (CDC 2011).

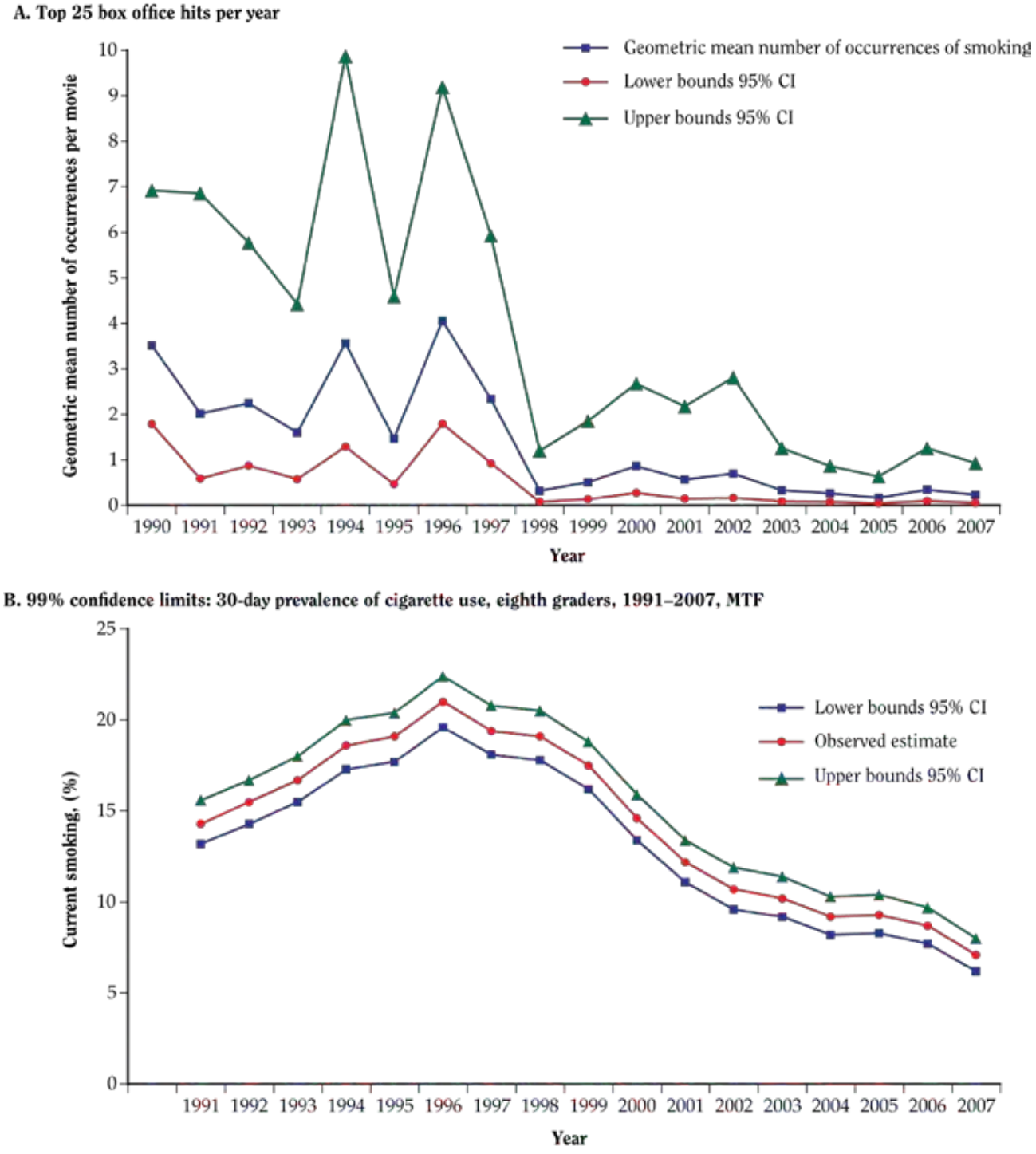
Depictions of Smoking

Short-Term Contemporary Trends

Recent studies have examined trends for the unbranded depiction of smoking in the period surrounding the Master Settlement Agreement; these studies examined smoking grouped by movie and by movie character.

The prevalence of smoking in movies. Three recent studies of trends in movie smoking have found overall declines in that activity. Sargent and Heatherton (2009) compared trends for smoking in the top 25 box office hits each year from 1990 to 2007 with trends in youth smoking derived from the MTF survey. Figure 5.10, which is based on their work, illustrates parallel downward trends for movie smoking and adolescent smoking among eighth graders after 1996. The authors stated, "Movie smoking represents only one of several factors that contribute to youth smoking trends…. Nonetheless, the downward

Figure 5.10 (A) Occurrences of smoking in highest-grossing movies, 1990–2007, and (B) smoking among eighth graders, 1991–2007, in the United States



Source: Adapted from Sargent and Heatherton 2009 with permission from the American Medical Association, © 2009.
Note: Trends for the geometric mean for the number of smoking occurrences in the 25 movies with the highest U.S. box office gross revenues released each year between 1990 and 2007 (lines below and above the middle line indicate 95% CI) and current (past 30-day) smoking among eighth graders from the MTF for each year between 1991 and 2007 (lines below and above the middle line indicate 95% CI). **CI** = confidence interval; **MTF** = Monitoring the Future.

trend in movie smoking is consistent with an influence on downward trends in adolescent smoking" (p. 2212). A second content analysis examined trends by motion picture rating (Worth et al. 2007), which is important because adolescents get more exposure to movies that are rated for youth (Sargent et al. 2007b). Overall, the percentage of the top 100 box office hits that depicted smoking declined from 91% in 1996 to 63% in 2005. Despite this observed decline of almost one-third among the top 100 hits, the number of "tobacco episodes" in youth-rated movies actually increased by 27% over the period because a larger percentage of the movies were youth rated toward the end of the period (due to "ratings creep"). A third analysis looked at trends for smoking in the top 15 United Kingdom box office hits (Lyons et al. 2010) from 1989 through 2008, a sample that contained a greater number of films produced in the United Kingdom than in the United States samples, resulting in an overall downward trend from a mean of six 5-minute intervals per hour that contained smoking images to less than one per hour in 2008.

The prevalence of smoking at the level of the character. Using the level of the movie character for content analysis allows for a comparison with the prevalence of smoking in the population. Four studies have found the prevalence of smoking among characters in movies to be similar to population prevalence (Dalton et al. 2002b; McIntosh et al. 2005; Omidvari et al. 2005; Worth et al. 2006). Worth and colleagues (2006) found that the prevalence of smoking declined significantly among adult characters in the top 100 box office hits over a 9-year period, from 1996 through 2004, and that the prevalence of smoking was equivalent to that among U.S. adults over that time period.

The sociodemographics of smokers in movies have been examined by many researchers; studies show that smokers tend to be White, male, and affluent and thus not representative of smokers in society (Hazan et al. 1994; Dalton et al. 2002b; Worth et al. 2007). The result is that the images of smoking in movies are more similar to the images in cigarette advertising—wealth and power—than to the realities of smoking, which is increasingly associated with lower socioeconomic status and powerlessness. This phenomenon is due to the demographics of movie characters overall, not a biased selection of who smokes in movies. The most conspicuous example of this type of bias is in gender: the majority of "character smokers" in movies are male because 70% of movie characters are male.

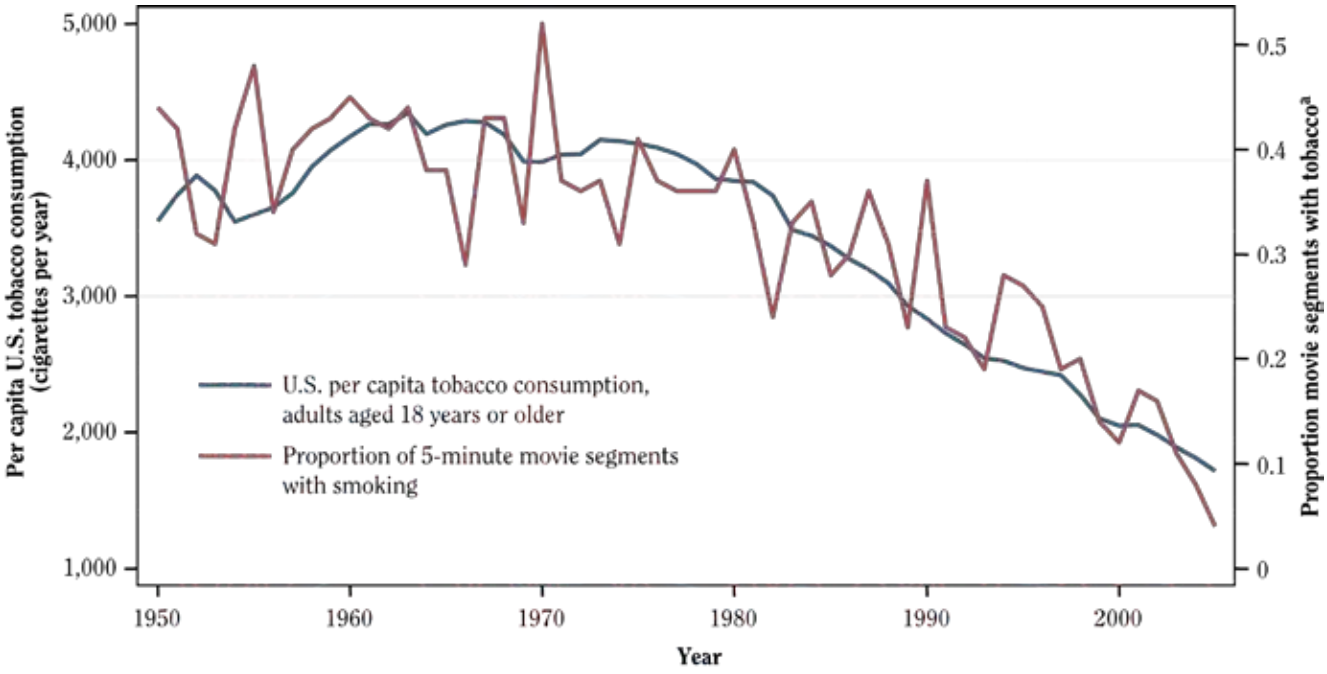
Long-Term Trends

Several studies regarding trends in the portrayal of tobacco use in U.S. films since 1950 are inconsistent. Two studies (Stockwell and Glantz 1997; Glantz et al. 2004) found that the number of smoking incidents per hour declined from 10.7% in the 1950s to 4.9% in the early 1980s, but increased to a high of 10.9% in 2002. Several other studies found little or no change in the frequency of tobacco movie portrayal in the 1980s and 1990s (Hazan et al. 1994; Everett et al. 1998; Dalton et al. 2002b; Titus et al. 2009). Other studies reported downward trends in the number of smoking incidents in movies during the 1990s (Mekemson et al. 2004; Worth et al. 2006; Sargent and Heatherton 2009). One study (Jamieson and Romer 2010) sought to overcome these inconsistencies by using a common sampling frame and methodology. The authors performed a content analysis of 15 movies randomly selected from the top 30 box office hits each year from 1950 through 2006 (n = 855 movies) and coded each film in 5-minute segments to determine total tobacco-related content and main character tobacco use. The results showed a steady and considerable decline in tobacco content of movies since 1950, with total tobacco-related content peaking around 1961. The study also concluded that the decline in tobacco use by main characters was already under way in 1950 and continued to decline.

CDC published two long-term content analyses of smoking in the movies (CDC 2010, 2011) in which the sampling frame was all motion pictures that were in the top 10 films for box office receipts for at least 1 week. This was done in cooperation with the Thumbs Up! Thumbs Down! (TUTD) Project of Breathe California-Sacramento Emigrant Trails. This sample counted all tobacco incidents among the 10 top-grossing movies in any calendar week. During 2002–2008, U.S. movies that ranked in the top 10 for at least 1 week accounted for 83% of all movies exhibited in the United States and 96% of ticket sales. For this analysis, TUTD defined a tobacco incident as the use or implied use of a tobacco product by an actor. The number of movies without tobacco incidents was divided by the total number of movies to calculate the percentage of movies with no incidents, and the average number of tobacco incidents per movie was calculated for each motion picture company.

Figure 5.11 shows the results of this analysis by film rating. Using this approach, the total number of tobacco incidents in all top-grossing films has been declining since 2005. Despite this decline, there is still a substantial amount of smoking in youth-rated (G, PG, PG-13) movies. Thus, while there are some differences in results among studies using different approaches for measuring the level of onscreen smoking in films, all available studies show a decline in the level of exposure since at least 2005.

Figure 5.11 Comparison of the trend for proportion of 5-minute movie segments with tobacco (means for 15 of the top 30 box office hits from 1950 to 2005) and per capita cigarette consumption among adults, 1950–2005, in the United States



Source: Adapted from Jamieson et al. 2008 by permission of Oxford University Press, Fig. 4.4, p. 113 of *The Changing Portrayal of Adolescents in the Media Since 1950.*
Note: Mean for the percentage of film segments containing tobacco use in the top 30 U.S. films (right axis) and U.S. per capita consumption of tobacco for adults aged 18 years or older (left axis).
[a]Mean for the proportion of 5-minute movie segments that contain tobacco.

Varying Responses by Media Company

Beginning in 2004, three motion picture companies adopted and began to enforce written policies designed to reduce the amount of smoking in their films: Disney in October 2004, Time Warner in July 2005 (updated in July 2007), and Universal (then part of General Electric and since purchased by Comcast) in April 2007. These policies provided for review of scripts, story boards, daily footage, rough cuts, and the final edited film by managers in each studio with the authority to implement the policies. Although these companies have almost entirely eliminated depictions of tobacco use from their G, PG, and PG-13 movies, as of June 2011 none of the three companies had zero depictions of smoking or other tobacco imagery in the youth-rated films that they produced or distributed.

From 2005 to 2010, among these three major motion picture companies (one-half of the six members of the Motion Picture Association of America [MPAA]), the number of tobacco incidents per youth-rated movie decreased 95.8% from an average of 23.1 incidents per movie to an average of 1.0 incidents (CDC 2010). For independent companies that are not MPAA members and the three MPAA members with no antitobacco policies, tobacco incidents decreased 41.7%, from an average of 17.9 incidents per youth-rated movie in 2005 to 10.4 incidents in 2010. Among the three companies with antitobacco policies, 88.2% of their top-grossing youth-rated movies were free of tobacco incidents, compared with 57.4% of youth-rated movies among companies without policies (Viacom, News Corp, Sony, and the independent producers) (CDC 2011).

While the policies voluntarily adopted during 2004–2007 by the three major motion picture companies (Disney, Time Warner, Universal) have excluded nearly all tobacco incidents from their top-grossing youth-rated movies, none of the three company policies completely

banned smoking or other tobacco imagery in the youth-rated films they produced or distributed (CDC 2011). Given the continuing varying performance among motion picture companies in reducing tobacco imagery in youth-rated films, WHO (2009) and numerous public health and health professional organizations have recommended giving movies with tobacco incidents an R rating, with exceptions: those that portray a historical figure who smoked and those that portray the negative effects of tobacco use (CDC 2011).

Tobacco Use in Movie Trailers

Depictions of smoking in movie trailers have important implications for exposure as the trailers are aired on television and may be seen by a wider audience than the movie itself. One study combined a content analysis of trailers with Nielsen data measuring media exposure among 12- to 17-year-olds (Healton et al. 2006); of all 216 movie trailers shown on television in a single year (2001–2002), 14.4% included images of tobacco use. Nielsen data indicated that during that year 95% of all U.S. youth aged 12–17 years saw at least one movie trailer on television depicting the use of tobacco, and 88.8% saw at least one of these trailers three or more times. Over the course of that year, movie trailers showing tobacco use were seen 270 million times by youth aged 12–17 years. One experimental study found that smoking by a character in a film trailer was associated with increased perceptions of that character's attractiveness among adolescent smokers (Hanewinkel 2009).

It has been noted that even if stronger policies were adopted banning smoking or other tobacco imagery in youth-rated movies, such policies would not affect youth exposures to older movies that have already been released and are available as downloads, rentals, and on television (CDC 2011). Also, evidence indicates that youth view some R-rated movies (Sargent 2007b). Therefore, antitobacco ads have been recommended for showing before movies that depict smoking (USDHHS 2010).

Summary

Recent content analyses of tobacco use in movies have documented a general decline in the appearance of tobacco brands and in depictions of tobacco use overall, especially since 2005 (Table 5.12). These trends suggest that the movie industry is responding to research and heightened attention to the issue applied by the public health community and the state attorneys general.

While these declines demonstrate the practicality of enacting policies to reduce tobacco incidents in youth-rated movies, it has been recommended that expanding the R rating to include movies with smoking could further reduce exposures of young persons to onscreen tobacco incidents (CDC 2011).

Exposure to Tobacco Use in Movies

Assessment of Exposure

Assessment of exposure to components of movies is challenging in ways similar to assessment of exposure to advertising. A recent article (Sargent et al. 2008) contrasts various methods and lists their advantages and disadvantages. The recall method (Goldberg and Baumgartner 2002) involves simply asking subjects how often they watch movies or how much they notice smoking in movies. This method is subject to recall bias; for example, a subject who smokes may pay more attention to smoking scenes. A second method involves assessing the relation between the smoking status of an adolescent's favorite movie star and the youth's own smoking status (Distefan et al. 1999). In this approach, adolescents are asked to name their favorite male and female movie stars. The smoking status of these stars is then assessed within a contemporary sample frame of movies, and this information is compared with the smoking status of the adolescent. This method has the advantage of assessing exposure to movie smoking in a way that is highly relevant to the individual, but it does not take into account that adolescents observe smoking by actors other than their favorites.

A third method determines which movies adolescents have watched and assesses these movies for tobacco exposures. This method requires adolescents to recognize a movie title when it is presented and recall whether they have seen the movie. Positive responses from participants are combined with content analysis to estimate exposure to portrayals of movie smoking. Clearly, it is not possible to ask every respondent about all available movies, and researchers have addressed this limitation in two ways. Some researchers choose a list of 40 or 50 contemporary movies with varying amounts of smoking and survey all respondents about all those specific films (Thrasher et al. 2008). This approach is easy to implement, but the conclusions apply only to the set of movies surveyed. A different approach, using the Beach method (Sargent et al. 2008), analyzes a large sample (500–600) of box office hits and then surveys each respondent about a randomly selected subsample of titles. The random subsample allows researchers to estimate exposure of the population to a relatively large sample of hits rather than limiting estimates to a specific subset of movies.

Table 5.12 Content analyses of movies in studies published since 2005

Study	Movie sample frame	Interrater reliability	Unit of analysis	Outcome variable	Results	Comments
Adachi-Mejia et al. 2005	Top 100 box office hits per year 1996–2003	Not reported	Movie	Number with appearances of tobacco brands, by year OR for appearance of a tobacco brand before vs. after Master Settlement Agreement	Brand appearances dropped from 20.8% of movies before Master Settlement Agreement to 10.5% afterward, OR = 0.45 (95% CI = 0.29–0.68)	Interrater reliabilities on this content analysis available through authors
Healton et al. 2006	All movie trailers shown on television August 1, 2001, to July 31, 2002	All smoking verified by two coders and differences resolved	Movie trailer (N = 216)	Percentage of trailers containing smoking Gross impressions for smoking in trailers among youth aged 12–17 years	Tobacco appeared in 14.4% (31) of trailers 270 million gross impressions were delivered to youth by the trailers	
Worth et al. 2006	Top 100 box office hits per year 1996–2004	Agreement = 99.6% for character smoking status	Major character smoking status	Smoking prevalence among adult major smoking characters	Smoking prevalence declined from 25.7% in 1996 to 18.4% in 2004, equivalent to declines in smoking among U.S. adults	
Worth et al. 2007	Top 100 box office hits per year 1996–2005	Mean for coder agreement on whether character tobacco use was occurring in 1-second intervals = 0.86 (SD = 0.17)	Tobacco episodes (handling or use of tobacco by a movie character) analyzed at the level of the movie and at the aggregate level for the top 100 box office hits each year	Percentage of movies with smoking, by movie rating Number of tobacco episodes for top 100 box office hits, by year and rating	Percentage of movies with smoking declined from 91% to 63% over study period Overall, the number of tobacco episodes declined from 650 to 400 There was an increase in tobacco episodes delivered by youth-rated movies (because a larger share of movies received youth ratings)	
Jamieson et al. 2008; Jamieson and Romer 2010	15 of the 30 top box office hits (random selection), each year 1950–2004	Krippendorff's alpha = 0.78 for tobacco	Unit of coding was the 5-minute interval (any tobacco present? yes vs. no) The unit of analysis was the percentage of 5-minute intervals containing any reference to tobacco	The outcome reported was the mean for the percentage of intervals containing any tobacco for all movies in each 5-year window	There was a continuous decline in the proportion of 5-minute intervals that contained smoking over the entire time period	

Table 5.12 Continued

Study	Movie sample frame	Interrater reliability	Unit of analysis	Outcome variable	Results	Comments
Sargent and Heatherton 2009	Top 25 box office hits 1990–2007	Interrater correlation = 0.96	A smoking occurrence was counted whenever a movie character handled or used tobacco or when tobacco use was depicted in the background Only tobacco use was coded (>90% was cigarette or cigar smoking)	Geometric mean, number of episodes per movie, by year of release	Geometric mean for movie smoking occurrences was 3.5 (95% CI = 1.8–6.9) in 1990 and 0.23 (95% CI = 0.06–0.93) in 2007 Trend analysis indicated that geometric mean for movie smoking declined by an average of 0.84 smoking occurrences (95% CI = 0.80–0.89) per year between 1990 and 2007	Downward trend in smoking among 8th graders also documented during this period
Lyons et al. 2010	Top 15 most commercially successful films United Kingdom 1989–2008	No interrater reliability reported	Unit of coding was the 5-minute interval (following categories counted separately: consumption of any tobacco product by any character, tobacco paraphernalia, inferred tobacco use, and brand appearances)	Proportion of movies with smoking, by rating Mean number of 5-minute intervals per hour	The mean rate of occurrence of tobacco intervals fell substantially and significantly ($p < 0.05$) for all categories of tobacco use between 1989 and 2008, from 3.5 to 0.6 per hour; similar trends occurred for all categories of tobacco interval	The proportion of U.K. films with brand appearances (0.36) was much higher than the rate overall (0.09) and for U.S. films (0.20)

Note: **CI** = confidence interval; **OR** = odds ratio; **SD** = standard deviation; **U.K.** = United Kingdom; **U.S.** = United States.

Total Exposures to Smoking in Movies

The exposure studies described in this section document the fact that movies overall deliver billions of smoking impressions to adolescents and conclude that how movies are rated affects these exposures. Three research groups have independently developed estimates for the exposure of adolescents to smoking contained in movies themselves, with convergent results. (Note that all three studies underestimated total exposure because they did not account for multiple DVD viewings of a given film.) Sargent and colleagues (2007b) surveyed 6,522 nationally representative U.S. adolescents aged 10–14 years in 2003; using the Beach method, they analyzed the content of 534 contemporary box office hits for smoking and assigned each movie to a random subsample of adolescents (on average, 613 adolescents per movie) who were asked whether they had seen it. Using survey weights, the authors estimated the total number of U.S. adolescents who had seen each movie and then multiplied that figure by the number of depictions of smoking in each to obtain total smoking exposures seen by adolescents. ("Gross impressions" are the total number of exposures delivered by a media schedule, such as all showings of a given film.) As of the date of the survey in 2003, the 534 movies had delivered 13.9 billion gross smoking impressions, an average of 665 per U.S. adolescent aged 10–14 years. Most of the 534 movies were rated either PG-13 (41%) or R (40%), and 74% contained smoking (3,830 total occurrences of smoking). On average, a movie was seen by 25% of the adolescents surveyed, but viewership was significantly lower for R-rated movies. Although this sample's youth-rated movies (G, PG, and PG-13) contained only 40% of smoking occurrences, they delivered 61% of smoking impressions to the targeted age group because of that group's higher viewership of those movies. Most of the gross impressions of smoking delivered by youth-rated movies came from PG-13 movies. The Sargent study also grouped gross smoking impressions by movie and by actor. Some 30 popular movies each delivered more than 100 million gross smoking impressions, and 30 actors each delivered more than 50 million smoking impressions, such that just 1.5% of the 1,961 actors who played characters in these movies delivered one-quarter of all character smoking to the adolescent sample. Some popular actors did not smoke in any of the movies.

In the second study, Polansky and Glantz (2007) examined how many gross smoking impressions were delivered to adolescents from 1,306 movies (1998–2006) that earned $500,000 or more at the box office. The estimated number of smoking occurrences was based on each movie's MPAA rating and its tobacco rating (Screenit[2012], where parents rate movie smoking). Overall, the 1,306 movies delivered an estimated 44.5 billion gross smoking impressions to audiences of all ages from 1999 to 2006, including 2.4 billion to children aged 6–11 years and 8.8 billion to youth aged 12–17 years. The study estimated that about one-half of impressions overall were delivered by youth-rated movies.

In the third study, Anderson and colleagues (2010) used a similar methodology to assess the exposure of British adolescents to smoking from 572 top-grossing films in the United Kingdom. They found higher exposure among British (than U.S.) adolescents resulting from higher exposure to movies with smoking that would have been rated R in the United States, but were rated as appropriate for youth in the United Kingdom. Because of the difference, British youth were exposed to 28% more movie smoking than were U.S. youth. These studies underline the large impact that decisions by ratings boards can make on the exposure of youth to smoking in movies; because fewer youth see adult-rated movies, a mandate by the ratings board to give movies with smoking an adult rating would greatly reduce the exposure of youth to smoking in those movies.

Further, it has been noted that almost all states offer movie producers subsidies in the form of tax credits or cash rebates to attract movie production to their states, totaling approximately $1 billion annually (CDC 2011). Millet and associates (2011) have reported that the 15 states subsidizing top-grossing movies with tobacco incidents spent more on these productions in 2010 ($288 million) than they budgeted for their state tobacco control programs in 2011 ($280 million).

The conclusion of Chapter 5 of the 1994 Surgeon General's report on smoking in young people emphasized the importance of the advertising of images in making use of cigarettes attractive to youth: "Cigarette advertising uses images rather than information to portray the attractiveness and function of smoking. Human models and cartoon characters in cigarette advertising convey independence, healthfulness, adventure-seeking, and youthful activities—themes correlated with psychosocial factors that appeal to young people" (USDHHS 1994, p. 195). Today, the delivery of billions of glamorized images of smoking by movie and television stars offers a stark contrast to the current landscape for tobacco advertising. Because some image-based tobacco advertising has been eliminated by the Master Settlement Agreement, images of smoking in movies and television may today be some of the more potent media-delivered smoking images seen by U.S. children and adolescents. The effect is compounded by the fact that many U.S. films are eventually released on television, DVD, or online, where they can reach an international audience. Thus, they have the potential to expose adolescents around the world to role models who smoke.

Population-Based Research Linking Movie Smoking to Adolescent Smoking

Cross-Sectional Studies Assessing Exposure to Movie Smoking and Smoking Among Young People

A number of cross-sectional studies have examined the association between movie smoking and adolescent smoking using a variety of approaches (Table 5.13) to assess measures of exposure: direct recall (Goldberg and Baumgartner 2002; Goldberg 2003; Henriksen et al. 2004b; McCool et al. 2005; Laugesen et al. 2007; Thompson and Gunther 2007); smoking status of favorite movie star (Distefan et al. 1999; Tickle et al. 2001; Dixon 2003); and cued recall (Sargent et al. 2001a, 2002, 2005; Hanewinkel and Sargent 2007; Thrasher et al. 2008). These cross-sectional studies assessed adolescents in Asia, Europe, Latin America, and the United States.

In these studies, the use of general recall measures resulted in weaker associations than did assessments of smoking by favorite movie star or methods that used cued recall of titles to assess exposure. The studies by Henriksen and colleagues (2004b) and Thompson and Gunther (2007) suggest that recall measures that assess the extent to which participants notice smoking in movies are unlikely to show a multivariate association with smoking. Figure 5.12 illustrates the strength and consistency of the results of cross-sectional studies of smoking onset that (1) employed cued recall of movie titles (results 1–4), (2) found adjusted ORs between 2 and 3 for high versus low exposure to movie smoking, and (3) achieved statistical significance for all estimates after controlling for a variety of potential confounders. Studies that used the participants' favorite movie stars showed significant associations between the star's smoking status and smoking among the youth who named a favorite movie star (Table 5.13). In summary, the results from cross-sectional studies are consistent with an association between exposure to smoking in movies and youth smoking.

Longitudinal Studies Assessing Exposure to Movies

A literature search identified eight published longitudinal samples, six involving U.S. adolescents, one from Germany, and one from Mexico, that were used to assess exposure to smoking in movies (Table 5.13).

The first published study was a follow-up of a sample of northern New England adolescents in which Dalton and colleagues (2003) contacted 2,603 baseline never smokers by telephone and determined that exposure to smoking in movies at baseline had a significant multivariate relationship with trying smoking over the 1- to 2-year follow-up period. When this sample was resurveyed as young adults, exposure to movie smoking during middle school was statistically associated with established smoking (>100 cigarettes lifetime). Another analysis of the same sample (Adachi-Mejia et al. 2009) found that the effect of movie smoking on established smoking was significantly stronger among those adolescents who were generally at lower risk for smoking because of their participation in team sports.

A 1-year follow-up study of never smokers in California (Distefan et al. 2004) found that adolescent girls choosing as a favorite movie star someone who had smoked in more than one movie in the 3 years preceding the survey were significantly more likely to try smoking in the follow-up period. In North Carolina, a school-based longitudinal study of a racially mixed sample of youth (Jackson et al. 2007) found that exposure to R-rated movies was associated with significantly elevated risk for trying smoking during the follow-up period for White but not Black adolescents. Having a television in the adolescent's bedroom was also a significant predictor, over and above the association with R-rated movies.

Sargent and colleagues (2007a) followed a nationally representative sample of 10- to 14-year-old adolescents at 8-month intervals for 24 months (four survey waves) and found that exposure to movie smoking at baseline predicted time to onset of established (>100 cigarettes lifetime) smoking in this cohort. In the same cohort, Tanski and colleagues (2009) found that exposure to movie smoking predicted onset of smoking among those who were never smokers at baseline and that smoking by movie characters predicted the onset of youth smoking regardless of whether the character was positively or negatively portrayed in the film.

Hanewinkel and Sargent (2008) followed 2,711 adolescents in Germany who had never smoked; after 1 year there was a significant association between exposure to movie smoking at baseline and onset of smoking. In addition, the authors reported a dose-response curve for the relation between a continuous measure of exposure to movie smoking and onset of smoking that was similar in shape to the dose-response curve for the Dalton cohort (Figure 5.13; Dalton et al. 2003). Both dose-response curves were curvilinear, with a flattening of the curves above the 75th percentile of exposure, indicating that the largest marginal effects occur at low, rather than high, levels of exposure.

Titus-Ernstoff and coworkers (2008) studied 2,627 New England fourth- and fifth-grade students and followed them up annually for 2 years; the authors assessed exposure to smoking in movies at baseline and in movies

Table 5.13 Population-based studies assessing the relation between exposure to movie smoking and smoking among young people

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
				Cross-sectional			
Distefan et al. 1999	Multiethnic Aged 12–17 years Cross-sectional random-digit-dialing survey N = 6,252 (analysis performed on 3,510 never smokers) United States (California) 1996	Identified favorite movie stars of ever smokers (vs. never smokers)	S, P, SCH, SI, M	Susceptibility to smoking among never smokers (42%)	Adolescent never smokers choosing a favorite star typical of ever smokers vs. choosing a favorite star typical of other never smokers	AOR 1.35 (1.12–1.62)	Favorite actors and actresses were defined by the nominations of the subjects; study examined commonly chosen actors/actresses; 52% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	S, P, SCH, PS, SI, M	Tried smoking (17%)	Quartile of exposure to movie smoking: 1 2 3 4	AOR Reference 1.9 (1.3–2.7) 2.6 (1.8–3.7) 2.5 (1.7–3.5)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs
				Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%)		No association between exposure to movie smoking and higher levels of lifetime smoking	
				Among never smokers: susceptibility to smoking (20%)	Quartile of exposure to movie smoking: 1 2 3 4	AOR Reference 1.2 (0.9–1.5) 1.5 (1.1–1.9) 1.6 (1.2–2.1)	
				Positive expectancies (61% endorsed no positive expectancies)	Quartile of exposure to movie smoking: 1 2 3 4	APOR Reference 1.2 (1.0–1.5) 1.3 (1.1–1.6) 1.4 (1.1–1.7)	
				Views adult smoking as normative (55%)	Quartile of exposure to movie smoking: 1 2 3 4	AOR Reference 1.2 (0.9–1.4) 1.3 (1.1–1.6) 1.4 (1.1–1.7)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Tickle et al. 2001	White, low-income communities Aged 10–19 years Cross-sectional school-based survey N = 632 (281 never smokers) United States (New Hampshire, Vermont)	Movie character smoking status of favorite star averaged for films released up to 3 years before survey	S, SCH, SI, M	Smoking index: 0 = nonsusceptible never smoker (37%), 1 = susceptible never smoker (7%), 2 = 1–99 lifetime cigarettes smoked, but not a current (30 days) smoker (26%), 3 = 1–99 lifetime cigarettes smoked and a current smoker (9%), 4 = ≥100 cigarettes lifetime (20%) Susceptibility among never smokers (17%)	Character smoking by favorite star averaged over 3 years: None 1 2 ≥3 None 1 2 ≥3	APOR Reference 0.78 (NS) 1.53 (1.01–2.32) 3.09 (1.34–7.12) AOR Reference 2.16 (0.86–5.45) 4.78 (1.60–14.2) 16.2 (2.33–112)	Study examined commonly chosen actors/actresses; 51% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents
Goldberg and Baumgartner 2002	Asian Aged 14–17 years Cross-sectional school-based N = 1,338 Thailand 1998	Recall measure—how many American movies have you seen in the past 2 months in theater or on video (0–1 vs. 2–3 vs. ≥4)?	None	Intent to smoke in the future Tried smoking Smoked at least 1 cigarette	0–1 movies (15%), 2–3 (14%), ≥4 (15%) 0-1 movies (24%), 2–3 (29%), ≥4 (32%) 0–1 movies (19%), 2–3 (24%), ≥4 (27%)	NS p <0.05 p <0.05	Results shown for exposure to American movies on video; results similar for exposure to American movies in theater
Dixon 2003	White Aged 12–18 years Cross-sectional school-based N = 2,610 participants, 1,858 experimental smokers Australia 1999	Movie character smoking status of favorite male and female star (mean smoking scenes per movie)	S, SCH, SI	Smoking uptake index: 0 nonsmokers (67%), 1 occasional smoker (12%), 2 light smokers (8%), 3 heavy smokers (5%), 4 chain smokers (1%) Null findings for negative health effects of smoking, endorsement of smokers as more popular, intent to smoke in future		APOR male actors: 1.16, p = 0.04 APOR female actors: NS	Stronger evidence for association among girls than in boys; study examined commonly chosen actors/actresses; 31% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Goldberg 2003	Asian Aged 14–17 years Cross-sectional school-based N = 1,762 Hong Kong 1998	Recall measure—how many American movies have you seen in the past 2 months (0–1 vs. 2–3 vs. ≥4)?	No covariate adjustment	Intent to smoke in the future (27%)	0–1 movies (21%), 2–3 (26%), ≥4 (30%)	p <0.01	
				Tried smoking (40%)	0–1 movies (34%), 2–3 (41%), ≥4 (47%)	p <0.01	
				Current (7 days) smoking (30%)	0–1 movies (18%), 2–3 (21%), ≥4 (22%)	NS	
Henriksen et al. 2004b	Multiethnic 6th–8th grades Cross-sectional school-based N = 2,125 California 2003	Recall measure—how often have you seen smoking in the movies or on television in the past week (never vs. sometimes/often)?	M, P, PS, S, SI, SCH	Tried smoking (prevalence not described, current [30 days] smoking 2.6–7.6%, depending on grade in school)	Past-week viewing of smoking in movies or television: Never vs. sometimes/often	AOR Reference NS (OR estimate did not survive stepwise regression)	Unadjusted OR was statistically significant = 2.2 (95% CI = 1.7–2.8)
McCool et al. 2005	Multiethnic Aged 12 or 16 years Cross-sectional school-based survey N = 3,041 New Zealand	Recall measure—3 items (How often do you see a film at the cinema?), α = 0.65 Positive smoker stereotypes (smokers in films are stylish, smart, sexy, healthy, intelligent), α = 0.79	S	Intent to smoke in the future Mediators Imagery pervasiveness ("smoking in films is common"), 3 items, α = 0.61 Nonchalance ("smoking in films is not important to me"), 3 items, α = 0.67	Continuous structural equation model; the relation between exposure to smoking in movies mediated through image pervasiveness and nonchalance Positive smoker stereotypes had a direct relation with intent to smoke in the future but were not predicted by higher exposure		

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Sargent et al. 2005	Multiethnic national sample N = 6,522 Aged 10–14 years Cross-sectional random-digit-dialed survey United States 2003	Movie title recognition—Beach method 50 titles/survey 532 U.S. box office hits released from 1998 to 2003	S, P, SCH, PS, SI, SINC, ACH, EA	Tried smoking (10%)	Quartile of exposure to movie smoking: 1 2 3 4 AAF	AOR Reference 1.7 (1.1–2.6) 1.8 (1.2–2.8) 2.6 (1.7–4.1) 0.38 (0.20–0.56)	
Hanewinkel and Sargent 2007	White Aged 10–17 years Cross-sectional school-based survey N = 5,586 Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	S, P, SCH, PS, SI, M	Tried smoking (41%)	Quartile of exposure to movie smoking: 1 2 3 4	AOR Reference 1.7 (1.4–2.1) 1.8 (1.5–2.3) 2.2 (1.8–2.8)	
				Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 1 2 3 4	AOR Reference 1.4 (0.9–2.2) 1.7 (1.1–2.6) 2.0 (1.3–3.1)	
Laugesen et al. 2007	Annual school-based surveys 10th graders N = 96,156 New Zealand 2002–2004	How often do you watch R-rated movies? (3 venues: cinema, video, TV) Never <1/month Once/month 2–3/month ≥ once/week	S (sensitivity analysis adjusted also for SI, SINC, and PS did not change the conclusion)	Tried smoking among not current smokers	ARR Watched R-rated movies: Never 2–3 times/month Once/month Weekly	 Reference 1.20 (1.12–1.28) 1.67 (1.55–1.80) 2.04 (1.90–2.18) 2.28 (2.12–2.45)	
				Current (30 days) smoking	Watched R-rated movies: Never 2–3 times/month Once/month Weekly	 Reference 0.80 (0.73–0.88) 1.15 (1.05–1.26) 1.59 (1.44–1.75) 2.31 (2.10–2.54)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Song et al. 2007	Multiethnic Aged 18–25 years Cross-sectional Web-based survey N = 1,528 United States	Movie title recognition—Beach method 60 titles/survey 500 top-grossing movies released from 2000 to 2004	S, P, SRA, SI, M, PPS	Current (30 days) smoking (31%)	AOR with exposure to movie smoking divided into quartiles and entered as a continuous variable	1.21 (1.05–1.38) for each quartile increase in exposure	For the established smoking analysis, a mediational model that showed significant paths from movie smoking to established smoking through friend smoking and positive expectancies
				Established smoking (>100 cigarettes lifetime) (25%)	AOR, same analytic approach as above	1.08 (0.93–1.25)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	S, P, SI, BOF	Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 1 2 3 4	AOR Reference 1.4 (0.9–2.4) 1.8 (1.0–3.2) 2.7 (1.5–4.7)	Significant multivariate association not found for perceived prevalence among adults
				Ever smoked (41%)	Quartile of exposure to movie smoking: 1 2 3 4	AOR Reference 1.3 (0.9–1.6) 1.8 (1.4–2.4) 2.3 (1.5–3.6)	
				Among never smokers susceptible to smoking (40%)	Quartile of exposure to movie smoking: 1 2 3 4	AOR Reference 1.5 (1.1–2.0) 1.8 (1.2–2.5) 1.6 (1.1–2.3)	
				Attitudes toward smoking (good or bad; pleasant or unpleasant; safe or dangerous)	Quartile of exposure to movie smoking: 1 2 3 4	UAβ Reference 0.17 (0.03–0.31) 0.18 (0.02–0.34) 0.41 (0.23–0.57)	
				Perceived prevalence among adults and youth	Quartile of exposure to movie smoking: 1 2 3 4	UAβ Reference 0.21 (0.03–0.39) 0.30 (0.16–0.44) 0.34 (0.18–0.50)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Hunt et al. 2009	White Aged 19 years Cross-sectional N = 948 Scotland (Glasgow) 2002–2004	Movie title recognition—Beach method 50 titles/survey 532 U.S. box office hits released from 1998 to 2003	S, P, SCH, SI	Ever smoked (63%) Current smoker (33%) Occasional social smoker + regular smoker vs. never smoker + trier + former smoker	No bivariate or multivariate association with movie smoking No bivariate or multivariate association with movie smoking	AOR Not significant	None of the associations between exposure categories was significant

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
				Longitudinal			
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	S, P, SCH, PS, SI, M	18-month endpoint Incidence of tried smoking (10%)	Quartile of exposure to movie smoking: 1 2 3 4	ARR Reference 2.02 (1.27–3.20) 2.16 (1.38–3.40) 2.71 (1.73–4.25)	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants
				7-year endpoint Established smoking incidence (≥100 cigarettes lifetime at survey point) (27.8%)	Quartile of exposure to movie smoking: 1 2 3 4	AAF 0.52 (0.30–0.67) ARR Reference 1.36 (0.95–1.94) 1.68 (1.15–2.44) 1.98 (1.35–2.90)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Distefan et al. 2004	Longitudinal random-digit-dial survey N = 2,084 never smokers at baseline Follow-up 3 years Multiethnic Aged 12–15 years Baseline smoking status: never smoker United States (California)	Movie character smoking status of favorite star Nonsmoker star smoked in <2 movies in preceding 3 years Smoker star smoked in ≥2 movies in the preceding 3 years	S, SCH, PS, SI, M	Tried smoking (not given, approximately 30%) Among females	Nonsmoker star Smoker star Nonsmoker star Smoker star	Reference 1.36 (1.02–1.82) Reference 1.86 (1.26–2.73)	Significantly stronger effect was found for females, with no effect for males
Jackson et al. 2007	Longitudinal school-based survey, 2001–2002 N = 735 Follow-up at 2 years White and Black Mean age 13.6 years Baseline smoking status: never smoker United States (North Carolina)	Title recognition measure—93 film titles released 2001–2002 7 (G-rated), 14 (PG-rated), 49 (PG-13 rated), 23 (R-rated)	S, SI, PS, SCH, P	Tried smoking (30%)	No movie effect for Black adolescents Among White adolescents, tercile of exposure to R-rated movies: 1 2 3	 AOR Reference 1.57 (0.73–3.35) 2.67 (1.07–6.55)	Television in the bedroom also found to be related to smoking; after controlling for this variable, the AOR for tercile 3 among White adolescents = 2.69 (1.25–5.77)

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Sargent et al. 2007a; Wills et al. 2008; Tanski et al. 2009	Longitudinal random-digit-dial survey N = 6,522 baseline (5,829 never smokers) National sample Follow-up at 8 months (5,503), 16 months (5,019), 24 months (4,574) Multiethnic Aged 10–14 years at baseline Baseline smoking status: never smoker for outcome of tried smoking, not established smoker for outcome of established smoking United States 2003	Movie title recognition—Beach method 50 titles/survey Baseline pool: 532 U.S. box office hits released from 1998 to 2003 Follow-up pools: movies released to box office or DVD during interim periods (approximately 150 titles for each follow-up survey wave)	S, SI, P, PS, EA, SCH	Tried smoking (15.9% by 24 months)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile, assessed by character type: Mixed Negative Positive	AHR 1.39 (1.04–1.85) 1.46 (1.07–1.98) 1.39 (0.99–1.96)	Interaction effect for negative character smoking: AHR = 2.55 (1.50–4.32) for adolescents low in sensation seeking; Wills et al. (2008) found that the relation of movie exposure and onset of smoking was partially mediated through positive expectancies and change in the smoking status of friends; interaction effect for established smoking: AHR = 12.7 (2.0–80.6) for adolescents low in sensation seeking
			S, SI, P, PS, EA, SCH	Established smoking (≥100 cigarettes lifetime)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile	AHR 2.04 (1.01–4.12)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Hanewinkel and Sargent 2008; Sargent and Hanewinkel 2009	Longitudinal school-based survey N = 2,711 Follow-up at 1 year White Aged 10–16 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	S, P, SCH, PS, SI, M	Tried smoking (19%)	Quartile of exposure to movie smoking: 1 2 3 4	ARR Reference 1.37 (1.09–1.68) 1.78 (1.39–2.29) 1.96 (1.55–2.47)	Hanewinkel and Sargent (2008) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); this and the dose-response curve were similar to Dalton et al. (2003)
				Smoking index (composed of lifetime smoking and current smoking items, α = 0.87)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile, assessed by character type	APOR among baseline never smokers: 2.85 (1.90–4.26) Among baseline ever smokers, the interaction term was 0.55 (0.34–0.92), indicating a significantly lower response in this category of baseline smoker	

Table 5.13 Continued

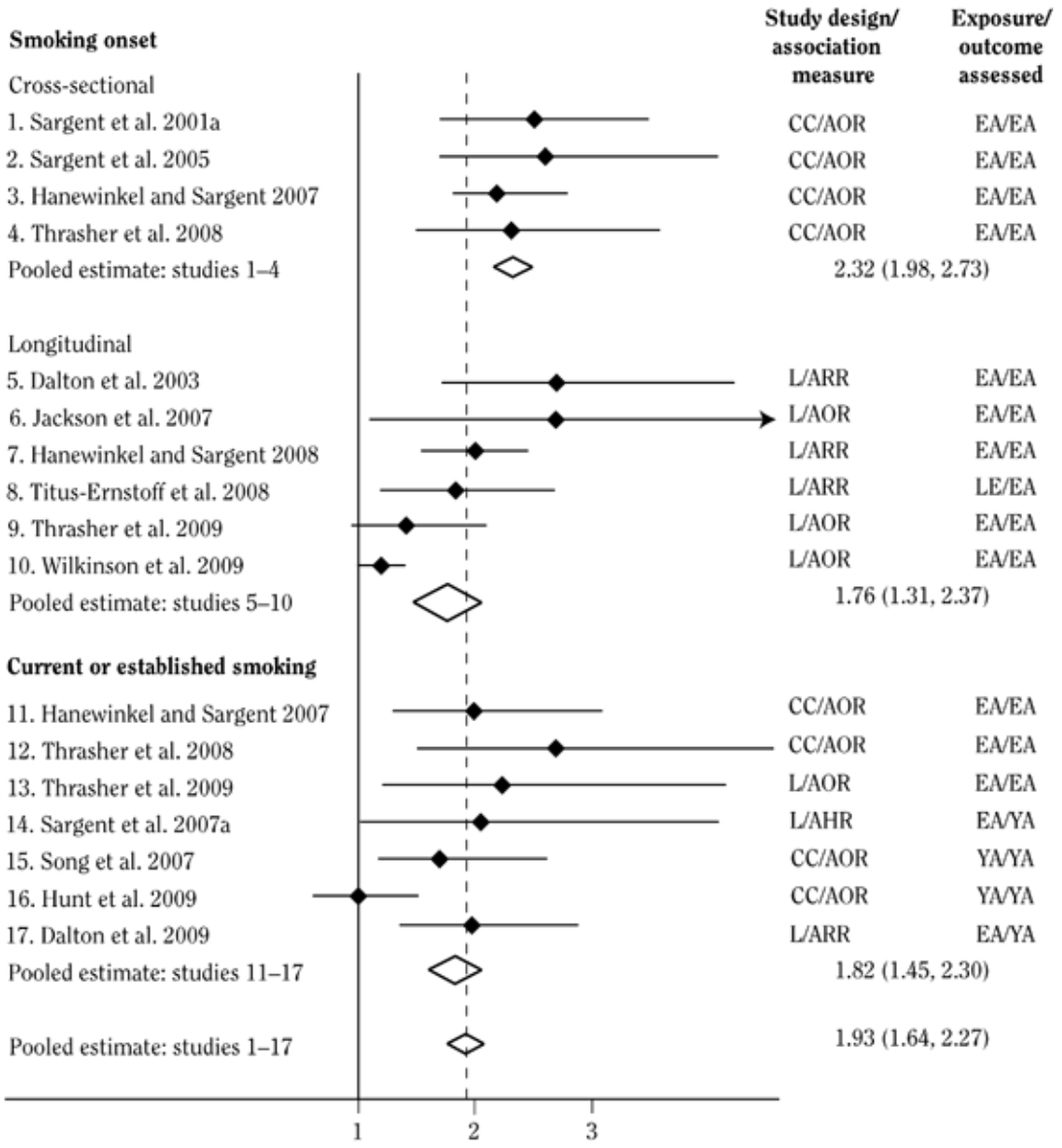
Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Titus-Ernstoff et al. 2008	Longitudinal, school-based, elementary schools, telephone N = 2,627 (2,499 baseline never smokers) United States (New Hampshire, Vermont) 2002–2003 Follow-up at 1 year (2,354) and 2 years (2,255) White Aged 9–12 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 550 popular contemporary movies, top 100 releases for each of the 5.5 years preceding baseline survey Follow-up movie pools selected on rolling basis from top 100 box office hits plus top 100 video rentals for the 12 months preceding survey		Tried smoking (9.6% by 24 months)	Exposure entered as continuous measure, with each 1-point increase equivalent to a 1-decile increase in exposure: Baseline (B) exposure 12-month exposure 24-month exposure B + 12-month exposure B + 12-month + 24-month exposure Using <25th percentile as reference Using <10th percentile as reference	ARR for trying smoking at 24 months 1.09 (1.03–1.15) 1.09 (1.03–1.16) 1.07 (1.00–1.14) 1.11 (1.04–1.17) 1.09 (1.02–1.16) AAF 0.35 (0.16–0.53) AAF 0.46 (0.11–0.70)	AAF = 0.35 (0.16–0.53); majority of movie smoking exposure was from youth-rated movies
Thrasher et al. 2009	Longitudinal school-based survey N = 3,874 baseline (2,093 never smokers) Mexico (Cuernavaca and Zacatecas) 2005 Follow-up at 1 year (1,741) Hispanic Aged 10–14 years Baseline smoking status: never smoker	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	BOF, M, P, PI, S, SI	Tried smoking (36%) Current (30 days) smoking (8%)	Quartile of exposure to movie smoking: 1 2 3 4 Quartile of exposure to movie smoking: 1 2 3 4	ARR Reference 1.01 (0.64–1.60) 1.54 (1.01–2.64) 1.41 (0.95–2.10) ARR Reference 1.22 (0.59–2.51) 2.44 (1.31–4.55) 2.23 (1.19–4.17)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
Wilkinson et al. 2009	Longitudinal household survey N = 1,328 Follow-up at 6, 12, 18, and 24 months (1,286) Hispanic Aged 11–13 years Baseline smoking status: never smoker for new experimentation United States (Texas)	Movie title recognition—Beach method 50 titles/survey 250 popular contemporary movies, top 50 releases each year 1999–2004	P, S, SCH, SI	Ever tried cigarettes (n = 1,286) New experimentation with cigarettes (n = 1,129)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile	AOR 1.27 (1.10–1.39) AOR 1.19 (1.01–1.40)	Interaction effect found for country of birth, with Mexican-born adolescents having a stronger response to smoking in movies, AOR = 1.52 (1.14–2.05), than did U.S. born, AOR = 1.04 (0.86–1.27)

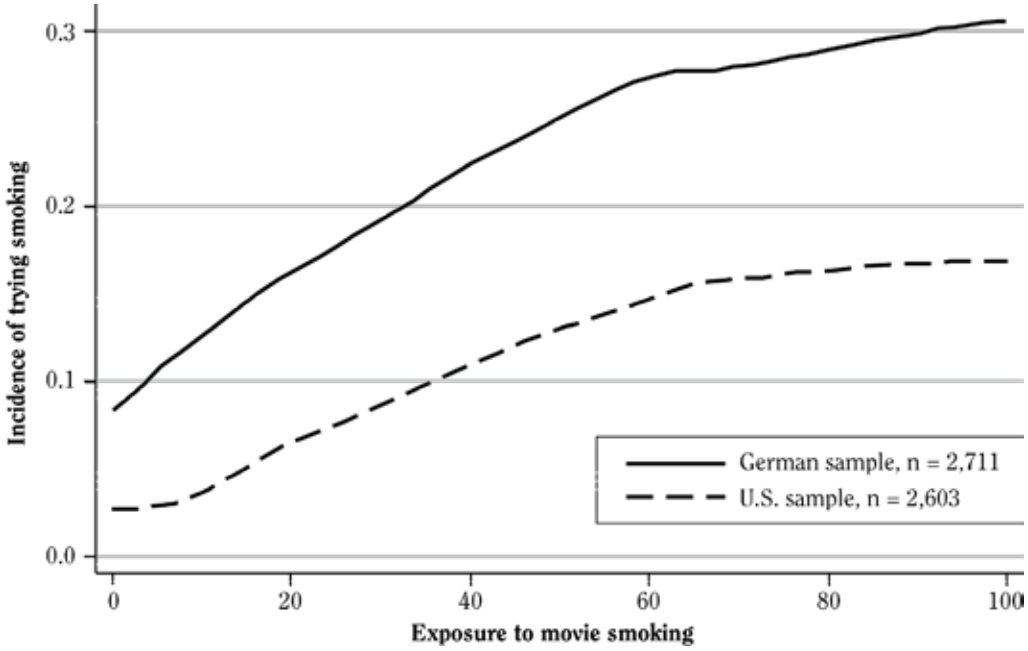
Note: Multiple citations within one cell are for multiple reports on the same sample. **U.S.** = United States.
[a]Covariates: **ACH** = access to cigarettes in household; **BOF** = reported seeing bogus title; **EA** = extracurricular activities; **M** = other media/advertising influences; **P** = personality characteristics; **PPS** = perceived prevalence of smoking; **PS** = parenting style/parental oversight of smoking behavior; **S** = sociodemographics; **SCH** = school attachment and function; **SI** = other social influences (friend and family smoking); **SINC** = weekly spendable income; **SRA** = smoking-related attitudes/cognitions.
[b]Measures of association: **AAF** = adjusted attributable fraction; **AHR** = adjusted hazard ratio; **AOR** = adjusted odds ratio; **APOR** = adjusted proportional odds ratio; **ARR** = adjusted relative risk; **CI** = confidence interval; **NS** = not significant; **OR** = odds ratio; **UAβ** = unstandardized beta coefficient.

Figure 5.12 Summary and meta-analysis of studies on the association between exposure to movie smoking and smoking among adolescents and young adults



Note: Only studies that used some form of a movie title recognition method of assessing exposure are summarized; in most cases, the high category was highest quartile of exposure compared with lowest quartile. For each study, the point estimate and 95% confidence intervals are illustrated. Pooled estimates were obtained through random effects meta-analysis using Stata 10 (College Station, Texas). **AHR** = adjusted hazard ratio; **AOR** = adjusted odds ratio; **ARR** = adjusted relative risk; **CC** = cross-sectional; **EA** = early adolescents (aged 11–15 years); **L** = longitudinal; **LE** = late elementary school (aged 7–10 years); **YA** = young adults (aged 18–25 years).

Figure 5.13 Shape of the crude dose-response relation between exposure to movie smoking and smoking onset for German and U.S. samples of adolescents



Source: Hanewinkel and Sargent 2008. Reprinted with permission from the American Academy of Pediatrics, © 2008.
Note: For the German sample, exposure was to 398 internationally distributed box office hits in the German market; for the U.S. sample, exposure was to 601 box office hits in the North American market. Because the sample of movies for the U.S. study was larger, those individuals had higher average levels of exposure to movie smoking. To compare the dose-response curves, exposure was standardized for the two studies so the lowest value was 0 and the highest was 100, with both distributions trimmed at the 95th percentile. For the German sample, the median (interquartile range) was 23 (7–48), and for the U.S. sample it was 32 (18–56).

that had been released after each previous survey. Most of the exposure (79%) in this age group came from youth-rated movies, and almost one-half of the onset of smoking in this cohort was explained by exposure to smoking in movies consistent with the results of Dalton and colleagues (2003).

Two longitudinal studies have addressed the relation between exposure to movie smoking and adolescent smoking among Latino adolescents. A study of Mexican adolescents 1 year after they were exposed to movie smoking (Thrasher et al. 2009) reported no association with trying smoking among never smokers at baseline, but significant associations with current (past 30 days) smoking among this group. The second study (Wilkinson et al. 2009) followed up a Texas-based sample of 1,328 Mexican American adolescents and reported that those who had been born in Mexico were more strongly affected by the exposure to movie smoking than were U.S.-born youths.

Figure 5.12 summarizes the results for longitudinal studies of the onset of smoking among adolescents that used cued-recall measures of movie exposure (results 5–10). Four studies of White adolescents (Dalton et al. 2003; Jackson et al. 2007; Hanewinkel and Sargent 2008; Titus-Ernstoff et al. 2008) from the United States and Germany yielded consistent results with multivariate estimates of relative risk (RR) in the 2–3 range. Smaller measures of risk were found among U.S. Latinos (Wilkinson et al. 2009), and findings were null for Mexican adolescents (Thrasher et al. 2009). Noting that marketing restrictions were strongest at the time of their study in the United States, intermediate in Germany, and weakest in Mexico, Thrasher and colleagues (2009) suggested that the strength of the association between movie smoking and adolescent smoking may depend on marketing regulations, with larger effects in countries with stronger tobacco control programs.

One study of Black adolescents using exposure to R-rated movies did not find a relationship between exposure and smoking behavior (Jackson et al. 2007). Another study found that there was a dose-response between the

number of episodes of smoking by Black actors and smoking initiation among Black adolescents (Tanski et al. 2011). However, Black adolescents did not appear to be affected by smoking by White actors, unlike White adolescents who were susceptible to both Black and non-Black movie characters. Further research is needed to better understand the relation between movie exposures and smoking among minority adolescents.

Figure 5.12 also summarizes results of cross-sectional and longitudinal studies of adolescents and young adults regarding an association with current or established smoking (results 11–17). All but one study of adolescents found multivariate RRs/ORs in the 2–3 range. A cross-sectional study of young adults in experimental phases of smoking by Song and colleagues (2007) showed a significant association, but the study by Hunt and colleagues (2009) (involving young established regular smokers) did not.

In summary, longitudinal studies have found consistent associations between exposure to movie smoking and the onset of smoking among adolescents (early vs. late smoking outcomes are addressed below). The evidence base is not large enough at this time to determine whether these general results apply specifically to young adults or to racial and ethnic subgroups.

Replicated Moderation Effects

Moderation, or effect modification, is found when the association is significantly stronger or weaker in a certain subgroup. Moderation effects are often reported but rarely replicated; replication of a moderation effect would make one more certain of an underlying causal relation responsible for both the association and the moderation effect.

Early Versus Late Outcomes

It has been common to model the uptake of smoking as one continuous variable, but recent publications have raised the possibility that different risk factors could play different roles for early outcomes (e.g., the onset of smoking) versus intermediate outcomes (progression of early experimentation) versus late outcomes (daily smoking) (Robinson et al. 2006). In one study, Sargent and coworkers (2009a) found that the association between exposure to movie smoking and adolescent smoking was confined to trying smoking; the authors found no significant association between exposure to movie smoking and higher levels of lifetime smoking among the experimental smokers. A study by DiFranza and colleagues (2002) found that some adolescents move quickly from the onset of smoking to symptoms of dependence and established smoking (>100 cigarettes lifetime) and that movies have more important effects on the early phases of this process (Pomerleau 1995; DiFranza et al. 2007).

Smoking by Parents

Dalton and colleagues (2003) reported that parental smoking status modified the relationship between exposure to movie smoking and smoking among adolescents; the effect was significantly stronger among adolescents in nonsmoking households. This moderation effect was replicated in the longitudinal study of German adolescents by Hanewinkel and Sargent (2008). Thus, the stimulus for smoking behavior that smoking in movies provides appears stronger for youth in nonsmoking homes, where parents do not provide smoking role models.

Sensation Seeking

Sargent and colleagues (2007a) reported a moderation effect for sensation seeking in their study of established smoking, with adolescents who were low in sensation seeking more strongly influenced by exposure to movie smoking. This type of moderation effect was also present for trying smoking, with adolescents low in sensation seeking being more strongly affected by negative-balanced smoking (smoking by bad guys) in movies (Tanski et al. 2009).

In conclusion, the moderation effects reported to date suggest that the effects of movies are stronger for adolescents at lower risk for taking up smoking (parents do not smoke, the youth are low-sensation seekers).

Mediation Through Hypothesized Endogenous Variables

Analyses of mediation are important in behavioral science because they test whether hypothesized attitudes, cognitions, and intentions lie along the causal pathway from an exposure to a behavior. These variables are considered endogenous, part of the mental mechanism through which the exposure to media exerts its influence. Demonstrating such a mediational pathway is an important part of empirically testing the plausibility of the theory underlying the causal association.

For example, using cross-sectional and longitudinal structural models, both Tickle and colleagues (2006) and Wills and colleagues (2007) assessed whether exposure to movies affected the onset of smoking indirectly though changes in some variable for peers regarding smoking. The Wills study found that change in friends' smoking status between baseline and follow-up partially mediated the effect of exposure to movies on the adolescent's own uptake of smoking. The Tickle study found that the pathway from exposure to movie smoking to young people's

intentions to smoke was mediated by positive expectancies about smoking and identification as a smoker. Finally, in a cross-sectional study of young adults, Song and colleagues (2007) found pathways from exposure to movie smoking to current smoking through friend smoking and positive expectancies about smoking. In summary, mediational analyses conducted on three samples suggest that exposure to smoking in movies affects adolescent smoking both directly and indirectly through peers and positive expectancies.

Parental Control Over Media Exposure

Although policies to reduce smoking in youth-rated movies might limit adolescents' exposure to movie smoking, about 40% of the exposure to this risk factor comes through adolescents watching movies rated for adults. Thus, an additional approach to limiting risk would be to encourage parents to control the exposure of their children to adult-rated movies. Observational studies, summarized in Table 5.14, suggest that this strategy could be complementary to policies aimed at eliminating smoking from youth-rated movies (Dalton et al. 2002a, 2006; Sargent et al. 2004; Thompson and Gunther 2007; Hanewinkel et al. 2008). Most of these studies used a form of the question "How often do your parents allow you to watch R-rated movies? (*never, once in a while, sometimes, all the time*)." Typically, only a minority of young adolescents reported complete restriction from viewing R-rated movies, and yet parental restrictions were associated with seeing fewer R-rated movies (Dalton et al. 2002a; Sargent et al. 2004; Hanewinkel et al. 2008). Most of the studies controlled for a variety of confounding influences, including some measure of authoritative parenting style. As illustrated in Figure 5.14, all the studies found that fewer parental restrictions on movie viewing were associated with higher risk of trying smoking.

The evidence that parental restrictions on the viewing of R-rated movies translates into lower risk for the onset of their children's smoking has two important implications for policy. First, it is evidence that active intervention to lower the level of exposure to on-screen smoking (the "dose") leads to lower risk of smoking (the "response"), and that intervention to move down the dose-response relationship between exposure to smoking in movies and youth smoking is possible. Second, because youth still receive a substantial amount of their exposure to on-screen smoking from youth-rated (mostly PG-13) films (Figure 5.11), even children of parents who vigorously enforce the R rating will receive substantial exposure to on-screen smoking. This remaining exposure is very important in view of the evidence that the marginal effect of exposure at lower levels is greater than at higher levels (Figures 5.12 and 5.13) and the effects of exposure to on-screen smoking are greater in youth at lower risk of smoking.

Summary of Population-Based Studies

A random effects meta-analysis of the four cross-sectional studies of smoking onset among early adolescents summarized in Figure 5.12 produced a pooled OR of 2.32 (95% CI; 1.98–2.73) for adolescent smoking in the top quartile of exposure to movie smoking compared with the bottom quartile of exposure. Similarly, a random effects meta-analysis of the six longitudinal studies in Figure 5.12 produced a pooled RR of 1.76 (95% CI; 1.31–2.37) for the same comparison. A random effects meta-analysis of the seven studies that addressed later stages of smoking yielded a pooled OR of 1.82 (95% CI; 1.45–2.30). Considering the OR to be an approximation of the RR, a random effects meta-analysis of all 17 studies provided an overall estimate of the risk of smoking as a function of high exposure to movie smoking to be 1.93 (95% CI; 1.64–2.27). In addition, the population-attributable risks for the four studies that provided such estimates (Dalton et al. 2003, 2009; Sargent et al. 2005; Titus-Ernstoff et al. 2008) yielded an overall population-attributable risk fraction of 0.44 for adolescent smoking due to exposure to smoking in movies (Millett and Glantz 2010). Because of the very widespread exposure to smoking in movies, and because movie exposures are not viewed with the same skepticism as marketing messages, some authors suggest that movie smoking may account for a larger fraction of the onset of youth smoking than does traditional cigarette advertising (Glantz 2003; Sargent and Hanewinkel 2009; Sargent et al. 2009a).

Studies Published Since the Meta-Analysis Was Completed

Since the meta-analysis discussed above was prepared, several additional epidemiological studies on the links between on-screen smoking and adolescent smoking have been completed that reinforce the conclusions of earlier work. Cross-sectional surveys with extensive controls for confounding have been published from Europe (Hunt et al. 2011; Morgenstern et al. 2011; Waylen et al. 2011). In one, approximately 16,000 adolescents were surveyed from six European Union nations, and in each country there was an association between seeing smoking in movies and youth smoking, net confounding (Hunt et al. 2011). One survey of adolescents in the U.S. Midwest

Table 5.14 Population-based studies assessing the relation between parental restrictions on viewing R-rated movies and smoking among adolescents

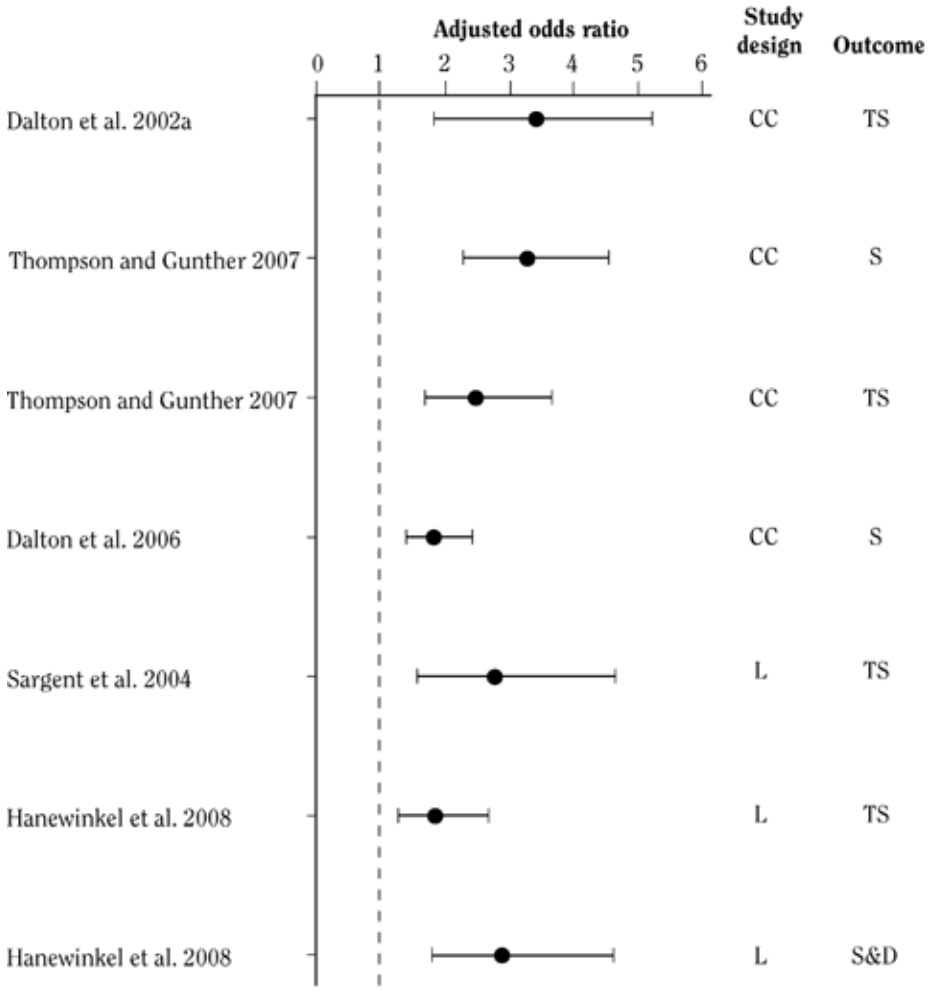
Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
				Cross-sectional			
Dalton et al. 2002a	Cross-sectional school-based survey N = 4,544 White Aged 10–15 years United States (Northeast) 1999	"How often do your parents let you watch movies or videos that are rated R?" (p. 3) (Never, once in a while, sometimes, all the time)	M, P, PS, S, SCH, SI	Prevalence of tried smoking (18%)	Allowed to watch R-rated movies: Never (16%) Once in a while/ sometimes (53%) All the time (31%)	ARR 0.29 (0.19–0.45) 0.74 (0.65–0.85) Reference	Parental restrictions associated with lower viewership of R and PG-13 movies and lower rates of drinking alcohol
Dalton et al. 2006	School-based survey N = 2,606 Aged 9–12 years United States (Northeast)	Parental restrictions on R-rated movie viewing combined with whether they co-viewed the movies	PS, S, SI	Susceptibility to smoking (12.5%)	Permits watching, no parent Permits watching, co-views Prohibits child from watching	ARR Reference 0.72 (0.54–0.96) 0.54 (0.41–0.70)	When assessing other movie-monitoring habits (requiring child to ask before seeing, going into video store, overseeing movie viewing at friends), it appeared that these behaviors partially ameliorated the effects of seeing R-rated movies
Thompson and Gunther 2007	School-based survey of 1,687 6th–8th graders N = 1,687 United States (Wisconsin)	"How often do your parents let you watch movies or videos that are rated R?" ([1] never to [5] all the time)	PS, S, SI	Smoking susceptibility among never smokers (24%) Tried smoking prevalence (29%)	R-rated movie restriction: Full Partial None R-rated movie restriction: Full Partial None	AOR Reference 2.1 (1.5–2.8) 3.3 (2.3–4.6) Reference 1.5 (1.0–2.8) 2.5 (1.7–3.7)	

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% CI)[b]	Comments
				Longitudinal			
Sargent et al. 2004	Longitudinal school-based survey with telephone follow-up, baseline survey N = 2,596 baseline never smokers Follow-up at 18 months White Aged 10–14 years at baseline Baseline smoking status: never smoker United States (New Hampshire, Vermont) 1999	"How often do your parents allow you to watch movies or videos that are rated R?" (Never, once in a while, sometimes, all the time)	EA, P, PS, S, SCH, SI	Incidence of tried smoking (15.9% by 18 months)	Allowed to watch R-rated movies: Never (19%) Once in a while (29%) Sometimes/all the time (52%)	ARR Reference 1.8 (1.1–3.1) 2.8 (1.6–4.7)	Statistically significant interaction with stronger results for adolescents living in nonsmoking households; relaxation of R-rated restrictions over time resulted in greater risk of smoking; strengthening of restrictions over time resulted in lower risk
Hanewinkel et al. 2008	Longitudinal, school-based survey N = 2,110 Follow-up at 1 year White Aged 10–15 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	"How often do your parents allow you to watch movies that are rated for 16-year-olds?" (Never, once in a while, sometimes, all the time)	P, PS, S, SCH, SI	Tried smoking incidence (16%) Smoking and binge drinking (5%)	Never (41%) Once in a while (28%) Sometimes (22%) All the time (9%) Never Once in a while Sometimes All the time	Reference 1.19 (0.85–1.67) 1.71 (1.33–2.20) 1.85 (1.27–2.69) Reference 1.64 (1.05–2.58) 2.30 (1.53–3.45) 2.92 (1.83–4.67)	German rating categories refer to the age below which the restriction applies; they are FSK-0 (family), FSK-6, FSK-12, FSK-16, FSK-18; lower exposure to movies in all rating categories for adolescents reporting restrictions; mediational analysis shows indirect pathway from FSK restriction through lower movie substance-use exposure to behavior

[a]Covariates: **EA** = extracurricular activities; **M** = other media/advertising influences; **P** = personality characteristics; **PS** = parenting style/parental oversight of smoking behavior; **S** = sociodemographics; **SCH** = school attachment and function; **SI** = other social influences (friend and family smoking).
[b]Measures of association: **AOR** = adjusted odds ratio; **ARR** = adjusted relative risk.

Figure 5.14 Summary of results for studies on the association between parental movie restrictions and smoking among early adolescents



Note: The point estimate is for the comparison between being allowed to watch R-rated movies "all the time" vs. "never"; for each study, the point estimate and 95% confidence intervals are illustrated. **CC** = cross-sectional; **L** = longitudinal; **S** = susceptibility to smoking among never smokers; **S&D** = tried smoking and binge drinking; **TS** = tried smoking.

found an association between repeated measures of adolescents' own assessment of smoking in movies they saw and changes in their smoking behavior (Choi et al. 2011, in press). In that study, there was no reciprocal relationship; that is, there was no prospective association between higher levels of smoking and larger increases in perception of smoking in movies. A survey of Indian adolescents assessed their exposure to smoking in 60 Bollywood movies and found a relationship with smoking that was the same order of magnitude found in studies of youths in Western countries (Arora et al., in press). de Leeuw and colleagues (2011) found that parental restrictions on viewing R-rated movies affected smoking by decreasing growth in sensation seeking over time. Finally, a study by Wills and colleagues (2010) found that higher levels of self-control were associated with a blunted response to smoking in movies.

Experimental Research

Experimental studies have used either quasi-experimental or randomized designs to better control for risk factors and influences that could confound the

effect of movie images on behavior. A recent review (NCI 2008) summarized the results from eight experimental studies that explored the effects of movie smoking on viewers' beliefs about smoking or their reactions to movies. According to that review, the results suggest that (1) viewing smoking in movies enhances viewers' perceptions of how socially acceptable smoking is (Pechmann and Shih 1999; Gibson and Maurer 2000), (2) adolescents who view adult characters smoking on screen perceive the real-world prevalence of smoking among adults to be higher than do adolescents viewing nonsmoking movie characters, and (3) exposure to smoking by characters affects personal intentions to smoke among adolescents (Pechmann and Shih 1999), but not among young adults (Gibson and Maurer 2000). The results also suggest that showing youth an antismoking advertisement before viewing a movie depicting smoking blunts the favorable attitudinal response among adolescents (Pechmann and Shih 1999). Finally, one study reported no relationship between the presence of smoking in a movie and box office success (Dalton et al. 2002b).

Recent Experimental Studies

Nine relevant experimental studies have been published since the NCI (2008) review. In one, Dal Cin and colleagues (2007) found that greater self-identification with the smoking protagonist may make smokers more likely to continue smoking and make nonsmokers more favorably disposed toward smoking.

Lochbuehler and colleagues (2009) studied reactivity to cues in movie smoking among young adults in The Netherlands and found that, although individual pictures of movie smoking prompted craving in a traditional pictorial study of reactivity to cues, a 30-minute movie segment with multiple cues to smoke did not have an effect on urge to smoke after the movie.

Golmier and colleagues (2007) evaluated the capacity of a graphic warning label to decrease the effect of movie smoking and found a significant main effect for warning labels on susceptibility to smoking. Harakeh and associates (2010) found that among young adult Dutch smokers, viewing an antismoking ad resulted in a moderate decline in all measures of smoking used, with a dose-response effect (more antismoking ads led to less smoking).

Shmueli and associates (2010) randomly assigned young adult smokers to watch an 8-minute film montage comprised of clips that either did or did not contain smoking. After watching, participants were asked to leave the room for 10 minutes while the experimenter prepared the next phase of the study. Smokers who watched the montage with smoking scenes were more likely to smoke during the break than those who watched the smoke-free montage. In addition, participants who saw the smoking films were more likely to smoke a cigarette within 30 minutes after completion of the experiment than were those who watched the smoke-free montage.

An interaction analysis suggested an enhanced effect on smoking of smoking in movies when the film included horror scenes (Sargent et al. 2009b). Another interaction effect was reported by Hanewinkel and colleagues (2010b) who replicated the findings that showing an antismoking ad before some films was associated with higher awareness of smoking in the movies and with lower levels of approval of smoking in the movie and smoking in general. These effects occurred at all ages but were stronger in youth than among adults.

Wagner and colleagues (2011) compared functional magnetic resonance imaging responses to smoking scenes in movies in a group of smokers and nonsmokers who were naive to the focus on smoking. The study assessed brain responses to movie smoking segments and compared them with responses to segments that contained no smoking. The smokers had larger responses in reward circuits and also larger responses in motor planning areas for the right hand, suggesting that the smoking scenes prompted planning for smoking. Lochbuehler and colleagues (2011) found that smokers preferentially looked at the cigarette when viewing on-screen smoking images and, in another study, that smokers smoked more when viewing movie smoking but only if they were not transported into the story (Lochbuehler et al. 2010). Finally, Shadel and colleagues (2010) showed middle-school adolescents movie clips that depicted smoking in the context of rebelliousness, relaxation, and no motive and found greater desire to smoke after adolescents viewed clips in which smoking conveyed relaxation.

Summary of Experimental Research

Experimental studies to date offer further evidence for an effect of movie images on behavior. In addition, there is a strong concordance of results for the beneficial effect of an antismoking advertisement shown before movies with smoking: more conscious awareness of movie smoking, higher disapproval of movie smoking, less intent to smoke among nonsmoking adolescents, and less actual smoking among young adult smokers. With respect to the effect of smoking in movies on urge to smoke, the results are mixed, with one quasi-experimental study showing an effect size similar to other cue reactivity studies and randomized experiments showing little or no effect. For observed smoking behavior—not urges alone—however, there is some evidence that exposure to smoking scenes increases smoking intensity. The differences in findings among some of the experimental studies may be due to

differences in the type of movie. The strongest design was used by Shmueli and colleagues (2010) who randomly assigned subjects to cues from five different movies. If subjects react more strongly to smoking presented in certain contexts than others, the null results for some experiments may be explained by the choice of the particular movie or movie segment used for the prompt; this is an important area for further research.

Summary

A 2008 NCI monograph that reviewed influences of the media on tobacco use offered a summary of research on the portrayal of tobacco use in media channels, including movies, television, music, magazines, and the Internet (NCI 2008). Chapter 10 of that report concluded that exposure to smoking in movies causes tobacco use among adolescents, stating: "The total weight of evidence from cross-sectional, longitudinal, and experimental studies indicates a causal relationship between exposure to movie smoking depictions and youth smoking initiation" (p. 357). This statement was also incorporated into that report's six major conclusions (p. 12). Since this statement was issued, population-based cross-sectional studies have shown that movies deliver billions of images of smoking to young audiences. Furthermore, cross-sectional and longitudinal population studies have demonstrated an association between seeing smoking in movies and smoking among youth in samples of U.S. White and Mexican American adolescents and among adolescents in Germany. Other studies have linked higher exposure to R-rated movies with smoking among adolescents in Wisconsin and New Zealand. In no case was the estimate of risk either zero or in the negative direction. Population-based studies support a mechanism whereby movie effects are mediated through cognitions, and experimental studies demonstrate a short-term effect of movies on the attitudes and behavior of adolescents who watch them. Population studies also provide support for an association between exposure to movie smoking and later stages of adolescent smoking; it is unclear whether this effect results from movies prompting adolescents to start smoking, promoting the continuation of experimentation, or both. An MPAA policy to give films with smoking an R (adult) rating, as recommended by WHO (2009), CDC (2011), and other authorities, could eliminate youth-rated films as sources of exposure to on-screen smoking imagery and reduce the exposure of youth to smoking in movies. The adoption of such policies would contribute to a reduction in adolescent smoking behavior. Some U.S. film studios have begun to respond to public pressure through the development of internal mechanisms to limit the depiction of smoking in movies.

Experimental studies provide strong and consistent support for the idea that an antismoking adverstisement shown before a movie that contains smoking scenes influences how moviegoers view smoking and react to it; several studios have already adopted this practice.

Finally, population-based studies provide evidence to support the idea that parental restrictions on viewing R-rated movies reduces exposure to such movies and the risk of early onset of smoking when restrictions are applied during late childhood and early adolescence. Moreover, practices of restricting and monitoring media appear to work independently of more traditional types of parenting factors, such as authoritative parenting. However, parental restrictions would not address the substantial exposure of youth to smoking imagery in movies rated G, PG, and PG-13.

Evidence Summary

There is strong empirical evidence, along with the tobacco industry's own internal documents and trial testimony, as well as widely accepted principles of advertising and marketing that support the conclusion that tobacco manufacturers' advertising, marketing, and promotions recruit new users as youth and continue to reinforce use among young adults. Hence, despite claims from cigarette manufacturers that marketing and promotion of their products are intended to increase market share and promote brand loyalty among adult consumers, the evidence presented in this chapter is sufficient to conclude that marketing efforts and promotion by tobacco companies show a consistent dose-response relationship in the initiation and progression of tobacco use among young people. As has been true for many decades, today, the majority of smokers begin to use tobacco products as adolescents. Among adults who become daily smokers, nearly all (88%) first use of cigarettes occurs by 18 years of age, with 99% of first use by the age of 26 years (see Chapter 3 of this report; SAMHSA 2009). Constraints on tobacco product marketing, including the ban on broadcast advertising, have had little impact on overall industry expenditures in

this area (FTC 2011a,b). Although spending for advertising and promotion of cigarettes has declined every year since 2004, the industry spent $9.94 billion on these activities in 2008 and $574 million to market smokeless tobacco products in 2008, the latest year for which data are available (FTC 2011a,b). Approximately 84% of these expenditures were for discounts, price promotions, coupons, and other activities that resulted in lower retail prices of cigarettes. Tobacco companies have several options for altering the prices of their products, ranging from changing wholesale prices to launching and promoting discount brands to engaging in a variety of price-reducing promotions. Evidence in this chapter also outlines industry actions to attract price-sensitive populations such as youth to their products, as well as to soften the price impact on consumers of increases in federal and state tobacco excise taxes (Chaloupka et al. 2002). Because there is strong evidence that as the price of tobacco products increases, tobacco use decreases, especially among young people, then any actions that mitigate the impact of increased price and thus reduce the purchase price of tobacco can increase the initiation and level of use of tobacco products among young people.

In addition to pricing policies, tobacco manufacturers have employed a wide range of advertising, marketing, and promotional initiatives that evidence shows have been key factors in the initiation and progression of tobacco use among youth and young adults (Perry 1999; King and Siegel 2001; Siegel 2001; NCI 2008). Existing theories of health behavior, including TTI, explain the processes by which tobacco marketing affects tobacco use among youth. TTI, which is consistent with other health behavior frameworks such as the Theory of Planned Behavior and the Social Cognitive Theory, organizes factors that promote or deter health behaviors such as smoking into three interacting streams: intrapersonal, social-contextual, and cultural-environmental (Flay et al. 2009). Variables that might influence smoking can be found at ultimate, distal, and proximate distances from actual smoking behaviors, and much industry marketing acts at multiple levels and points within this triadic framework, through moderated mediation pathways. Behavioral intentions are immediate precursors to behavior and are strong predictors of future behavior. Research demonstrates that tobacco marketing affects intentions toward smoking in a way that leads to increased susceptibility to smoking among adolescents exposed to the marketing. Many econometric studies analyzed in this chapter offer additional evidence that the marketing of tobacco promotes its use by adolescents.

There is strong evidence that tobacco advertising and promotion, particularly those initiatives containing imagery that associates positive qualities with tobacco use, are successful at affecting awareness of smoking, recognition of specific brands, attitudes about smoking, intentions to smoke, and actual smoking behavior among youth (Armstrong et al. 1990; Aitken et al. 1991; Evans et al. 1995; Schooler et al. 1996; Gilpin et al. 1997). Such imagery has also been proven to be effective at reducing perception of risk among young people (Pollay 2001; Wakefield et al. 2002a). Tobacco advertising has consistently contained images that evoke characteristics such as independence, adventurousness, sophistication, athleticism, social acceptability, sexual attractiveness, thinness, popularity, and rebelliousness—common aspirational themes among youth and young adults (see Chapter 3 of this report; SAMHSA 2009). Studies cited in this chapter demonstrate that young people who are more familiar with tobacco advertising can identify specific advertisements, have a favorite tobacco advertisement, or possess cigarette promotional items are more likely to begin smoking than their peers who do not have these characteristics (Arnett and Terhanian 1998; Feighery et al. 1998). Additional longitudinal studies have found increased odds of progression from initiation of smoking to established smoking among adolescents who both owned cigarette promotional items and had a favorite cigarette advertisement (Pierce et al. 1998). Although tobacco companies reported spending relatively small proportions of their marketing and advertising dollars on their Web sites in 2008, Web sites that promoted specific brands of tobacco products and engaged in electronic mail marketing were found to include features such as music, cartoons, and moving images.

A number of studies have examined the relationship between tobacco marketing, peer relationships, and adolescent smoking behavior. Adolescents who believe smoking to be prevalent are more likely to smoke, and peers who smoke increase perceptions of the prevalence of smoking (Kobus 2003). Significant research has supported the idea that adolescents choose their peer group on the basis of their attitudes about smoking and their smoking behavior (Ennett and Bauman 1994; Engels et al. 1997; Kobus 2003; de Vries et al. 2006; Mercken et al. 2007). Industry documents cited in this chapter illustrate how tobacco companies employ peer appeal in marketing campaigns and emphasize the popularity of specific brands to encourage brand loyalty as an extension of a sense of belonging (Tindall 1984; RJR 1986a; Philip Morris USA 2004a). Other research concluded that tobacco companies market their products to young adult trendsetters through promotions in bars and nightclubs because these young adults were highly likely to influence the behaviors of their peers (Hendlin et al. 2010).

In addition to advertising and promotions, the tobacco industry has invested heavily in packaging design

to establish brand identity and promote brand appeal (Pollay 2001; Wakefield et al. 2002a). Research conducted by the tobacco industry and cited in this chapter has consistently demonstrated that brand imagery on packages is especially influential during adolescence and young adulthood, when smoking behavior and brand preferences are being developed (DiFranza et al. 1994; Pollay 2000, 2001). Color, words, and images on cigarette packs, as well as container shape and packaging material of smokeless tobacco products, have all been found to suggest specific product characteristics and reduce the perception of risk (Pollay 2001; Pollay and Dewhirst 2001; Wakefield et al. 2002a; Kropp and Halpern-Felsher 2004; Hammond 2009a; Hammond and Parkinson 2009; Bansal-Travers and Hammond 2010). Recent research suggests that even when terms such as "light" and "mild" are prohibited in tobacco packaging and advertising, a significant proportion of adult and youth smokers continue to report false beliefs about the relative risk of cigarette brands (Hammond et al. 2009). Studies suggest that the use of lighter colors on cigarette packs to imply lightness, as well as replacement words such as "smooth," have the same misleading effect as "light" and "mild" labels (Pollay 2001; Wakefield et al. 2002a; Hammond 2009a). The efficacy of package design as an element of tobacco marketing has been supported by research into plain packaging, which removes color and brand imagery from packaging. In addition to enhancing the effectiveness of health warnings by increasing their noticeability, plain packaging has been shown to make smoking less appealing and has the potential to reduce the level of false beliefs about the risks of different brands (Freeman et al. 2008). Plain packaging, then, has the potential to reduce youth smoking.

The evidence reviewed in this chapter strongly suggests that tobacco companies have changed the packaging and design of their products to increase their appeal to adolescents and young adults. Further, as a complementary tactic to support the effects of packaging design on brand identity, tobacco manufacturers have used product design features to appeal to specific market segments. Reviews of internal industry documents show that cigarette length, chemical additives to improve the flavor of the smoke and reduce harshness, ventilated filters, and other product modifications were all used by cigarette companies to attract beginning smokers (Burrows 1984; Tindall 1984; Stevenson and Proctor 2008). Menthol and other flavor additives including fruit and candy flavoring were used as marketing tools to attract young smokers, and national survey findings confirm that menthol cigarette use is disproportionately common among younger and newer adolescent smokers. Flavoring agents other than menthol have been banned in cigarettes but are still used in some cigars, smokeless tobacco products, and new tobacco products such as orbs, sticks, and strips. The evidence also shows that tobacco companies have used menthol and other flavor additives to increase the appeal of smokeless tobacco products to young people. Evidence presented in this chapter indicates that smokeless products have been designed on the basis of a "graduation strategy" to encourage new users to start with particular products and progress to others with higher levels of free nicotine (Figure 5.5; U.S. Smokeless Tobacco 1984). This integration of product design with marketing helped to reverse the decline in smokeless tobacco use among adolescents and young adults (Slade 1995; Tomar et al. 1995; USDHHS 1986). More recent evidence suggests that similar integration of product design with marketing to increase appeal to adolescents and young adults has continued in cigarettes and new smokeless tobacco products such as orbs, sticks, and strips (Mejia and Ling 2010).

Although some tobacco advertising and promotion activities are prohibited by the Master Settlement Agreement and the *Family Smoking Prevention and Tobacco Control Act,* consumers, regardless of age, are exposed to prosmoking messages in stores, and tobacco companies have offered retailers price promotions, volume discounts, in-store branded displays, and payment for prime shelf space. Research confirms that tobacco companies have sought to make their products easily visible and readily accessible to customers to stimulate impulse purchases and have entered into contractual agreements with retailers to secure placement of their products in highly visible locations around sales counters (Pollay 2007). Studies of stores that sell tobacco have confirmed that there is more in-store tobacco advertising in predominantly ethnic and low-income neighborhoods and that tobacco industry point-of-sale marketing differentially appeals to people with lower income and education levels (Wildey et al. 1992; Barbeau et al. 2005; John et al. 2009). Further, more cigarettes are sold in convenience stores than in any other type of store, and 70% of adolescents shop in convenience stores at least weekly. Studies have shown that tobacco advertising is more prevalent in stores located near schools and where adolescents are more likely to shop. The presence of heavy cigarette advertising in these stores has been shown to increase the likelihood of exposing youth to prosmoking messages, which can increase initiation rates among those exposed, particularly if stores are near schools. Several cross-sectional studies have identified relationships between exposure to tobacco marketing in a retail environment and experimentation with smoking; a multiyear cross-sectional study of 8th-, 10th-, and 12th-grade students found that higher levels of advertising, lower cigarette prices, and greater availability of

cigarette promotions at point of sale all predicted smoking uptake among youth (Slater et al. 2007). Finally, research on the location of retail outlets selling cigarettes indicated that experimental smoking among youth was related to the density of tobacco outlets both in high school neighborhoods and in neighborhoods where youth live.

In addition to traditional advertising and point-of-sale marketing, tobacco companies have engaged in a variety of public relations strategies to position themselves as responsible corporations and to enhance their public image. Tobacco industry documents demonstrate that these strategies were undertaken in response to public concern about the industry's marketing practices and with the goal of forestalling legislation on regulation that would restrict industry activities. These strategies have included sponsorship of school-based youth smoking prevention programs, retailer education programs on enforcement of legal restrictions on youth access to tobacco products, antismoking campaigns in the mass media, and sponsorship of community-based programs aimed at youth such as the national 4-H program (SCARC Action Alert 1996; Landman et al. 2002; Mandel et al. 2006). Studies cited in this chapter show that the tobacco industry's youth smoking prevention activities have not provided evidence that they are effective at reducing youth smoking. Some studies, as well as industry documents, indicate that these programs can lead to a greater likelihood of uptake among youth by positioning smoking as an "adult only" activity, a concept that may appeal to youth. Further evidence has shown that the messages in these programs divert attention from industry marketing efforts, as well as from messages on the addictiveness of the product. At the same time, advertisements about tobacco company charitable works were shown to improve perceptions of the company's corporate image among 18–25-year-old undergraduates.

An NCI monograph that reviewed influences of the media on tobacco use by youth concluded that exposure to depictions of smoking in movies causes tobacco use among adolescents (NCI 2008). Since that report was issued, multiple population-based cross-sectional studies have provided consistent evidence supporting a causal relationship between exposure to smoking images in movies and smoking among youth in the United States. Although the incidence of on-screen smoking in movies has declined steadily since 2005 and one-half of MPAA member movie studios have adopted policies designed to reduce smoking images in their films, movies overall continue to deliver billions of these images to adolescents. Cross-sectional and longitudinal population studies have demonstrated an association between exposure to smoking in movies and smoking among youth in samples of U.S. White and Mexican American adolescents. Research cited in this chapter has shown that the association between exposure to smoking images in movies and youth smoking has a more important effect on the early phases of smoking initiation than on the transition to addiction. Experimental studies have suggested that an antismoking advertisement shown before a movie that contains smoking scenes can influence how moviegoers view smoking. Evidence indicates that parental restrictions on viewing R-rated movies reduces exposure to such movies and the risk of early onset of smoking when restrictions are applied during late childhood and early adolescence. Finally, recent evidence supports expanding the R rating to include movies with smoking in order to further reduce exposures of young persons to onscreen tobacco incidents, making smoking initiation less likely.

In summary, the tobacco industry's own internal documents and trial testimony indicate that the industry needs to recruit new smokers from among youth. The evidence provided in this chapter shows multiple strategies by which the tobacco industry continues to pursue this objective to increase the rate of initiation and use of tobacco products among young people. Cumulative research indicates that cigarette advertising and promotional activities and depictions of smoking in movies have caused young people to smoke (Lovato et al. 2011).

Conclusions

1. In 2008, tobacco companies spent $9.94 billion on the marketing of cigarettes and $547 million on the marketing of smokeless tobacco. Spending on cigarette marketing is 48% higher than in 1998, the year of the Master Settlement Agreement. Expenditures for marketing smokeless tobacco are 277% higher than in 1998.
2. Tobacco company expenditures have become increasingly concentrated on marketing efforts that reduce the prices of targeted tobacco products. Such expenditures accounted for approximately 84% of cigarette marketing and more than 77% of the marketing of smokeless tobacco products in 2008.

3. The evidence is sufficient to conclude that there is a causal relationship between advertising and promotional efforts of the tobacco companies and the initiation and progression of tobacco use among young people.

4. The evidence is suggestive but not sufficient to conclude that tobacco companies have changed the packaging and design of their products in ways that have increased these products' appeal to adolescents and young adults.

5. The tobacco companies' activities and programs for the prevention of youth smoking have not demonstrated an impact on the initiation or prevalence of smoking among young people.

6. The evidence is sufficient to conclude that there is a causal relationship between depictions of smoking in the movies and the initiation of smoking among young people.

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Table 5.13 Population-based studies assessing the relation between exposure to movie smoking and smoking among young people

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Cross-sectional							
Distefan et al. 1999	Multiethnic Aged 12–17 years Cross-sectional random-digit-dialing survey N = 6,252 (analysis performed on 3,510 never smokers) United States (California) 1996	Identified favorite movie stars of ever smokers (versus never smokers)	Sociodemographics, personality characteristics, school attachment and function, other social influences (friend and family smoking), other media/advertising influences	Susceptibility to smoking among never smokers (42%)	Adolescent never smokers choosing a favorite star typical of ever smokers versus choosing a favorite star typical of other never smokers	Adjusted odds ratio 1.35 (1.12–1.62)	Favorite actors and actresses were defined by the nominations of the subjects; study examined commonly chosen actors/actresses; 52% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (17%)	Quartile of exposure to movie smoking: 1	Adjusted odds ratio Reference	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (17%)	Quartile of exposure to movie smoking: 2	Adjusted odds ratio 1.9 (1.3–2.7)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (17%)	Quartile of exposure to movie smoking: 3	Adjusted odds ratio 2.6 (1.8–3.7)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (17%)	Quartile of exposure to movie smoking: 4	Adjusted odds ratio 2.5 (1.7–3.5)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Among never smokers: susceptibility to smoking (20%)	Quartile of exposure to movie smoking: 1	No association between exposure to movie smoking and higher levels of lifetime smoking Adjusted odds ratio Reference	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Among never smokers: susceptibility to smoking (20%)	Quartile of exposure to movie smoking: 2	No association between exposure to movie smoking and higher levels of lifetime smoking Adjusted odds ratio 1.2 (0.9–1.5)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Among never smokers: susceptibility to smoking (20%)	Quartile of exposure to movie smoking: 3	No association between exposure to movie smoking and higher levels of lifetime smoking Adjusted odds ratio 1.5 (1.1–1.9)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Among never smokers: susceptibility to smoking (20%)	Quartile of exposure to movie smoking: 4	No association between exposure to movie smoking and higher levels of lifetime smoking Adjusted odds ratio 1.6 (1.2–2.1)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Positive expectancies (61% endorsed no positive expectancies)	Quartile of exposure to movie smoking: 1	No association between exposure to movie smoking and higher levels of lifetime smoking Adjusted odds ratio Reference	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Positive expectancies (61% endorsed no positive expectancies)	Quartile of exposure to movie smoking: 2	No association between exposure to movie smoking and higher levels of lifetime smoking adjusted proportional odds ratio 1.2 (1.0–1.5)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Positive expectancies (61% endorsed no positive expectancies)	Quartile of exposure to movie smoking: 3	No association between exposure to movie smoking and higher levels of lifetime smoking adjusted proportional odds ratio 1.3 (1.1–1.6)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Positive expectancies (61% endorsed no positive expectancies)	Quartile of exposure to movie smoking: 4	No association between exposure to movie smoking and higher levels of lifetime smoking adjusted proportional odds ratio 1.4 (1.1–1.7)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Views adult smoking as normative (55%)	Quartile of exposure to movie smoking: 1	No association between exposure to movie smoking and higher levels of lifetime smoking adjusted odds ratio Reference	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Views adult smoking as normative (55%)	Quartile of exposure to movie smoking: 2	No association between exposure to movie smoking and higher levels of lifetime smoking adjusted odds ratio 1.2 (0.9–1.4)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Views adult smoking as normative (55%)	Quartile of exposure to movie smoking: 3	No association between exposure to movie smoking and higher levels of lifetime smoking adjusted odds ratio 1.3 (1.1–1.6)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2001a, 2002, 2009a; Tickle et al. 2006	White Aged 10–15 years Cross-sectional school-based survey N = 4,919 (3,766 never smokers) United States (Northeast) 1999	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Lifetime smoking level among triers (n = 794): puffers (57%), 1–19 cigarettes (19%), 20–100 cigarettes (9.7%), >100 cigarettes (13.8%) Views adult smoking as normative (55%)	Quartile of exposure to movie smoking: 4	No association between exposure to movie smoking and higher levels of lifetime smoking adjusted odds ratio 1.4 (1.1–1.7)	A cross-sectional structural equation model (Tickle et al. 2006) identified indirect paths from exposure to movie smoking to intentions to smoke through positive expectancies and identification as a smoker, but not through normative beliefs
Tickle et al. 2001	White, low-income communities Aged 10–19 years Cross-sectional school-based survey N = 632 (281 never smokers) United States (New Hampshire, Vermont)	Movie character smoking status of favorite star averaged for films released up to 3 years before survey	Sociodemographics, school attachment and function, other social influences (friend and family smoking), other media/advertising influences	Smoking index: 0 = nonsusceptible never smoker (37%), 1 = susceptible never smoker (7%), 2 = 1–99 lifetime cigarettes smoked, but not a current (30 days) smoker (26%), 3 = 1–99 lifetime cigarettes smoked and a current smoker (9%), 4 = ≥100 cigarettes lifetime (20%) Susceptibility among never smokers (17%)	Character smoking by favorite star averaged over 3 years: None	adjusted proportional odds ratio Reference	Study examined commonly chosen actors/actresses; 51% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Tickle et al. 2001	White, low-income communities Aged 10–19 years Cross-sectional school-based survey N = 632 (281 never smokers) United States (New Hampshire, Vermont)	Movie character smoking status of favorite star averaged for films released up to 3 years before survey	Sociodemographics, school attachment and function, other social influences (friend and family smoking), other media/ advertising influences	Smoking index: 0 = nonsusceptible never smoker (37%), 1 = susceptible never smoker (7%), 2 = 1–99 lifetime cigarettes smoked, but not a current (30 days) smoker (26%), 3 = 1–99 lifetime cigarettes smoked and a current smoker (9%), 4 = ≥100 cigarettes lifetime (20%) Susceptibility among never smokers (17%)	Character smoking by favorite star averaged over 3 years: 1	adjusted proportional odds ratio 0.78 (not significant)	Study examined commonly chosen actors/actresses; 51% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents
Tickle et al. 2001	White, low-income communities Aged 10–19 years Cross-sectional school-based survey N = 632 (281 never smokers) United States (New Hampshire, Vermont)	Movie character smoking status of favorite star averaged for films released up to 3 years before survey	Sociodemographics, school attachment and function, other social influences (friend and family smoking), other media/ advertising influences	Smoking index: 0 = nonsusceptible never smoker (37%), 1 = susceptible never smoker (7%), 2 = 1–99 lifetime cigarettes smoked, but not a current (30 days) smoker (26%), 3 = 1–99 lifetime cigarettes smoked and a current smoker (9%), 4 = ≥100 cigarettes lifetime (20%) Susceptibility among never smokers (17%)	Character smoking by favorite star averaged over 3 years: 2	adjusted proportional odds ratio 1.53 (1.01–2.32)	Study examined commonly chosen actors/actresses; 51% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Tickle et al. 2001	White, low-income communities Aged 10–19 years Cross-sectional school-based survey N = 632 (281 never smokers) United States (New Hampshire, Vermont)	Movie character smoking status of favorite star averaged for films released up to 3 years before survey	Sociodemographics, school attachment and function, other social influences (friend and family smoking), other media/ advertising influences	Smoking index: 0 = nonsusceptible never smoker (37%), 1 = susceptible never smoker (7%), 2 = 1–99 lifetime cigarettes smoked, but not a current (30 days) smoker (26%), 3 = 1–99 lifetime cigarettes smoked and a current smoker (9%), 4 = ≥100 cigarettes lifetime (20%) Susceptibility among never smokers (17%)	Character smoking by favorite star averaged over 3 years: ≥3	adjusted proportional odds ratio 3.09 (1.34–7.12)	Study examined commonly chosen actors/actresses; 51% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents
Tickle et al. 2001	White, low-income communities Aged 10–19 years Cross-sectional school-based survey N = 632 (281 never smokers) United States (New Hampshire, Vermont)	Movie character smoking status of favorite star averaged for films released up to 3 years before survey	Sociodemographics, school attachment and function, other social influences (friend and family smoking), other media/ advertising influences	Smoking index: 0 = nonsusceptible never smoker (37%), 1 = susceptible never smoker (7%), 2 = 1–99 lifetime cigarettes smoked, but not a current (30 days) smoker (26%), 3 = 1–99 lifetime cigarettes smoked and a current smoker (9%), 4 = ≥100 cigarettes lifetime (20%) Susceptibility among never smokers (17%)	Character smoking by favorite star averaged over 3 years: None	adjusted odds ratio Reference	Study examined commonly chosen actors/actresses; 51% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Tickle et al. 2001	White, low-income communities Aged 10–19 years Cross-sectional school-based survey N = 632 (281 never smokers) United States (New Hampshire, Vermont)	Movie character smoking status of favorite star averaged for films released up to 3 years before survey	Sociodemographics, school attachment and function, other social influences (friend and family smoking), other media/ advertising influences	Smoking index: 0 = nonsusceptible never smoker (37%), 1 = susceptible never smoker (7%), 2 = 1–99 lifetime cigarettes smoked, but not a current (30 days) smoker (26%), 3 = 1–99 lifetime cigarettes smoked and a current smoker (9%), 4 = ≥100 cigarettes lifetime (20%) Susceptibility among never smokers (17%)	Character smoking by favorite star averaged over 3 years: 1	adjusted odds ratio 2.16 (0.86–5.45)	Study examined commonly chosen actors/actresses; 51% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents
Tickle et al. 2001	White, low-income communities Aged 10–19 years Cross-sectional school-based survey N = 632 (281 never smokers) United States (New Hampshire, Vermont)	Movie character smoking status of favorite star averaged for films released up to 3 years before survey	Sociodemographics, school attachment and function, other social influences (friend and family smoking), other media/ advertising influences	Smoking index: 0 = nonsusceptible never smoker (37%), 1 = susceptible never smoker (7%), 2 = 1–99 lifetime cigarettes smoked, but not a current (30 days) smoker (26%), 3 = 1–99 lifetime cigarettes smoked and a current smoker (9%), 4 = ≥100 cigarettes lifetime (20%) Susceptibility among never smokers (17%)	Character smoking by favorite star averaged over 3 years: 2	adjusted odds ratio 4.78 (1.60–14.2)	Study examined commonly chosen actors/actresses; 51% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Tickle et al. 2001	White, low-income communities Aged 10–19 years Cross-sectional school-based survey N = 632 (281 never smokers) United States (New Hampshire, Vermont)	Movie character smoking status of favorite star averaged for films released up to 3 years before survey	Sociodemographics, school attachment and function, other social influences (friend and family smoking), other media/ advertising influences	Smoking index: 0 = nonsusceptible never smoker (37%), 1 = susceptible never smoker (7%), 2 = 1–99 lifetime cigarettes smoked, but not a current (30 days) smoker (26%), 3 = 1–99 lifetime cigarettes smoked and a current smoker (9%), 4 = ≥100 cigarettes lifetime (20%) Susceptibility among never smokers (17%)	Character smoking by favorite star averaged over 3 years: ≥3	adjusted odds ratio 16.2 (2.33–112)	Study examined commonly chosen actors/actresses; 51% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents
Goldberg and Baumgartner 2002	Asian Aged 14–17 years Cross-sectional school-based N = 1,338 Thailand 1998	Recall measure—how many American movies have you seen in the past 2 months in theater or on video (0–1 versus 2–3 versus ≥4)?	None	Intent to smoke in the future	0–1 movies (15%), 2–3 (14%), ≥4 (15%)	Not significant	Results shown for exposure to American movies on video; results similar for exposure to American movies in theater
Goldberg and Baumgartner 2002	Asian Aged 14–17 years Cross-sectional school-based N = 1,338 Thailand 1998	Recall measure—how many American movies have you seen in the past 2 months in theater or on video (0–1 versus 2–3 versus ≥4)?	None	Tried smoking	0-1 movies (24%), 2–3 (29%), ≥4 (32%)	$p < 0.05$	Results shown for exposure to American movies on video; results similar for exposure to American movies in theater

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Goldberg and Baumgartner 2002	Asian Aged 14–17 years Cross-sectional school-based N = 1,338 Thailand 1998	Recall measure—how many American movies have you seen in the past 2 months in theater or on video (0–1 versus 2–3 versus ≥4)?	None	Smoked at least 1 cigarette	0–1 movies (19%), 2–3 (24%), ≥4 (27%)	p <0.05	Results shown for exposure to American movies on video; results similar for exposure to American movies in theater
Dixon 2003	White Aged 12–18 years Cross-sectional school-based N = 2,610 participants, 1,858 experimental smokers Australia 1999	Movie character smoking status of favorite male and female star (mean smoking scenes per movie)	Sociodemographics, school attachment and function, other social influences (friend and family smoking)	Smoking uptake index: 0 nonsmokers (67%), 1 occasional smoker (12%), 2 light smokers (8%), 3 heavy smokers (5%), 4 chain smokers (1%) Null findings for negative health effects of smoking, endorsement of smokers as more popular, intent to smoke in future		adjusted proportional odds ratio male actors: 1.16, p = 0.04 adjusted proportional odds ratio female actors: Not significant	Stronger evidence for association among girls than in boys; study examined commonly chosen actors/actresses; 31% of adolescents were excluded because they nominated a star chosen by fewer than 5 respondents
Goldberg 2003	Asian Aged 14–17 years Cross-sectional school-based N = 1,762 Hong Kong 1998	Recall measure—how many American movies have you seen in the past 2 months (0–1 versus 2–3 versus ≥4)?	No covariate adjustment	Intent to smoke in the future (27%)	0–1 movies (21%), 2–3 (26%), ≥4 (30%)	p <0.01	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Goldberg 2003	Asian Aged 14–17 years Cross-sectional school-based N = 1,762 Hong Kong 1998	Recall measure—how many American movies have you seen in the past 2 months (0–1 versus 2–3 versus ≥4)?	No covariate adjustment	Tried smoking (40%)	0–1 movies (34%), 2–3 (41%), ≥4 (47%)	p <0.01	
Goldberg 2003	Asian Aged 14–17 years Cross-sectional school-based N = 1,762 Hong Kong 1998	Recall measure—how many American movies have you seen in the past 2 months (0–1 versus 2–3 versus ≥4)?	No covariate adjustment	Current (7 days) smoking (30%)	0–1 movies (18%), 2–3 (21%), ≥4 (22%)	Not significant	
Henriksen et al. 2004b	Multiethnic 6th–8th grades Cross-sectional school-based N = 2,125 California 2003	Recall measure—how often have you seen smoking in the movies or on television in the past week (never versus sometimes/often)?	other media/advertising influences, personality characteristics, parenting style/parental oversight of smoking behavior, Sociodemographics, other social influences (friend and family smoking), school attachment and function	Tried smoking (prevalence not described, current [30 days] smoking 2.6–7.6%, depending on grade in school)	Past-week viewing of smoking in movies or television: Never versus sometimes/often	Adjusted odds ratio Reference Not significant (Odds ratio estimate did not survive stepwise regression)	Unadjusted odds ratio was statistically significant = 2.2 (95% confidence interval = 1.7–2.8)

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
McCool et al. 2005	Multiethnic Aged 12 or 16 years Cross-sectional school-based survey N = 3,041 New Zealand	Recall measure—3 items (How often do you see a film at the cinema?), alpha = 0.65 Positive smoker stereotypes (smokers in films are stylish, smart, sexy, healthy, intelligent), alpha = 0.79	Sociodemographics	Intent to smoke in the future Mediators Imagery pervasiveness ("smoking in films is common"), 3 items, alpha = 0.61 Nonchalance ("smoking in films is not important to me"), 3 items, alpha = 0.67	Continuous structural equation model; the relation between exposure to smoking in movies mediated through image pervasiveness and nonchalance Positive smoker stereotypes had a direct relation with intent to smoke in the future but were not predicted by higher exposure		
Sargent et al. 2005	Multiethnic national sample N = 6,522 Aged 10–14 years Cross-sectional random-digit-dialed survey United States 2003	Movie title recognition—Beach method 50 titles/survey 532 U.S. box office hits released from 1998 to 2003	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), weekly spendable income, access to cigarettes in household, extracurricular activities	Tried smoking (10%)	Quartile of exposure to movie smoking: 1	adjusted odds ratio Reference	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2005	Multiethnic national sample N = 6,522 Aged 10–14 years Cross-sectional random-digit-dialed survey United States 2003	Movie title recognition—Beach method 50 titles/survey 532 U.S. box office hits released from 1998 to 2003	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), weekly spendable income, access to cigarettes in household, extracurricular activities	Tried smoking (10%)	Quartile of exposure to movie smoking: 2	adjusted odds ratio 1.7 (1.1–2.6)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2005	Multiethnic national sample N = 6,522 Aged 10–14 years Cross-sectional random-digit-dialed survey United States 2003	Movie title recognition—Beach method 50 titles/survey 532 U.S. box office hits released from 1998 to 2003	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), weekly spendable income, access to cigarettes in household, extracurricular activities	Tried smoking (10%)	Quartile of exposure to movie smoking: 3	adjusted odds ratio 1.8 (1.2–2.8)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2005	Multiethnic national sample N = 6,522 Aged 10–14 years Cross-sectional random-digit-dialed survey United States 2003	Movie title recognition—Beach method 50 titles/survey 532 U.S. box office hits released from 1998 to 2003	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), weekly spendable income, access to cigarettes in household, extracurricular activities	Tried smoking (10%)	Quartile of exposure to movie smoking: 4	Adjusted odds ratio 2.6 (1.7–4.1)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2005	Multiethnic national sample N = 6,522 Aged 10–14 years Cross-sectional random-digit-dialed survey United States 2003	Movie title recognition—Beach method 50 titles/survey 532 U.S. box office hits released from 1998 to 2003	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), weekly spendable income, access to cigarettes in household, extracurricular activities	Tried smoking (10%)	Quartile of exposure to movie smoking: Adjusted attributable fraction	Adjusted odds ratio 0.38 (0.20–0.56)	
Hanewinkel and Sargent 2007	White Aged 10–17 years Cross-sectional school-based survey N = 5,586 Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (41%)	Quartile of exposure to movie smoking: 1	Adjusted odds ratio Reference	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Hanewinkel and Sargent 2007	White Aged 10–17 years Cross-sectional school-based survey N = 5,586 Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (41%)	Quartile of exposure to movie smoking: 2	Adjusted odds ratio 1.7 (1.4–2.1)	
Hanewinkel and Sargent 2007	White Aged 10–17 years Cross-sectional school-based survey N = 5,586 Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (41%)	Quartile of exposure to movie smoking: 3	Adjusted odds ratio 1.8 (1.5–2.3)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Hanewinkel and Sargent 2007	White Aged 10–17 years Cross-sectional school-based survey N = 5,586 Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (41%)	Quartile of exposure to movie smoking: 4	Adjusted odds ratio 2.2 (1.8–2.8)	
Hanewinkel and Sargent 2007	White Aged 10–17 years Cross-sectional school-based survey N = 5,586 Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 1	Adjusted odds ratio Reference	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Hanewinkel and Sargent 2007	White Aged 10–17 years Cross-sectional school-based survey N = 5,586 Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 2	Adjusted odds ratio 1.4 (0.9–2.2)	
Hanewinkel and Sargent 2007	White Aged 10–17 years Cross-sectional school-based survey N = 5,586 Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 3	Adjusted odds ratio 1.7 (1.1–2.6)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Hanewinkel and Sargent 2007	White Aged 10–17 years Cross-sectional school-based survey N = 5,586 Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 4	Adjusted odds ratio 2.0 (1.3–3.1)	
Laugesen et al. 2007	Annual school-based surveys 10th graders N = 96,156 New Zealand 2002–2004	How often do you watch R-rated movies? (3 venues: cinema, video, TV) Never <1/month Once/month 2–3/month ≥ once/week	Sociodemographics (sensitivity analysis adjusted also forother social influences (friend and family smoking) weekly spendable income, and parenting style/parental oversight of smoking behavior did not change the conclusion)	Tried smoking among not current smokers	Adjusted relative risk Watched R-rated movies: Never	Reference 1.20 (1.12–1.28)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Laugesen et al. 2007	Annual school-based surveys 10th graders N = 96,156 New Zealand 2002–2004	How often do you watch R-rated movies? (3 venues: cinema, video, TV) Never <1/month Once/month 2–3/month ≥ once/week	Sociodemographics (sensitivity analysis adjusted also forother social influences (friend and family smoking) weekly spendable income, and parenting style/ parental oversight of smoking behavior did not change the conclusion)	Tried smoking among not current smokers	Adjusted relative risk Watched R-rated movies: 2–3 times/month	Reference 1.67 (1.55–1.80)	
Laugesen et al. 2007	Annual school-based surveys 10th graders N = 96,156 New Zealand 2002–2004	How often do you watch R-rated movies? (3 venues: cinema, video, TV) Never <1/month Once/month 2–3/month ≥ once/week	Sociodemographics (sensitivity analysis adjusted also forother social influences (friend and family smoking) weekly spendable income, and parenting style/ parental oversight of smoking behavior did not change the conclusion)	Tried smoking among not current smokers	Adjusted relative risk Watched R-rated movies: Once/month	Reference 2.04 (1.90–2.18)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Laugesen et al. 2007	Annual school-based surveys 10th graders N = 96,156 New Zealand 2002–2004	How often do you watch R-rated movies? (3 venues: cinema, video, TV) Never <1/month Once/month 2–3/month ≥ once/week	Sociodemographics (sensitivity analysis adjusted also forother social influences (friend and family smoking) weekly spendable income, and parenting style/ parental oversight of smoking behavior did not change the conclusion)	Tried smoking among not current smokers	Adjusted relative risk Watched R-rated movies: Weekly	Reference 2.28 (2.12–2.45)	
Laugesen et al. 2007	Annual school-based surveys 10th graders N = 96,156 New Zealand 2002–2004	How often do you watch R-rated movies? (3 venues: cinema, video, TV) Never <1/month Once/month 2–3/month ≥ once/week	Sociodemographics (sensitivity analysis adjusted also forother social influences (friend and family smoking) weekly spendable income, and parenting style/ parental oversight of smoking behavior did not change the conclusion)	Current (30 days) smoking	Watched R-rated movies: Never	Reference 0.80 (0.73–0.88)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Laugesen et al. 2007	Annual school-based surveys 10th graders N = 96,156 New Zealand 2002–2004	How often do you watch R-rated movies? (3 venues: cinema, video, TV) Never <1/month Once/month 2–3/month ≥ once/week	Sociodemographics (sensitivity analysis adjusted also forother social influences (friend and family smoking) weekly spendable income, and parenting style/ parental oversight of smoking behavior did not change the conclusion)	Current (30 days) smoking	Watched R-rated movies: 2–3 times/month	Reference 1.15 (1.05–1.26)	
Laugesen et al. 2007	Annual school-based surveys 10th graders N = 96,156 New Zealand 2002–2004	How often do you watch R-rated movies? (3 venues: cinema, video, TV) Never <1/month Once/month 2–3/month ≥ once/week	Sociodemographics (sensitivity analysis adjusted also forother social influences (friend and family smoking) weekly spendable income, and parenting style/ parental oversight of smoking behavior did not change the conclusion)	Current (30 days) smoking	Watched R-rated movies: Once/month	Reference 1.59 (1.44–1.75)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Laugesen et al. 2007	Annual school-based surveys 10th graders N = 96,156 New Zealand 2002–2004	How often do you watch R-rated movies? (3 venues: cinema, video, TV) Never <1/month Once/month 2–3/month ≥ once/week	Sociodemographics (sensitivity analysis adjusted also forother social influences (friend and family smoking) weekly spendable income, and parenting style/ parental oversight of smoking behavior did not change the conclusion)	Current (30 days) smoking	Watched R-rated movies: Weekly	Reference 2.31 (2.10–2.54)	
Song et al. 2007	Multiethnic Aged 18–25 years Cross-sectional Web-based survey N = 1,528 United States	Movie title recognition—Beach method 60 titles/survey 500 top-grossing movies released from 2000 to 2004	Sociodemographics, personality characteristics, smoking-related attitudes/ cognitions, other social influences (friend and family smoking), other media/ advertising influences, perceived prevalence of smoking	Current (30 days) smoking (31%)	Adjusted odds ratio with exposure to movie smoking divided into quartiles and entered as a continuous variable	1.21 (1.05–1.38) for each quartile increase in exposure	For the established smoking analysis, a mediational model that showed significant paths from movie smoking to established smoking through friend smoking and positive expectancies

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Song et al. 2007	Multiethnic Aged 18–25 years Cross-sectional Web-based survey N = 1,528 United States	Movie title recognition—Beach method 60 titles/survey 500 top-grossing movies released from 2000 to 2004	Sociodemographics, personality characteristics, smoking-related attitudes/cognitions, other social influences (friend and family smoking), other media/advertising influences, perceived prevalence of smoking	Established smoking (>100 cigarettes lifetime) (25%)	Adjusted odds ratio, same analytic approach as above	1.08 (0.93–1.25)	For the established smoking analysis, a mediational model that showed significant paths from movie smoking to established smoking through friend smoking and positive expectancies
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 1	Adjusted odds ratio Reference	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 2	Adjusted odds ratio 1.4 (0.9–2.4)	Significant multivariate association not found for perceived prevalence among adults

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 3	Adjusted odds ratio 1.8 (1.0–3.2)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Current (30 days) smoking (12%)	Quartile of exposure to movie smoking: 4	Adjusted odds ratio 2.7 (1.5–4.7)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Ever smoked (41%)	Quartile of exposure to movie smoking: 1	Adjusted odds ratio Reference	Significant multivariate association not found for perceived prevalence among adults

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Ever smoked (41%)	Quartile of exposure to movie smoking: 2	Adjusted odds ratio 1.3 (0.9–1.6)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Ever smoked (41%)	Quartile of exposure to movie smoking: 3	Adjusted odds ratio 1.8 (1.4–2.4)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Ever smoked (41%)	Quartile of exposure to movie smoking: 4	Adjusted odds ratio 2.3 (1.5–3.6)	Significant multivariate association not found for perceived prevalence among adults

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Among never smokers susceptible to smoking (40%)	Quartile of exposure to movie smoking: 1	Adjusted odds ratio Reference	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Among never smokers susceptible to smoking (40%)	Quartile of exposure to movie smoking: 2	Adjusted odds ratio 1.5 (1.1–2.0)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Among never smokers susceptible to smoking (40%)	Quartile of exposure to movie smoking: 3	Adjusted odds ratio 1.8 (1.2–2.5)	Significant multivariate association not found for perceived prevalence among adults

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Among never smokers susceptible to smoking (40%)	Quartile of exposure to movie smoking: 4	Adjusted odds ratio 1.6 (1.1–2.3)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Attitudes toward smoking (good or bad; pleasant or unpleasant; safe or dangerous)	Quartile of exposure to movie smoking: 1	Unstandardized beta coefficient Reference	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Attitudes toward smoking (good or bad; pleasant or unpleasant; safe or dangerous)	Quartile of exposure to movie smoking: 2	Unstandardized beta coefficient 0.17 (0.03–0.31)	Significant multivariate association not found for perceived prevalence among adults

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Attitudes toward smoking (good or bad; pleasant or unpleasant; safe or dangerous)	Quartile of exposure to movie smoking: 3	Unstandardized beta coefficient 0.18 (0.02–0.34)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Attitudes toward smoking (good or bad; pleasant or unpleasant; safe or dangerous)	Quartile of exposure to movie smoking: 4	Unstandardized beta coefficient 0.41 (0.23–0.57)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Perceived prevalence among adults and youth	Quartile of exposure to movie smoking: 1	Unstandardized beta coefficient Reference	Significant multivariate association not found for perceived prevalence among adults

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Perceived prevalence among adults and youth	Quartile of exposure to movie smoking: 2	Unstandardized beta coefficient 0.21 (0.03–0.39)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Perceived prevalence among adults and youth	Quartile of exposure to movie smoking: 3	Unstandardized beta coefficient 0.30 (0.16–0.44)	Significant multivariate association not found for perceived prevalence among adults
Thrasher et al. 2008	Hispanic Aged 10–14 years Cross-sectional school-based survey N = 3,874 Mexico (Cuernavaca and Zacatecas) 2005	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	Sociodemographics, personality characteristics, other social influences (friend and family smoking), reported seeing bogus title	Perceived prevalence among adults and youth	Quartile of exposure to movie smoking: 4	Unstandardized beta coefficient 0.34 (0.18–0.50)	Significant multivariate association not found for perceived prevalence among adults

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Hunt et al. 2009	White Aged 19 years Cross-sectional N = 948 Scotland (Glasgow) 2002–2004	Movie title recognition—Beach method 50 titles/survey 532 U.S. box office hits released from 1998 to 2003	Sociodemographics, personality characteristics, school attachment and function, other social influences (friend and family smoking)	Ever smoked (63%) Current smoker (33%)	No bivariate or multivariate association with movie smoking	Adjusted odds ratio Not significant	None of the associations between exposure categories was significant
Hunt et al. 2009	White Aged 19 years Cross-sectional N = 948 Scotland (Glasgow) 2002–2004	Movie title recognition—Beach method 50 titles/survey 532 U.S. box office hits released from 1998 to 2003	Sociodemographics, personality characteristics, school attachment and function, other social influences (friend and family smoking)	Occasional social smoker + regular smoker versus never smoker + trier + former smoker	No bivariate or multivariate association with movie smoking	Adjusted odds ratio Not significant	None of the associations between exposure categories was significant

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Longitudinal							
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	18-month endpoint Incidence of tried smoking (10%)	Quartile of exposure to movie smoking: 1	Adjusted relative risk Reference	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	18-month endpoint Incidence of tried smoking (10%)	Quartile of exposure to movie smoking: 2	Adjusted relative risk 2.02 (1.27–3.20)	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	18-month endpoint Incidence of tried smoking (10%)	Quartile of exposure to movie smoking: 3	Adjusted relative risk 2.16 (1.38–3.40)	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	18-month endpoint Incidence of tried smoking (10%)	Quartile of exposure to movie smoking: 4	Adjusted relative risk 2.71 (1.73–4.25)	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999		7-year endpoint		Adjusted attributable fraction 0.52 (0.30–0.67)	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Established smoking incidence (≥100 cigarettes lifetime at survey point) (27.8%)	Quartile of exposure to movie smoking: 1	Adjusted relative risk Reference	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Established smoking incidence (≥100 cigarettes lifetime at survey point) (27.8%)	Quartile of exposure to movie smoking: 2	Adjusted relative risk 1.36 (0.95–1.94)	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Established smoking incidence (≥100 cigarettes lifetime at survey point) (27.8%)	Quartile of exposure to movie smoking: 3	Adjusted relative risk 1.68 (1.15–2.44)	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Dalton et al. 2003, 2009; Tickle et al. 2006; Wills et al. 2007; Adachi-Mejia et al. 2009; Sargent et al. 2009a	Longitudinal school-based survey with telephone follow-up, baseline = 1,999 N = 2,603 baseline never smokers followed up at 18 months, 1,791 at 7 years United States (New Hampshire, Vermont) Follow-up at 18 months, 5 years White Aged 10–14 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 601 U.S. box office releases, 1989–1999	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Established smoking incidence (≥100 cigarettes lifetime at survey point) (27.8%)	Quartile of exposure to movie smoking: 4	Adjusted relative risk Reference 1.98 (1.35–2.90)	Dalton et al. (2003) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); Tickle et al. (2006) found significant indirect paths to intentions to smoke through positive expectancies and identification as a smoker; there was also a pathway to smoking behavior at 18 months through smoking status of favorite star; Wills et al. (2007) found that change in friend smoking status from time 1 to time 2 partially mediated the effect of movie exposure on smoking at 18 months; Adachi-Mejia et al. (2009) found a moderation effect for the 7-year endpoint, with stronger effect for adolescent team sports participants

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Distefan et al. 2004	Longitudinal random-digit-dial survey N = 2,084 never smokers at baseline Follow-up 3 years Multiethnic Aged 12–15 years Baseline smoking status: never smoker United States (California)	Movie character smoking status of favorite star Nonsmoker star smoked in <2 movies in preceding 3 years Smoker star smoked in ≥2 movies in the preceding 3 years	Sociodemographics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (not given, approximately 30%)	Nonsmoker star Smoker star	Reference 1.36 (1.02–1.82)	Significantly stronger effect was found for females, with no effect for males
Distefan et al. 2004	Longitudinal random-digit-dial survey N = 2,084 never smokers at baseline Follow-up 3 years Multiethnic Aged 12–15 years Baseline smoking status: never smoker United States (California)	Movie character smoking status of favorite star Nonsmoker star smoked in <2 movies in preceding 3 years Smoker star smoked in ≥2 movies in the preceding 3 years	Sociodemographics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Among females	Nonsmoker star Smoker star	Reference 1.86 (1.26–2.73)	Significantly stronger effect was found for females, with no effect for males

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Jackson et al. 2007	Longitudinal school-based survey, 2001–2002 N = 735 Follow-up at 2 years White and Black Mean age 13.6 years Baseline smoking status: never smoker United States (North Carolina)	Title recognition measure—93 film titles released 2001–2002 7 (G-rated), 14 (PG-rated), 49 (PG-13 rated), 23 (R-rated)	Sociodemographics, other social influences (friend and family smoking), Parenting style/ parental oversight of smoking behavior, school attachment and function, personality characteristics	Tried smoking (30%)	No movie effect for Black adolescents		Television in the bedroom also found to be related to smoking; after controlling for this variable, the Adjusted odds ratio for tercile 3 among White adolescents = 2.69 (1.25–5.77)
Jackson et al. 2007	Longitudinal school-based survey, 2001–2002 N = 735 Follow-up at 2 years White and Black Mean age 13.6 years Baseline smoking status: never smoker United States (North Carolina)	Title recognition measure—93 film titles released 2001–2002 7 (G-rated), 14 (PG-rated), 49 (PG-13 rated), 23 (R-rated)	Sociodemographics, other social influences (friend and family smoking), Parenting style/ parental oversight of smoking behavior, school attachment and function, personality characteristics	Tried smoking (30%)	Among White adolescents, tercile of exposure to R-rated movies: 1	Adjusted odds ratio Reference	Television in the bedroom also found to be related to smoking; after controlling for this variable, the Adjusted odds ratio for tercile 3 among White adolescents = 2.69 (1.25–5.77)

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Jackson et al. 2007	Longitudinal school-based survey, 2001–2002 N = 735 Follow-up at 2 years White and Black Mean age 13.6 years Baseline smoking status: never smoker United States (North Carolina)	Title recognition measure—93 film titles released 2001–2002 7 (G-rated), 14 (PG-rated), 49 (PG-13 rated), 23 (R-rated)	Sociodemographics, other social influences (friend and family smoking), Parenting style/ parental oversight of smoking behavior, school attachment and function, personality characteristics	Tried smoking (30%)	Among White adolescents, tercile of exposure to R-rated movies: 2	Adjusted odds ratio 1.57 (0.73–3.35)	Television in the bedroom also found to be related to smoking; after controlling for this variable, the Adjusted odds ratio for tercile 3 among White adolescents = 2.69 (1.25–5.77)
Jackson et al. 2007	Longitudinal school-based survey, 2001–2002 N = 735 Follow-up at 2 years White and Black Mean age 13.6 years Baseline smoking status: never smoker United States (North Carolina)	Title recognition measure—93 film titles released 2001–2002 7 (G-rated), 14 (PG-rated), 49 (PG-13 rated), 23 (R-rated)	Sociodemographics, other social influences (friend and family smoking), Parenting style/ parental oversight of smoking behavior, school attachment and function, personality characteristics	Tried smoking (30%)	Among White adolescents, tercile of exposure to R-rated movies: 3	Adjusted odds ratio 2.67 (1.07–6.55)	Television in the bedroom also found to be related to smoking; after controlling for this variable, the Adjusted odds ratio for tercile 3 among White adolescents = 2.69 (1.25–5.77)

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2007a; Wills et al. 2008; Tanski et al. 2009	Longitudinal random-digit-dial survey N = 6,522 baseline (5,829 never smokers) National sample Follow-up at 8 months (5,503), 16 months (5,019), 24 months (4,574) Multiethnic Aged 10–14 years at baseline Baseline smoking status: never smoker for outcome of tried smoking, not established smoker for outcome of established smoking United States 2003	Movie title recognition—Beach method 50 titles/survey Baseline pool: 532 U.S. box office hits released from 1998 to 2003 Follow-up pools: movies released to box office or DVD during interim periods (approximately 150 titles for each follow-up survey wave)	Sociodemographics, other social influences (friend and family smoking) personality characteristics, parenting style/parental oversight of smoking behavior, extracurricular activities, school attachment and function	Tried smoking (15.9% by 24 months)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile, assessed by character type: Mixed	Adjusted hazard ratio 1.39 (1.04–1.85)	Interaction effect for negative character smoking: adjusted hazard ratio = 2.55 (1.50–4.32) for adolescents low in sensation seeking; Wills et al. (2008) found that the relation of movie exposure and onset of smoking was partially mediated through positive expectancies and change in the smoking status of friends; interaction effect for established smoking: adjusted hazard ratio = 12.7 (2.0–80.6) for adolescents low in sensation seeking

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2007a; Wills et al. 2008; Tanski et al. 2009	Longitudinal random-digit-dial survey N = 6,522 baseline (5,829 never smokers) National sample Follow-up at 8 months (5,503), 16 months (5,019), 24 months (4,574) Multiethnic Aged 10–14 years at baseline Baseline smoking status: never smoker for outcome of tried smoking, not established smoker for outcome of established smoking United States 2003	Movie title recognition—Beach method 50 titles/survey Baseline pool: 532 U.S. box office hits released from 1998 to 2003 Follow-up pools: movies released to box office or DVD during interim periods (approximately 150 titles for each follow-up survey wave)	Sociodemographics, other social influences (friend and family smoking) personality characteristics, parenting style/parental oversight of smoking behavior, extracurricular activities, school attachment and function	Tried smoking (15.9% by 24 months)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile, assessed by character type: Negative	Adjusted hazard ratio 1.46 (1.07–1.98)	Interaction effect for negative character smoking: adjusted hazard ratio = 2.55 (1.50–4.32) for adolescents low in sensation seeking; Wills et al. (2008) found that the relation of movie exposure and onset of smoking was partially mediated through positive expectancies and change in the smoking status of friends; interaction effect for established smoking: adjusted hazard ratio = 12.7 (2.0–80.6) for adolescents low in sensation seeking

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2007a; Wills et al. 2008; Tanski et al. 2009	Longitudinal random-digit-dial survey N = 6,522 baseline (5,829 never smokers) National sample Follow-up at 8 months (5,503), 16 months (5,019), 24 months (4,574) Multiethnic Aged 10–14 years at baseline Baseline smoking status: never smoker for outcome of tried smoking, not established smoker for outcome of established smoking United States 2003	Movie title recognition—Beach method 50 titles/survey Baseline pool: 532 U.S. box office hits released from 1998 to 2003 Follow-up pools: movies released to box office or DVD during interim periods (approximately 150 titles for each follow-up survey wave)	Sociodemographics, other social influences (friend and family smoking) personality characteristics, parenting style/parental oversight of smoking behavior, extracurricular activities, school attachment and function	Tried smoking (15.9% by 24 months)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile, assessed by character type: Positive	Adjusted hazard ratio 1.39 (0.99–1.96)	Interaction effect for negative character smoking: adjusted hazard ratio = 2.55 (1.50–4.32) for adolescents low in sensation seeking; Wills et al. (2008) found that the relation of movie exposure and onset of smoking was partially mediated through positive expectancies and change in the smoking status of friends; interaction effect for established smoking: adjusted hazard ratio = 12.7 (2.0–80.6) for adolescents low in sensation seeking

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Sargent et al. 2007a; Wills et al. 2008; Tanski et al. 2009	Longitudinal random-digit-dial survey N = 6,522 baseline (5,829 never smokers) National sample Follow-up at 8 months (5,503), 16 months (5,019), 24 months (4,574) Multiethnic Aged 10–14 years at baseline Baseline smoking status: never smoker for outcome of tried smoking, not established smoker for outcome of established smoking United States 2003	Movie title recognition—Beach method 50 titles/survey Baseline pool: 532 U.S. box office hits released from 1998 to 2003 Follow-up pools: movies released to box office or DVD during interim periods (approximately 150 titles for each follow-up survey wave)	Sociodemographics, other social influences (friend and family smoking) personality characteristics, parenting style/parental oversight of smoking behavior, extracurricular activities, school attachment and function	Established smoking (≥100 cigarettes lifetime)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile	Adjusted hazard ratio 2.04 (1.01–4.12)	Interaction effect for negative character smoking: adjusted hazard ratio = 2.55 (1.50–4.32) for adolescents low in sensation seeking; Wills et al. (2008) found that the relation of movie exposure and onset of smoking was partially mediated through positive expectancies and change in the smoking status of friends; interaction effect for established smoking: adjusted hazard ratio = 12.7 (2.0–80.6) for adolescents low in sensation seeking

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Hanewinkel and Sargent 2008; Sargent and Hanewinkel 2009	Longitudinal school-based survey N = 2,711 Follow-up at 1 year White Aged 10–16 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (19%)	Quartile of exposure to movie smoking: 1	Adjusted relative risk Reference	Hanewinkel and Sargent (2008) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); this and the dose-response curve were similar to Dalton et al. (2003)
Hanewinkel and Sargent 2008; Sargent and Hanewinkel 2009	Longitudinal school-based survey N = 2,711 Follow-up at 1 year White Aged 10–16 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (19%)	Quartile of exposure to movie smoking: 2	Adjusted relative risk 1.37 (1.09–1.68)	Hanewinkel and Sargent (2008) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); this and the dose-response curve were similar to Dalton et al. (2003)

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Hanewinkel and Sargent 2008; Sargent and Hanewinkel 2009	Longitudinal school-based survey N = 2,711 Follow-up at 1 year White Aged 10–16 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (19%)	Quartile of exposure to movie smoking: 3	Adjusted relative risk 1.78 (1.39–2.29)	Hanewinkel and Sargent (2008) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); this and the dose-response curve were similar to Dalton et al. (2003)
Hanewinkel and Sargent 2008; Sargent and Hanewinkel 2009	Longitudinal school-based survey N = 2,711 Follow-up at 1 year White Aged 10–16 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Tried smoking (19%)	Quartile of exposure to movie smoking: 4	Adjusted relative risk 1.96 (1.55–2.47)	Hanewinkel and Sargent (2008) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); this and the dose-response curve were similar to Dalton et al. (2003)

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Hanewinkel and Sargent 2008; Sargent and Hanewinkel 2009	Longitudinal school-based survey N = 2,711 Follow-up at 1 year White Aged 10–16 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	Movie title recognition—Beach method 50 titles/survey 398 internationally distributed movies that were German box office hits and released from 1994 to 2004	Sociodemographics, personality characteristics, school attachment and function, parenting style/parental oversight of smoking behavior, other social influences (friend and family smoking), other media/advertising influences	Smoking index (composed of lifetime smoking and current smoking items, alpha = 0.87)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile, assessed by character type	Adjusted proportional odds ratio among baseline never smokers: 2.85 (1.90–4.26) Among baseline ever smokers, the interaction term was 0.55 (0.34–0.92), indicating a significantly lower response in this category of baseline smoker	Hanewinkel and Sargent (2008) also found a significant moderation effect on parental smoking (higher movie effects among adolescents whose parents did not smoke); this and the dose-response curve were similar to Dalton et al. (2003)

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Titus-Ernstoff et al. 2008	Longitudinal, school-based, elementary schools, telephone N = 2,627 (2,499 baseline never smokers) United States (New Hampshire, Vermont) 2002–2003 Follow-up at 1 year (2,354) and 2 years (2,255) White Aged 9–12 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 550 popular contemporary movies, top 100 releases for each of the 5.5 years preceding baseline survey Follow-up movie pools selected on rolling basis from top 100 box office hits plus top 100 video rentals for the 12 months preceding survey		Tried smoking (9.6% by 24 months)	Exposure entered as continuous measure, with each 1-point increase equivalent to a 1-decile increase in exposure: Baseline (B) exposure	Adjusted relative risk for trying smoking at 24 months 1.09 (1.03–1.15)	Adjusted attributable fraction = 0.35 (0.16–0.53); majority of movie smoking exposure was from youth-rated movies

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Titus-Ernstoff et al. 2008	Longitudinal, school-based, elementary schools, telephone N = 2,627 (2,499 baseline never smokers) United States (New Hampshire, Vermont) 2002–2003 Follow-up at 1 year (2,354) and 2 years (2,255) White Aged 9–12 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 550 popular contemporary movies, top 100 releases for each of the 5.5 years preceding baseline survey Follow-up movie pools selected on rolling basis from top 100 box office hits plus top 100 video rentals for the 12 months preceding survey		Tried smoking (9.6% by 24 months)	Exposure entered as continuous measure, with each 1-point increase equivalent to a 1-decile increase in exposure: 12-month exposure	Adjusted relative risk for trying smoking at 24 months 1.09 (1.03–1.16)	Adjusted attributable fraction = 0.35 (0.16–0.53); majority of movie smoking exposure was from youth-rated movies = 0.35 (0.16–0.53); majority of movie smoking exposure was from youth-rated movies

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Titus-Ernstoff et al. 2008	Longitudinal, school-based, elementary schools, telephone N = 2,627 (2,499 baseline never smokers) United States (New Hampshire, Vermont) 2002–2003 Follow-up at 1 year (2,354) and 2 years (2,255) White Aged 9–12 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 550 popular contemporary movies, top 100 releases for each of the 5.5 years preceding baseline survey Follow-up movie pools selected on rolling basis from top 100 box office hits plus top 100 video rentals for the 12 months preceding survey		Tried smoking (9.6% by 24 months)	Exposure entered as continuous measure, with each 1-point increase equivalent to a 1-decile increase in exposure: 24-month exposure	Adjusted relative risk for trying smoking at 24 months 1.07 (1.00–1.14)	Adjusted attributable fraction = 0.35 (0.16–0.53); majority of movie smoking exposure was from youth-rated movies

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Titus-Ernstoff et al. 2008	Longitudinal, school-based, elementary schools, telephone N = 2,627 (2,499 baseline never smokers) United States (New Hampshire, Vermont) 2002–2003 Follow-up at 1 year (2,354) and 2 years (2,255) White Aged 9–12 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 550 popular contemporary movies, top 100 releases for each of the 5.5 years preceding baseline survey Follow-up movie pools selected on rolling basis from top 100 box office hits plus top 100 video rentals for the 12 months preceding survey		Tried smoking (9.6% by 24 months)	Exposure entered as continuous measure, with each 1-point increase equivalent to a 1-decile increase in exposure: B + 12-month exposure	Adjusted relative risk for trying smoking at 24 months 1.11 (1.04–1.17)	Adjusted attributable fraction = 0.35 (0.16–0.53); majority of movie smoking exposure was from youth-rated movies

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Titus-Ernstoff et al. 2008	Longitudinal, school-based, elementary schools, telephone N = 2,627 (2,499 baseline never smokers) United States (New Hampshire, Vermont) 2002–2003 Follow-up at 1 year (2,354) and 2 years (2,255) White Aged 9–12 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 550 popular contemporary movies, top 100 releases for each of the 5.5 years preceding baseline survey Follow-up movie pools selected on rolling basis from top 100 box office hits plus top 100 video rentals for the 12 months preceding survey		Tried smoking (9.6% by 24 months)	Exposure entered as continuous measure, with each 1-point increase equivalent to a 1-decile increase in exposure: B + 12-month + 24-month exposure	Adjusted relative risk for trying smoking at 24 months 1.09 (1.02–1.16)	Adjusted attributable fraction = 0.35 (0.16–0.53); majority of movie smoking exposure was from youth-rated movies

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Titus-Ernstoff et al. 2008	Longitudinal, school-based, elementary schools, telephone N = 2,627 (2,499 baseline never smokers) United States (New Hampshire, Vermont) 2002–2003 Follow-up at 1 year (2,354) and 2 years (2,255) White Aged 9–12 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 550 popular contemporary movies, top 100 releases for each of the 5.5 years preceding baseline survey Follow-up movie pools selected on rolling basis from top 100 box office hits plus top 100 video rentals for the 12 months preceding survey		Tried smoking (9.6% by 24 months)	Using <25th percentile as reference	Adjusted attributable fraction 0.35 (0.16–0.53)	Adjusted attributable fraction = 0.35 (0.16–0.53); majority of movie smoking exposure was from youth-rated movies

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Titus-Ernstoff et al. 2008	Longitudinal, school-based, elementary schools, telephone N = 2,627 (2,499 baseline never smokers) United States (New Hampshire, Vermont) 2002–2003 Follow-up at 1 year (2,354) and 2 years (2,255) White Aged 9–12 years at baseline Baseline smoking status: never smoker	Movie title recognition—Beach method 50 titles/survey 550 popular contemporary movies, top 100 releases for each of the 5.5 years preceding baseline survey Follow-up movie pools selected on rolling basis from top 100 box office hits plus top 100 video rentals for the 12 months preceding survey		Tried smoking (9.6% by 24 months)	Using <10th percentile as reference	Adjusted attributable fraction 0.46 (0.11–0.70)	Adjusted attributable fraction = 0.35 (0.16–0.53); majority of movie smoking exposure was from youth-rated movies
Thrasher et al. 2009	Longitudinal school-based survey N = 3,874 baseline (2,093 never smokers) Mexico (Cuernavaca and Zacatecas) 2005 Follow-up at 1 year (1,741) Hispanic Aged 10–14 years Baseline smoking status: never smoker	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	reported seeing bogus title, other media/advertising influences, personality characteristics, peer influences, sociodemographics, other social influences (friend and family smoking)	Tried smoking (36%)	Quartile of exposure to movie smoking: 1	Adjusted relative risk Reference	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2009	Longitudinal school-based survey N = 3,874 baseline (2,093 never smokers) Mexico (Cuernavaca and Zacatecas) 2005 Follow-up at 1 year (1,741) Hispanic Aged 10–14 years Baseline smoking status: never smoker	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	reported seeing bogus title, other media/advertising influences, personality characteristics, peer influences, sociodemographics, other social influences (friend and family smoking)	Tried smoking (36%)	Quartile of exposure to movie smoking: 2	Adjusted relative risk 1.01 (0.64–1.60)	
Thrasher et al. 2009	Longitudinal school-based survey N = 3,874 baseline (2,093 never smokers) Mexico (Cuernavaca and Zacatecas) 2005 Follow-up at 1 year (1,741) Hispanic Aged 10–14 years Baseline smoking status: never smoker	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	reported seeing bogus title, other media/advertising influences, personality characteristics, peer influences, sociodemographics, other social influences (friend and family smoking)	Tried smoking (36%)	Quartile of exposure to movie smoking: 3	Adjusted relative risk 1.54 (1.01–2.64)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2009	Longitudinal school-based survey N = 3,874 baseline (2,093 never smokers) Mexico (Cuernavaca and Zacatecas) 2005 Follow-up at 1 year (1,741) Hispanic Aged 10–14 years Baseline smoking status: never smoker	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	reported seeing bogus title, other media/advertising influences, personality characteristics, peer influences, sociodemographics, other social influences (friend and family smoking)	Tried smoking (36%)	Quartile of exposure to movie smoking: 4	Adjusted relative risk 1.41 (0.95–2.10)	
Thrasher et al. 2009	Longitudinal school-based survey N = 3,874 baseline (2,093 never smokers) Mexico (Cuernavaca and Zacatecas) 2005 Follow-up at 1 year (1,741) Hispanic Aged 10–14 years Baseline smoking status: never smoker	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	reported seeing bogus title, other media/advertising influences, personality characteristics, peer influences, sociodemographics, other social influences (friend and family smoking)	Current (30 days) smoking (8%)	Quartile of exposure to movie smoking: 1	Adjusted relative risk Reference	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2009	Longitudinal school-based survey N = 3,874 baseline (2,093 never smokers) Mexico (Cuernavaca and Zacatecas) 2005 Follow-up at 1 year (1,741) Hispanic Aged 10–14 years Baseline smoking status: never smoker	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	reported seeing bogus title, other media/advertising influences, personality characteristics, peer influences, sociodemographics, other social influences (friend and family smoking)	Current (30 days) smoking (8%)	Quartile of exposure to movie smoking: 2	Adjusted relative risk 1.22 (0.59–2.51)	
Thrasher et al. 2009	Longitudinal school-based survey N = 3,874 baseline (2,093 never smokers) Mexico (Cuernavaca and Zacatecas) 2005 Follow-up at 1 year (1,741) Hispanic Aged 10–14 years Baseline smoking status: never smoker	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	reported seeing bogus title, other media/advertising influences, personality characteristics, peer influences, sociodemographics, other social influences (friend and family smoking)	Current (30 days) smoking (8%)	Quartile of exposure to movie smoking: 3	Adjusted relative risk 2.44 (1.31–4.55)	

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Thrasher et al. 2009	Longitudinal school-based survey N = 3,874 baseline (2,093 never smokers) Mexico (Cuernavaca and Zacatecas) 2005 Follow-up at 1 year (1,741) Hispanic Aged 10–14 years Baseline smoking status: never smoker	Movie title recognition—fixed list of 42 box office hits (2002–2006) with >1 minute of smoking, 15 Mexican, 23 U.S., 4 other foreign	reported seeing bogus title other media/advertising influences, personality characteristics, peer influences, sociodemographics, other social influences (friend and family smoking)	Current (30 days) smoking (8%)	Quartile of exposure to movie smoking: 4	Adjusted relative risk 2.23 (1.19–4.17)	
Wilkinson et al. 2009	Longitudinal household survey N = 1,328 Follow-up at 6, 12, 18, and 24 months (1,286) Hispanic Aged 11–13 years Baseline smoking status: never smoker for new experimentation United States (Texas)	Movie title recognition—Beach method 50 titles/survey 250 popular contemporary movies, top 50 releases each year 1999–2004	personality characteristics, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Ever tried cigarettes (n = 1,286)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile	Adjusted odds ratio 1.27 (1.10–1.39)	Interaction effect found for country of birth, with Mexican-born adolescents having a stronger response to smoking in movies, Adjusted odds ratio = 1.52 (1.14–2.05), than did U.S. born, Adjusted odds ratio = 1.04 (0.86–1.27)

Table 5.13 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome (prevalence)	Exposure comparison categories	Measure of association, association (95% confidence interval)[b]	Comments
Wilkinson et al. 2009	Longitudinal household survey N = 1,328 Follow-up at 6, 12, 18, and 24 months (1,286) Hispanic Aged 11–13 years Baseline smoking status: never smoker for new experimentation United States (Texas)	Movie title recognition—Beach method 50 titles/survey 250 popular contemporary movies, top 50 releases each year 1999–2004	personality characteristics, sociodemographics, school attachment and function, other social influences (friend and family smoking)	New experimentation with cigarettes (n = 1,129)	Continuous measure windsorized and scaled so 0 = 5th percentile and 1 = 95th percentile	Adjusted odds ratio 1.19 (1.01–1.40)	Interaction effect found for country of birth, with Mexican-born adolescents having a stronger response to smoking in movies, Adjusted odds ratio = 1.52 (1.14–2.05), than did U.S. born, Adjusted odds ratio = 1.04 (0.86–1.27)

Note: Multiple citations within one cell are for multiple reports on the same sample. **U.S.** = United States.
[a]Covariates: **ACH** = access to cigarettes in household; **BOF** = reported seeing bogus title; **EA** = extracurricular activities; **M** = other media/advertising influences; **P** = personality characteristics; **PPS** = perceived prevalence of smoking; **PS** = parenting style/parental oversight of smoking behavior; **S** = sociodemographics; **SCH** = school attachment and function; **SI** = other social influences (friend and family smoking); **SINC** = weekly spendable income; **SRA** = smoking-related attitudes/cognitions.
[b]Measures of association: **AAF** = adjusted attributable fraction; **AHR** = adjusted hazard ratio; **AOR** = adjusted odds ratio; **APOR** = adjusted proportional odds ratio; **ARR** = adjusted relative risk; **CI** = confidence interval; **NS** = not significant; **OR** = odds ratio; **UA**β = unstandardized beta coefficient.

Table 5.14 Population-based studies assessing the relation between parental restrictions on viewing R-rated movies and smoking among adolescents

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Cross-sectional							
Dalton et al. 2002a	Cross-sectional school-based survey N = 4,544 White Aged 10–15 years United States (Northeast) 1999	"How often do your parents let you watch movies or videos that are rated R?" (p. 3) (Never, once in a while, sometimes, all the time)	Other media/ advertising influences, personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Prevalence of tried smoking (18%)	Allowed to watch R-rated movies: Never (16%)	Adjusted relative risk 0.29 (0.19–0.45)	Parental restrictions associated with lower viewership of R and PG-13 movies and lower rates of drinking alcohol

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Dalton et al. 2002a	Cross-sectional school-based survey N = 4,544 White Aged 10–15 years United States (Northeast) 1999	"How often do your parents let you watch movies or videos that are rated R?" (p. 3) (Never, once in a while, sometimes, all the time)	Other media/ advertising influences, personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Prevalence of tried smoking (18%)	Allowed to watch R-rated movies: Once in a while/ sometimes (53%)	Adjusted relative risk 0.74 (0.65–0.85)	Parental restrictions associated with lower viewership of R and PG-13 movies and lower rates of drinking alcohol
Dalton et al. 2002a	Cross-sectional school-based survey N = 4,544 White Aged 10–15 years United States (Northeast) 1999	"How often do your parents let you watch movies or videos that are rated R?" (p. 3) (Never, once in a while, sometimes, all the time)	Other media/ advertising influences, personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Prevalence of tried smoking (18%)	Allowed to watch R-rated movies: All the time (31%)	Adjusted relative risk Reference	Parental restrictions associated with lower viewership of R and PG-13 movies and lower rates of drinking alcohol

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Dalton et al. 2006	School-based survey N = 2,606 Aged 9–12 years United States (Northeast)	Parental restrictions on R-rated movie viewing combined with whether they co-viewed the movies	Parenting style/ parental oversight of smoking behavior, sociodemographics, other social influences (friend and family smoking)	Susceptibility to smoking (12.5%)	Permits watching, no parent	Adjusted relative risk Reference	When assessing other movie-monitoring habits (requiring child to ask before seeing, going into video store, overseeing movie viewing at friends), it appeared that these behaviors partially ameliorated the effects of seeing R-rated movies
Dalton et al. 2006	School-based survey N = 2,606 Aged 9–12 years United States (Northeast)	Parental restrictions on R-rated movie viewing combined with whether they co-viewed the movies	Parenting style/ parental oversight of smoking behavior, sociodemographics, other social influences (friend and family smoking)	Susceptibility to smoking (12.5%)	Permits watching, co-views	Adjusted relative risk 0.72 (0.54–0.96)	When assessing other movie-monitoring habits (requiring child to ask before seeing, going into video store, overseeing movie viewing at friends), it appeared that these behaviors partially ameliorated the effects of seeing R-rated movies
Dalton et al. 2006	School-based survey N = 2,606 Aged 9–12 years United States (Northeast)	Parental restrictions on R-rated movie viewing combined with whether they co-viewed the movies	Parenting style/ parental oversight of smoking behavior, sociodemographics, other social influences (friend and family smoking)	Susceptibility to smoking (12.5%)	Prohibits child from watching	Adjusted relative risk 0.54 (0.41–0.70)	When assessing other movie-monitoring habits (requiring child to ask before seeing, going into video store, overseeing movie viewing at friends), it appeared that these behaviors partially ameliorated the effects of seeing R-rated movies

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Thompson and Gunther 2007	School-based survey of 1,687 6th–8th graders N = 1,687 United States (Wisconsin)	"How often do your parents let you watch movies or videos that are rated R?" ([1] never to [5] all the time)	Parenting style/ parental oversight of smoking behavior, sociodemographics, other social influences (friend and family smoking)	Smoking susceptibility among never smokers (24%)	R-rated movie restriction: Full	Adjusted odds ratio Reference	
Thompson and Gunther 2007	School-based survey of 1,687 6th–8th graders N = 1,687 United States (Wisconsin)	"How often do your parents let you watch movies or videos that are rated R?" ([1] never to [5] all the time)	Parenting style/ parental oversight of smoking behavior, sociodemographics, other social influences (friend and family smoking)	Smoking susceptibility among never smokers (24%)	R-rated movie restriction: Partial	Adjusted odds ratio 2.1 (1.5–2.8)	
Thompson and Gunther 2007	School-based survey of 1,687 6th–8th graders N = 1,687 United States (Wisconsin)	"How often do your parents let you watch movies or videos that are rated R?" ([1] never to [5] all the time)	Parenting style/ parental oversight of smoking behavior, sociodemographics, other social influences (friend and family smoking)	Smoking susceptibility among never smokers (24%)	R-rated movie restriction: None	Adjusted odds ratio 3.3 (2.3–4.6)	

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Thompson and Gunther 2007	School-based survey of 1,687 6th–8th graders N = 1,687 United States (Wisconsin)	"How often do your parents let you watch movies or videos that are rated R?" ([1] never to [5] all the time)	Parenting style/ parental oversight of smoking behavior, sociodemographics, other social influences (friend and family smoking)	Tried smoking prevalence (29%)	R-rated movie restriction: Full	Adjusted odds ratio Reference	
Thompson and Gunther 2007	School-based survey of 1,687 6th–8th graders N = 1,687 United States (Wisconsin)	"How often do your parents let you watch movies or videos that are rated R?" ([1] never to [5] all the time)	Parenting style/ parental oversight of smoking behavior, sociodemographics, other social influences (friend and family smoking)	Tried smoking prevalence (29%)	R-rated movie restriction: Partial	Adjusted odds ratio 1.5 (1.0–2.8)	
Thompson and Gunther 2007	School-based survey of 1,687 6th–8th graders N = 1,687 United States (Wisconsin)	"How often do your parents let you watch movies or videos that are rated R?" ([1] never to [5] all the time)	Parenting style/ parental oversight of smoking behavior, sociodemographics, other social influences (friend and family smoking)	Tried smoking prevalence (29%)	R-rated movie restriction: None	Adjusted odds ratio 2.5 (1.7–3.7)	

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Longitudinal							
Sargent et al. 2004	Longitudinal school-based survey with telephone follow-up, baseline survey N = 2,596 baseline never smokers Follow-up at 18 months White Aged 10–14 years at baseline Baseline smoking status: never smoker United States (New Hampshire, Vermont) 1999	"How often do your parents allow you to watch movies or videos that are rated R?" (Never, once in a while, sometimes, all the time)	Extracurricular activities, personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Incidence of tried smoking (15.9% by 18 months)	Allowed to watch R-rated movies: Never (19%)	Adjusted relative risk Reference	Statistically significant interaction with stronger results for adolescents living in nonsmoking households; relaxation of R-rated restrictions over time resulted in greater risk of smoking; strengthening of restrictions over time resulted in lower risk
Sargent et al. 2004	Longitudinal school-based survey with telephone follow-up, baseline survey N = 2,596 baseline never smokers Follow-up at 18 months White Aged 10–14 years at baseline Baseline smoking status: never smoker United States (New Hampshire, Vermont) 1999	"How often do your parents allow you to watch movies or videos that are rated R?" (Never, once in a while, sometimes, all the time)	Extracurricular activities, personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Incidence of tried smoking (15.9% by 18 months)	Allowed to watch R-rated movies: Once in a while (29%)	Adjusted relative risk 1.8 (1.1–3.1)	Statistically significant interaction with stronger results for adolescents living in nonsmoking households; relaxation of R-rated restrictions over time resulted in greater risk of smoking; strengthening of restrictions over time resulted in lower risk

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Sargent et al. 2004	Longitudinal school-based survey with telephone follow-up, baseline survey N = 2,596 baseline never smokers Follow-up at 18 months White Aged 10–14 years at baseline Baseline smoking status: never smoker United States (New Hampshire, Vermont) 1999	"How often do your parents allow you to watch movies or videos that are rated R?" (Never, once in a while, sometimes, all the time)	Extracurricular activities, personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Incidence of tried smoking (15.9% by 18 months)	Allowed to watch R-rated movies: Sometimes/all the time (52%)	Adjusted relative risk 2.8 (1.6–4.7)	Statistically significant interaction with stronger results for adolescents living in nonsmoking households; relaxation of R-rated restrictions over time resulted in greater risk of smoking; strengthening of restrictions over time resulted in lower risk
Hanewinkel et al. 2008	Longitudinal, school-based survey N = 2,110 Follow-up at 1 year White Aged 10–15 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	"How often do your parents allow you to watch movies that are rated for 16-year-olds?" (Never, once in a while, sometimes, all the time)	Personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Tried smoking incidence (16%)	Never (41%)	Reference	German rating categories refer to the age below which the restriction applies; they are FSK-0 (family), FSK-6, FSK-12, FSK-16, FSK-18; lower exposure to movies in all rating categories for adolescents reporting restrictions; mediational analysis shows indirect pathway from FSK restriction through lower movie substance-use exposure to behavior

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Hanewinkel et al. 2008	Longitudinal, school-based survey N = 2,110 Follow-up at 1 year White Aged 10–15 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	"How often do your parents allow you to watch movies that are rated for 16-year-olds?" (Never, once in a while, sometimes, all the time)	Personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Tried smoking incidence (16%)	Once in a while (28%)	1.19 (0.85–1.67)	German rating categories refer to the age below which the restriction applies; they are FSK-0 (family), FSK-6, FSK-12, FSK-16, FSK-18; lower exposure to movies in all rating categories for adolescents reporting restrictions; mediational analysis shows indirect pathway from FSK restriction through lower movie substance-use exposure to behavior
Hanewinkel et al. 2008	Longitudinal, school-based survey N = 2,110 Follow-up at 1 year White Aged 10–15 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	"How often do your parents allow you to watch movies that are rated for 16-year-olds?" (Never, once in a while, sometimes, all the time)	Personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Tried smoking incidence (16%)	Sometimes (22%)	1.71 (1.33–2.20)	German rating categories refer to the age below which the restriction applies; they are FSK-0 (family), FSK-6, FSK-12, FSK-16, FSK-18; lower exposure to movies in all rating categories for adolescents reporting restrictions; mediational analysis shows indirect pathway from FSK restriction through lower movie substance-use exposure to behavior

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Hanewinkel et al. 2008	Longitudinal, school-based survey N = 2,110 Follow-up at 1 year White Aged 10–15 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	"How often do your parents allow you to watch movies that are rated for 16-year-olds?" (Never, once in a while, sometimes, all the time)	Personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Tried smoking incidence (16%)	All the time (9%)	1.85 (1.27–2.69)	German rating categories refer to the age below which the restriction applies; they are FSK-0 (family), FSK-6, FSK-12, FSK-16, FSK-18; lower exposure to movies in all rating categories for adolescents reporting restrictions; mediational analysis shows indirect pathway from FSK restriction through lower movie substance-use exposure to behavior
Hanewinkel et al. 2008	Longitudinal, school-based survey N = 2,110 Follow-up at 1 year White Aged 10–15 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	"How often do your parents allow you to watch movies that are rated for 16-year-olds?" (Never, once in a while, sometimes, all the time)	Personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Smoking and binge drinking (5%)	Never	Reference	German rating categories refer to the age below which the restriction applies; they are FSK-0 (family), FSK-6, FSK-12, FSK-16, FSK-18; lower exposure to movies in all rating categories for adolescents reporting restrictions; mediational analysis shows indirect pathway from FSK restriction through lower movie substance-use exposure to behavior

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Hanewinkel et al. 2008	Longitudinal, school-based survey N = 2,110 Follow-up at 1 year White Aged 10–15 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	"How often do your parents allow you to watch movies that are rated for 16-year-olds?" (Never, once in a while, sometimes, all the time)	Personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Smoking and binge drinking (5%)	Once in a while	1.64 (1.05–2.58)	German rating categories refer to the age below which the restriction applies; they are FSK-0 (family), FSK-6, FSK-12, FSK-16, FSK-18; lower exposure to movies in all rating categories for adolescents reporting restrictions; mediational analysis shows indirect pathway from FSK restriction through lower movie substance-use exposure to behavior
Hanewinkel et al. 2008	Longitudinal, school-based survey N = 2,110 Follow-up at 1 year White Aged 10–15 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	"How often do your parents allow you to watch movies that are rated for 16-year-olds?" (Never, once in a while, sometimes, all the time)	Personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Smoking and binge drinking (5%)	Sometimes	2.30 (1.53–3.45)	German rating categories refer to the age below which the restriction applies; they are FSK-0 (family), FSK-6, FSK-12, FSK-16, FSK-18; lower exposure to movies in all rating categories for adolescents reporting restrictions; mediational analysis shows indirect pathway from FSK restriction through lower movie substance-use exposure to behavior

Table 5.14 Continued

Study	Design	Measure of exposure	Categories of covariates used in adjustment[a]	Outcome	Exposure comparison categories	Measure of association, association (95% confidence interval[b]	Comments
Hanewinkel et al. 2008	Longitudinal, school-based survey N = 2,110 Follow-up at 1 year White Aged 10–15 years at baseline Baseline smoking status: never smoker Germany (Schleswig-Holstein) 2005	"How often do your parents allow you to watch movies that are rated for 16-year-olds?" (Never, once in a while, sometimes, all the time)	Personality characteristics, parenting style/parental oversight of smoking behavior, sociodemographics, school attachment and function, other social influences (friend and family smoking)	Smoking and binge drinking (5%)	All the time	2.92 (1.83–4.67)	German rating categories refer to the age below which the restriction applies; they are FSK-0 (family), FSK-6, FSK-12, FSK-16, FSK-18; lower exposure to movies in all rating categories for adolescents reporting restrictions; mediational analysis shows indirect pathway from FSK restriction through lower movie substance-use exposure to behavior

[a]Covariates: **EA** = extracurricular activities; **M** = other media/advertising influences; **P** = personality characteristics; **PS** = parenting style/parental oversight of smoking behavior; **S** = sociodemographics; **SCH** = school attachment and function; **SI** = other social influences (friend and family smoking).
[b]Measures of association: **AOR** = adjusted odds ratio; **ARR** = adjusted relative risk.

Figure 5.12 Summary and meta-analysis of studies on the association between exposure to movie smoking and smoking among adolescents and young adults

Studies	Point Estimate (95% Confidence Interval)	Study Design/ Association Measure	Exposure/ Outcome Assessed
Smoking onset: Cross-sectional			
1. Sargent, Beach et al. 2001	2.5 (1.7–3.5)	crosssectional/adjusted odds ratio	early adolescents/early adolescents
2. Sargent, Beach et al. 2005	2.6 (1.7–4.1)	crosssectional/adjusted odds ratio	early adolescents/early adolescents
3. Hanewinkel and Sargent 2007	2.2 (1.8–2.8)	crosssectional/adjusted odds ratio	early adolescents/early adolescents
4. Thrasher, Jackson et al. 2008	2.3 (1.5–3.6)	crosssectional/adjusted odds ratio	early adolescents/early adolescents
Pooled estimate: Studies 1–4	2.3 (1.9–2.7)		
Smoking onset: Longitudinal			
5. Dalton, Sargent et al. 2003	2.7 (1.7–4.2)	longitudinal/adjusted relative risk	early adolescents/early adolescents
6. Jackson, Brown et al. 2007	2.7 (1.1–6.6)	longitudinal/adjusted odds ratio	early adolescents/early adolescents
7. Hanewinkel and Sargent 2008	2.0 (1.5–2.4)	longitudinal/adjusted relative risk	early adolescents/early adolescents
8. Titus-Ernstoff, Dalton et al. 2008	1.8 (1.2–2.7)	longitudinal/adjusted relative risk	late elementary school/early adolescents
9. Thrasher and Sargent 2009	1.4 (0.9–2.1)	longitudinal/adjusted odds ratio	early adolescents/early adolescents
10. Wilkinson and Spitz 2009	1.2 (1.0–1.4)	longitudinal/adjusted odds ratio	early adolescents/early adolescents
Pooled estimate: Studies 5–10	1.7 (1.3–2.4)		
Current or established smoking			
11. Hanewinkel and Sargent 2007	2.0 (1.3–3.1)	crosssectional/adjusted odds ratio	early adolescents/early adolescents
12. Thrasher, Jackson et al. 2008	2.7 (1.5–4.7)	crosssectional/adjusted odds ratio	early adolescents/early adolescents
13. Thrasher and Sargent 2010	2.2 (1.2–4.2)	longitudinal/adjusted odds ratio	early adolescents/young adults
14. Sargent, Stoolmiller et al. 2007	2.0 (1.0–4.1)	longitudinal/adjusted hazard ratio	young adults/young adults
15. Song, Ling et al. 2007	1.7 (1.2–2.6)	crosssectional/adjusted odds ratio	young adults/young adults
16. Hunt, Sweeting et al. 2008	1.0 (0.6–1.5)	crosssectional/adjusted odds ratio	early adolescents/young adults
17. Dalton, Beach et al. 2009	2.0 (1.4–3.0)	longitudinal/adjusted relative risk	early adolescents/early adolescents
Pooled estimate: Studies 11–17	1.8 (1.4–2.3)		
Pooled estimate: Studies 1–17	1.9 (1.6–2.3)		

Note: **AHR** = adjusted hazard ratio; **AOR** = adjusted odds ratio; **ARR** = adjusted relative risk; **CC** = crosssectional; **EA** = early adolescents (aged 11–15 years); **L** = longitudinal; **LE** = late elementary school (aged 7–10 years); **YA** = young adults (aged 18–25 years).

Figure 5.14 Summary of results for studies on the association between parental movie restrictions and smoking among early adolescents

Studies	Adjusted Odds Ratio (95% Confidence Interval)	Study Design	Outcome
Dalton, Ahrens et al. 2002	3.4 (1.9–5.3)	cross-sectional	tried smoking
Thompson and Gunther 2007	3.3 (2.3–4.6)	cross-sectional	susceptibility to smoking among never smokers
Thompson and Gunther 2007	2.5 (1.7–3.7)	cross-sectional	tried smoking
Dalton, Adachi-Mejia et al. 2006	1.9 (1.4–2.4)	cross-sectional	susceptibility to smoking among never smokers
Sargent, Beach et al. 2004	2.8 (1.6–4.7)	longitudinal	tried smoking
Hanewinkel, Morgenstern et al. 2008	1.9 (1.3–2.7)	longitudinal	tried smoking
Hanewinkel, Morgenstern et al. 2008	2.9 (1.8–4.7)	longitudinal	tried smoking and binge drinking

Note: **CC** = cross-sectional; **L** = longitudinal; **S** = susceptibility to smoking among never smokers; **S&D** = tried smoking and binge drinking; **TS** = tried smoking.

Federal Trade Commission Protecting America's Consumers

For Release: 12/19/2012

FTC Strengthens Kids' Privacy, Gives Parents Greater Control Over Their Information By Amending Children's Online Privacy Protection Rule

Rule Being Modified to Keep Up with Changing Technology

The Federal Trade Commission adopted final amendments to the Children's Online Privacy Protection Rule that strengthen kids' privacy protections and give parents greater control over the personal information that websites and online services may collect from children under 13.

The FTC initiated a review in 2010 to ensure that the COPPA Rule keeps up with evolving technology and changes in the way children use and access the Internet, including the increased use of mobile devices and social networking. The updates to the COPPA Rule reflect careful consideration of the entire record of the rulemaking, which included a public roundtable and several rounds of public comments sought by the agency.

"The Commission takes seriously its mandate to protect children's online privacy in this ever-changing technological landscape," said FTC Chairman Jon Leibowitz. "I am confident that the amendments to the COPPA Rule strike the right balance between protecting innovation that will provide rich and engaging content for children, and ensuring that parents are informed and involved in their children's online activities."

The final amendments:

- modify the list of "personal information" that cannot be collected without parental notice and consent, clarifying that this category includes geolocation information, photographs, and videos;
- offer companies a streamlined, voluntary and transparent approval process for new ways of getting parental consent;

- close a loophole that allowed kid-directed apps and websites to permit third parties to collect personal information from children through plug-ins without parental notice and consent;
- extend coverage in some of those cases so that the third parties doing the additional collection also have to comply with COPPA;
- extend the COPPA Rule to cover persistent identifiers that can recognize users over time and across different websites or online services, such as IP addresses and mobile device IDs;
- strengthen data security protections by requiring that covered website operators and online service providers take reasonable steps to release children's personal information only to companies that are capable of keeping it secure and confidential;
- require that covered website operators adopt reasonable procedures for data retention and deletion; and
- strengthen the FTC's oversight of self-regulatory safe harbor programs.

The COPPA Rule was mandated when Congress passed the Children's Online Privacy Protection Act of 1998. It requires that operators of websites or online services that are either directed to children under 13 or have actual knowledge that they are collecting personal information from children under 13 give notice to parents and get their verifiable consent before collecting, using, or disclosing such personal information, and keep secure the information they collect from children. It also prohibits them from conditioning children's participation in activities on the collection of more personal information than is reasonably necessary for them to participate. The Rule contains a "safe harbor" provision that allows industry groups or others to seek FTC approval of self-regulatory guidelines.

Definitions

The Final Rule includes these modified definitions:

- The definition of an *operator* has been updated to make clear that the Rule covers a child-directed site or service that integrates outside services, such as plug-ins or advertising networks, that collect personal information from its visitors. This definition does not extend liability to platforms, such as Google Play or the App Store, when such platforms merely offer the public access to child-directed apps.
- The definition of a *website or online service directed to children* is expanded to include plug-ins or ad networks that have actual knowledge that they are collecting personal information through a child-directed website or online service. In addition, in contrast to sites and services whose primary target audience is children, and who must presume all users are children, sites and services that target children only as a secondary audience or to a lesser degree may differentiate among users, and will be required to provide notice and obtain parental consent only for those users who identify themselves as being younger than 13.
- The definition of *personal information* now also includes geolocation information, as well as photos, videos, and audio files that contain a child's image or voice.
- The definition of *personal information* requiring parental notice and consent before collection now includes "persistent identifiers" that can be used to recognize users over

time and across different websites or online services. However, no parental notice and consent is required when an operator collects a persistent identifier for the sole purpose of supporting the website or online service's internal operations, such as contextual advertising, frequency capping, legal compliance, site analysis, and network communications. Without parental consent, such information may never be used or disclosed to contact a specific individual, including through behavioral advertising, to amass a profile on a specific individual, or for any other purpose. The final amended Rule also adds a process allowing industry to seek formal approval to add permitted activities to the definition of *support for internal operations.*

- The definition of *collection* of personal information has been changed so that operators may allow children to participate in interactive communities without parental consent, so long as the operators take reasonable measures to delete all or virtually all children's personal information before it is made public.

Parental Notice

The amended Final Rule revises the parental notice provisions to help ensure that operators' privacy policies, and the direct notices they must give parents before collecting children's personal information, are concise and timely.

Parental Consent Mechanisms

The amendments add several new methods that operators can use to obtain verifiable parental consent: electronic scans of signed parental consent forms; video-conferencing; use of government-issued identification; and alternative payment systems, such as debit cards and electronic payment systems, provided they meet certain criteria.

The FTC considered numerous comments on the "sliding-scale mechanism of parental consent," otherwise known as "email plus." Under this method, operators that collect children's personal information for internal use only may obtain verifiable parental consent with an e-mail from the parent, as long as the operator confirms consent by sending a delayed e-mail confirmation to the parent, or calling or sending a letter to the parent. After considering the comments on "email plus," the FTC concluded that it remains a valued and cost-effective consent mechanism for certain operators. The Final Rule retains email plus as an acceptable consent method for operators that collect personal information only for *internal* use.

To encourage the development of new consent methods, the Commission establishes a voluntary 120-day notice and comment process so parties can seek approval of a particular consent method. Operators participating in a Commission-approved safe-harbor program may use any consent method approved by the program.

Confidentiality and Security Requirements

The amended Final Rule requires operators to take reasonable steps to make sure that children's personal information is released only to service providers and third parties that are capable of maintaining the confidentiality, security, and integrity of such information, and who assure that

they will do so. The Rule also requires operators to retain children's personal information for only as long as is reasonably necessary, and to protect against unauthorized access or use while the information is being disposed of.

Safe Harbors

The FTC seeks to strengthen its oversight of the approved self-regulatory "safe harbor programs" by requiring them to audit their members and report annually to the Commission the aggregated results of those audits.

The Commission vote to issue the amended Final Rule was 3-1-1, with Commissioner J. Thomas Rosch abstaining. Commissioner Maureen Ohlhausen voted no and issued a dissenting statement on the ground that she believes a core provision of the amendments exceeds the scope of the authority granted by Congress in COPPA. She stated that, regardless of policy justifications, she cannot support extending COPPA's statutory definition of "operator" to impose obligations on websites or online services that do not collect personal information from children or have access to or control of such information collected by a third-party.

The final amended Rule will be published in a notice in the Federal Register. The amendments to the Final Rule will go into effect on July 1, 2013.

FTC Chairman Jon Leibowitz announces final amendments to the Children's Online Privacy Protection Rule at a press conference hosted by Senate Commerce Committee Chairman John D. Rockefeller (D-West Virginia) at the Russell Senate Office Building in Washington, DC, on Dec. 19, 2012. From left to right: Rep. Edward Markey (D- Massachusetts), Chairman Leibowitz, Senator Rockefeller.

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STAFF CONTACT:
Phyllis H. Marcus or Mamie Kresses
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Related Items:

16 C.F.R. Part 312: Children's Online Privacy Protection Rule: Final Rule Amendments – Consistent With the Requirements of the Children's Online Privacy Protection Act – To Clarify the Scope of the Rule and Strengthen Its Protections For Children's Personal Information

- Text of the Federal Register Notice
- Statement of FTC Chairman Jon Leibowitz on Updated COPPA Rule (as prepared for delivery)
- Dissenting Statement of Commissioner Ohlhausen

For Businesses:

- FTC's revised COPPA Rule: Five need-to-know changes for your business
- Children's Privacy

For Consumers:

Blog Post: Kids' Online Privacy: The Next Generation

Press Conference at Russell Senate Office Building (archived webcast)

Transcript of FTC #COPPA Twitter Chat

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Last Modified: Wednesday, January 23, 2013