

FROM TOBACCO ROAD TO TINSEL TOWN:  
ASSESSING THE CONTEXT OF SMOKING IN  
MOVIES IN TERMS OF SOCIAL  
MODELING IMPLICATIONS

By

KENNETH C. KOCH

Bachelor of Science in Broadcasting/Film

University of Tulsa

Tulsa, Oklahoma

1978

Submitted to the Faculty of the  
Graduate College of the  
Oklahoma State University  
in partial fulfillment of  
the requirements for  
the Degree of  
MASTER OF SCIENCE  
July, 2011

FROM TOBACCO ROAD TO TINSEL TOWN:  
ASSESSING THE CONTEXT OF SMOKING  
IN MOVIES IN TERMS OF SOCIAL  
MODELING IMPLICATIONS

Thesis Approved:

Dr. John McGuire

---

Thesis Adviser

Dr. Jami Fullerton

---

Dr. Bobbikay Lewis

---

Dr. Mark E. Payton

Dean of the Graduate College

## ACKNOWLEDGEMENTS

I would like to thank my wife, family and friends for providing the encouragement that was integral to my completing this work in the face of competing priorities and pressures. It would have been easy to give up along the way, but knowing of their support gave me the conviction to press on.

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION .....	1
Background .....	2
Adolescent Smoking .....	2
Role of Media .....	3
Significance of Study .....	5
Summary .....	7
II. LITERATURE REVIEW .....	8
Social Expectations and Modeling .....	8
Product Demonstration .....	11
Popular Media and Modeling .....	12
Product Placement .....	14
Research Questions .....	17
III. METHODOLOGY .....	21
Content Analysis .....	21
Sample .....	22
Procedures .....	23
Reliability .....	25
Data Analysis .....	25

Chapter	Page
IV. FINDINGS.....	26
V. IMPLICATIONS .....	36
Summary .....	36
Discussion .....	36
Study Limitations.....	41
Future Research .....	42
REFERENCES .....	45
APPENDICES .....	52

LIST OF TABLES

Table	Page
1.....	27
2.....	27
3.....	29
4.....	31
5.....	31
6.....	31
7.....	33
8.....	33
9.....	34

## CHAPTER I

### INTRODUCTION

The leading preventable cause of death in the United States is cigarette use (Sherman & Primack, 2009). Efforts to keep people from starting cigarette use have historically been directed at adolescents. The American Cancer Society considers this effort crucial because 90% of adult smokers say they picked up the habit before age 18 (Haugen, 2005). To that end, researchers and anti-smoking activists are looking for additional means that can help limit adolescent smoking initiation.

One issue that continues to receive attention is what role the media play in adolescents deciding to start smoking. Much of that attention (and the focus of this study) is centered on movies. Adolescents (within the age group of 12-24 year-olds), makes up 22% of the total population, but disproportionately represents 27% of all moviegoers and 41% of frequent moviegoers (MPAA, 2007). The 12-24 year-old age group dominates movie attendance, equaling 48 million moviegoers yearly (MPAA). As smoking is portrayed in the movies that adolescents view, it is important to study the impact such portrayals may have on smoking initiation. This research study will examine how smoking has been portrayed in movies and how such portrayals have contributed to influencing adolescents about smoking. Content analysis will be used to inventory depictions of smoking in movies in order to better understand the potential impact of smoking in movies on adolescent behavior. Key to this study is the work of Bandura related to the *Rocky and Johnny* films, in which he found that modeling is more likely to

take place when the character exhibiting the tested behavior is rewarded for engaging in that behavior (Bandura, 1971).

## Background

### *Adolescent Smoking*

While smoking among high school students has declined from an all-time high of 36% in 1997, the rate of decline slowed after 2003 (“New CDC Survey Finds First Increase in High School Smoking Since 1997”, 2006). In 2008, 13% of teenagers smoked once a month (Brody, 2008). This reaffirmed earlier data that the downward trend had leveled out (Wahlberg, 2004). In 2009, 54% of high school students reported they had tried cigarette smoking and 16% of high schoolers had smoked a whole cigarette before the age of 13 (Sherman & Primack, 2009).

Although the number of adolescents who have begun smoking has decreased since 1997, officials still reported that more than 2,000 people under the age of 18 start smoking every day (“Preventing Tobacco Use”, 2005). It is estimated that if this pattern continues, 6.4 million of today’s adolescents will die prematurely of smoking-related diseases (“Preventing Tobacco Use”, 2005).

Fear of consequences of smoking (e.g., cancer and premature death) has been used as a tool to discourage adolescents from beginning a smoking habit. Studies have shown, though, that other forces – peer pressure, parental models and media exposure (such as ads or movie portrayals) - may override the “smoking is dangerous” theme (Evans, 1978; Evans, et al., 1981). A contributing factor may be the promotion of “light” and “low tar” cigarettes by the tobacco industry, which could be interpreted by



consumers as “safer” cigarettes, even though no evidence exists that such cigarettes deliver less tar (Wakefield, Flay, Nichter, & Giovino, 2003).

As adolescents grow older, medical expenditures attributed to smoking will begin to accumulate. Currently, those costs total more than \$75 billion per year for all smokers in the U.S. Fourteen percent of all Medicaid expenditures are for smoking-related illnesses (“Preventing Tobacco Use”, 2005). Additionally, lost productivity due to smoking costs the U.S. an estimated \$92 billion per year (“Preventing Tobacco Use”, 2005). The most effective way of cutting these costs is to reduce the number of smokers. Given that 80% of adults who smoke began before they were 18, dissuading adolescents from taking up the habit could significantly affect costs associated with lost productivity (“Preventing Tobacco Use”).

### *Role of Media*

As early as the 1930s, there have been concerns about the effect motion pictures have on children. The Payne Fund studies underwrote, among others, the work of Charters who, in 1933’s *Motion Pictures and Youth*, explained that “... the motion picture situation is very complicated. It is one among many influences which mold the experience of children” (p. 61). Charters’ work aligned with that of other members of his research group, which generally acknowledged that movies were influential but took care when drawing conclusions (Jarvis, 1991).

The tobacco industry spends more than \$12.4 billion per year marketing its products in the U.S. (Tobacco Ad Gallery, 2009). A large component of this activity is contained in print media and follows specific guidelines that have been set out by federal officials. In 1972, a movie producer noted in his letter soliciting payment by a tobacco

company for product placement that “Film is better than any commercial that has been run on television or in any magazine, because the audience is totally unaware of any sponsor involvement” (Smoke Free Movies, para. 1). This underscores the fact that while specific product placement of tobacco products in movies has been outlawed, there are no regulations about tobacco use that may result from creative and directorial decisions.

The Motion Picture Association of America (MPAA) revised its rating system in May 2007 to factor in smoking portrayals. The revised system takes into account (a)the pervasiveness of smoking (although the system does not define what constitutes pervasiveness), (b)whether smoking is glamorized or not through on-screen portrayals, and (c)the context (historical or not) in which smoking occurs as part of determining a movie’s rating (MPAA, 2007). The change in the rating system does acknowledge the issue of adolescent initiation of smoking. "There is broad awareness of smoking as a unique public health concern due to nicotine's highly addictive nature, and no parent wants their child to take up the habit," stated Dan Glickman, MPAA chair and CEO (Hitti, 2007, para. 4). Critics, though, contend that the revised system does not go far enough. Dr. Cheryl Heaton, president of the American Legacy Foundation, said “It’s an anemic response” (Cieply, 2007, para. 6). “I’m glad it’s finally an issue they’re taking up, but what they’re proposing does not go far enough and is not going to make a difference,” said Kori Titus, spokeswoman for Breathe California, which opposes film images of tobacco use that might encourage young people to start smoking (“MPAA Makes Smoking”, 2007, para. 6). Anti-smoking groups continue to lobby for tougher regulations in terms of the MPAA rating system and smoking portrayals.

The MPAA change did not go as far as guidelines envisioned by critics in earlier efforts calling for the introduction of regulations that would mandate movies featuring tobacco usage be given an “R” rating, just as they would if they exhibited violence, adult language or sexual themes (“Rate smoking movies “R”, 2004). While movie industry critics have repeatedly stated that movies depicting tobaccos usage are hazardous to the health of adolescents, Hollywood executives have expressed concerns about censorship (Dutka, 1996).

### Significance of Study

Several justifications can be offered for a study of how smoking behaviors are portrayed in modern movies. The first justification is that the study will provide a foundational inventory of smoking behaviors as portrayed in recent movies. It is not enough to merely count how many times actors light up on screen. There are a myriad of reasons why adolescents make the decision to begin smoking (or decide not to begin) that have been categorized. To better understand possible influences of cinematic tobacco use on adolescent smoking, it is necessary to examine (and categorize) smoking incidents in movies.

A second justification of this study is that it will contribute to the body of research that will be necessary if further regulatory restrictions on movies are pursued. The study will provide data integral to the debate over whether movies should receive an “R” rating if they contain smoking behaviors by assessing what the prevalence is of those behaviors. By establishing a clearly defined, quantified method of analyzing movies and then amassing the data, the study will help move the argument from an emotional basis to a scientific one.

A third justification of this study is the contribution it could make in the area of smoking-related illnesses. If the study fosters an understanding of the possible connection between smoking in movies and the initiation of smoking by adolescents and, in turn, provokes new regulations that may reduce the number of new smokers, the impact on smoking-related illnesses could be significant.

A fourth justification is the examination, through comparison, of whether there was a measurable difference in the amount of smoking behaviors that were depicted in movies before the MPAA's 2007 policy change and after. Since it is not the case that smoking behaviors earn a movie an automatic "R" rating (which would likely be a major deterrent), then it would be meaningful to understand how many movies still contained depictions of smoking after the 2007 policy change. This topic would also consider the notion that pre-2007 movies are still readily available to adolescent viewers through either rental outlets or in-home media outlets.

Finally, the study will shine a light on the portrayal of smoking in movies that may serve to further enlighten the motion picture industry. The study will provide a realistic assessment of such portrayals' roles in smoking initiation to those who may be too close to the subject to see its real impact or size. By examining the industry's smoking portrayals, this study may serve as the next step in movie producers and directors reassessing creative decisions in terms of potential social consequences. This study will provide a fact-based appraisal, absent the arguments of censorship and creative control that have colored discussions of smoking in movies up to now.

## Summary

Following on this chapter's introductory material, the literature review in Chapter 2 will provide a review of previous work relevant to the topic, including (a) content analysis of movies, (b) the general concept of product placement along with specific research concerning product placement related to tobacco and smoking, and (c) adolescent demographics and psychographics and how they shape marketing directed at adolescents. The theoretical frameworks of social learning theory and social modeling will be examined, along with reviews of classic studies performed in those areas being discussed in terms of their impact and applicability to smoking initiation. Chapter 3 will define and discuss the methodology that will be employed in the study, which will be a content analysis of leading movies, coding them in regards to the portrayal of smoking behaviors. Chapter 4 will discuss the findings of the study, detailing the coding results in relation to the research questions. Chapter 5 will discuss the implications of the findings in terms of their significance in the overall discussion of smoking in movies and social modeling. This will include limitations of the study and suggestions for future research.

## CHAPTER II

### LITERATURE REVIEW

This chapter will examine previous work that has been done in topics related to this study, including (a) social expectations and modeling, (b) factors effecting smoking onset and adolescent smoking behavior, and (c) portrayals of tobacco products in media, including a discussion of product placement.

#### Social Expectations and Modeling

A theory germane to this study is that of social expectations. DeFleur (as cited by Lowery & DeFleur, 1995) advanced the concept of social expectations which embodied the premise that television viewers of all kinds learned the patterns of social organization of all kinds of groups – their norms, roles, ranking systems, and social controls – even if they have never been members or never will be. Duran and Prusank (1997) examined social expectations as they studied the notion that individuals may turn to media sources for information on how to behave in terms of societal norms and expectations.

It would be reasonable to ascribe this same idea to moviegoers and further suggest that the prevalence of products and their usage in a movie could be part and parcel of the pattern of social organization (i.e., everyone in the movies smokes so that must be how the world is). Studies have shown that the incidence of smoking in movies may be related to a finding that adolescents highly at risk of becoming smokers grossly overestimate the actual extent of smoking among their peers (Chassin, Presson, Sherman, Corty & Olshavsky, 1984). This overestimation also relates to the previous concept of

shaping the pattern of social organization and the study explored the concept that smoking prevention programs needed to be more attuned to the characteristics of the adolescents at risk of smoking.

Another study showed that adolescents with high exposure to smoking in movies are about three times as likely to try smoking as those with limited exposure (Heatherton & Sargent, 2009). In that study, the authors set out the argument that "... media also have a profound impact on the adolescent self-concept: They shape views of what is 'cool,' what is attractive, and what is grown-up—all things that adolescents are trying to be" (p. 63). The authors went on to extend the argument to the notion that media can also affect other behaviors, including the initiation of smoking.

Similarly, it has been shown that the presence of smoking in movies can be seen as a cue that smoking is appropriate and can actually increase smoking among smokers (Lochbuehler, Peters, Scholte & Engels, 2010). The study showed that those already pre-disposed to smoking would smoke more, immediately after seeing smoking behaviors in movies. Multiple studies identified smoking in movies as one of the causes for an increase in the prevalence of smoking among adolescents (Dalton et al., 2003, Distefan, Pierce & Gilpin, 2004, Charlsworth & Glantz, 2005).

Another theory to be examined in the context of tobacco appearances is that of modeling. Bandura's work on modeling is relevant to the persuasion of media audiences (as cited in Balasubramanian, 1994). Where social learning theory posits that people learn through observations of others in their environments, modeling goes further to say that people acquire behaviors through observation, particularly through consumption of media (Balasubramanian, 1994).

Early research done on modeling focused on exposure to aggressive behavior and how such exposure affects children (Bandura, 1971). In the *Rocky and Johnny* films study, Bandura observed that children who had witnessed aggressive behavior being rewarded tended to imitate that behavior when given the opportunity. Children who had witnessed aggressive behavior being punished, however, did not imitate that behavior. Ultimately, though, when subjects were offered rewards for reproducing the aggressive acts, all groups showed a high and uniform degree of learning (Bandura, 1971). Similarly, the work of Liebert, Neale and Davidson (1973) provided evidence that children can and do imitate aggression they see on television.

The connection to the initiation of the use of tobacco products could be that the viewing of smoking behaviors which are perceived as being desirable (e.g., cool, sexy, or positive) will increase the likelihood of those behaviors being acquired by moviegoers. Conversely, following Bandura, it might be that witnessing “bad guys” exhibiting undesirable smoking behaviors (e.g., uncool, unsexy and negative) could serve as a deterrent. A study that examined the use of social modeling films to deter smoking in adolescents showed that junior high school students exposed to anti-smoking films smoked less frequently, intended to smoke less frequently and had gained knowledge from the films that related to their smoking behavior and intentions (Evans et al., 1981). The same study suggested that, for adolescents, factors including models who smoke (e.g., parents and relatives) and portrayals in mass media channels have the ability to override the belief of adolescents that smoking is dangerous. It could be argued that the delivery of the opposite message (that smoking is desirable) could also occur through tobacco appearances in movies and would likely achieve similar results.



A related study (Smith, Twum & Gielen, 2009) examined whether news coverage of harmful behavior (excessive use of alcohol) among celebrities might present a teachable moment that would deter drinking that lead to driving under the influence incidents. The authors suggested that their results indicated that, instead, the media coverage served to provide “normalizing” messages that conveyed that the behavior of these role models was appropriate. Another study of alcohol-related content in young adults’ magazines found, however, that coverage serves to normalize drinking and to construct women who drink as ‘professional, glamorous, good looking, competent and sophisticated’ (Lyons et al., 2006).

#### *Product Demonstration*

Demonstrations of products that use models (or actors in the case of movies) can facilitate learning, even more so when there are portrayals of positive consequences following the product use (Balasubramanian, 1994). A correlation has been shown between increased tobacco use and increased recognition of cigarette brands by high school students (Goldstein, Fisher, Richards, & Creten, 1987). Kelman (1958) reported audiences strive to identify with the model and the message they are delivering. He described this process of identification, suggesting “. . . the individual accepts influence because he wants to establish or maintain a satisfying, self-defining relationship to another person or a group . . . the individual actually believes in the responses which he adopts through identification . . . he adopts the induced behavior because it is associated with the desired relationship” (p. 53) This described relationship is similar to the premise that adolescents who want to identify with actors in a movie will imitate those actors, perhaps by smoking. In addressing the effect smoking portrayals in movies might have,

Chapman and Davis (1997), referencing that the appearance of a cigarette in a movie does not mean just one thing, said that “. . . depending on context and character, cigarettes can be used to signify a wide range of meanings, some which might actually promote negative associations with smoking.” (p. 270). In terms of this study, it is important to recognize the context in which smoking occurs as it relates to social modeling and factors that influence the adolescent’s decision to begin smoking or not.

### *Popular Media and Modeling*

While other work has been done that examined topics such as the use of tobacco by actresses currently in vogue (Escamilla, Cradock, & Kawachi, 2000) or the appearance of tobacco in PG-13 movies (Hazan, Lipton, & Glantz, 1994), there has been no research that has cataloged and measured factors that related to social modeling. There have been studies that examined adolescents’ perceptions and views of smokers. McKennell and Bynner (1969) asked adolescent boys for descriptions of their personal ideal image, along with descriptions of the kinds of boys who were smokers and nonsmokers. Boys who were smokers were more often described as being tough and adult-like, masculine characteristics that might be considered social assets. Similar findings were reported in a study that asked adolescents to rate photographs of same-age smoking models. Smokers were characterized as having toughness and being of interest to the opposite sex (Barton, Chassin, Presson, & Sherman, 1982).

Botvin, Botvin, and Baker (1983) found that eighth-grade students were likely to perceive smokers as “cool,” “tough,” more attractive to the opposite sex and having more fun and friends. Continuing research has shown that adolescents who think of themselves

as being brave, cool and tough and see smokers as having those same character traits are more likely to smoke (Aloise-Young, Hennigan, & Graham, 1996).

Pechmann & Shih (1999) conducted a study where ninth-grade students were shown the same movie, but one test group saw a version with smoking scenes intact while the other group saw a version in which the smoking scenes had been edited out. Students who viewed the smoking scenes were (a) more likely to indicate that they might smoke and (b) more likely to associate smokers as being smarter, more successful, more fit and more athletic. Follow-up research with unedited movies showed that smoking was twice as likely to begin with those whose self-image lined up most closely with the smokers in movies and that smoking was more likely to continue for those who had already experimented with smoking (Goldberg, 2003). These findings suggested a developmental shift in smoking attitudes over time, since sixth-grade students once perceived smokers as “uptight,” “show-offs,” and as “looking stupid” (Botvin, Botvin, Michela, Baker & Filazzola, 1983).

If the premise that the appearance of tobacco products in movies can be considered advertising per se, then the effect upon shaping adolescent smoking behaviors is worth noting. Research supported the argument that students in the initial stages of the smoking onset process were selectively attending to cigarette advertisements (Botvin, Botvin, Michela, & Filazzola, 1991). The connections between adolescent perceptions of smoking and the portrayals seen in movies suggest that a thorough review of the frequency with which the portrayals appear (and in what context) will serve as a needed foundation for future research.

## Product Placement

The use of cigarettes by characters appearing in movies is a common form of product placement. The concept of product placement is fairly straightforward: Manufacturers strive to have their products appear in movies and television shows. One definition of product placement stated that it is “a paid product message aimed at influencing movie (or television) audiences via the planned and unobtrusive entry of a branded product into a movie (or television program)” (Balasubramanian, 1994, p.30). Another definition stated product placement “is the compensated inclusion of branded products or brand identifiers, through audio and/or visual means, within mass media programming” (Karrh, 1998, p. 33). In both definitions, placement is regarded as being the result of planned and compensated appearances of products.

Some of the earliest product placement activities involved cigarette firms working to influence Hollywood in the 1920s, with the anticipated result of actors and actresses smoking in movies (Schudson, 1984). It was not until the late 1970s, though, that product placement was seen as a well organized or a high-profile growth area within advertising (“Robert Kovolov,” 1986). Up to this point, product placement was largely considered a by-product of public relations initiatives intended to loan products for use in movie production, rather than paying movie producers to feature products (Balasubramanian, 1994). Among issues examined were whether smoking in movies could be justified for artistic or creative reasons or if it was an accurate portrayal of the real world. These issues were not concerned with whether a specific tobacco brand was obvious in a scene, but with the mere appearance of smoking behaviors at all.

Referring to the question of whether movie directors should prevent smoking portrayals in their work, noted director Joel Schumacher commented that, “(a famous actor) is a role model and, as filmmakers, we have a responsibility. Even more so in child-oriented movies . . .” (Dutka, 1996, p. F1). As to whether smoking in movies reflected the real world, one study showed that the occurrence of smoking in movies from 1960 to 1990 was nearly three times that reported in actual population data (Hazan, Lipton & Glantz, 1994). Congress mandated “After January 1, 1971, it shall be unlawful to advertise cigarettes and little cigars on any medium of electronic communications subject to the jurisdiction of the Federal Communications Commission” (Legal Information Institute, 2011, p. 1). Clearly, however, the new law had no effect on motion pictures.

In the 1980s, however, manufacturers (or firms working on their behalf) began to make payments, which were often substantial, in order to have movie producers give products favorable exposure in movies (Miller, 1990). In 1983, tobacco company Brown and Williamson agreed to pay Sylvester Stallone \$500,000 in exchange for his use of their cigarette products in five movies in which Stallone would be starring (Ripslinger, 1983). Product placement continued to grow, with an estimated \$50 million being spent in 1991 on product placements of all kinds (Elliott, 1992). Further research showed that such growth continued even after a voluntary ban on product placement of tobacco products in movies in 1988 (Sapolsky & Kinney, 1994; Stockwell & Glantz, 1997; Egan, 2001).

One study examined whether the use of product placement for tobacco products in movies that ultimately aired on television was designed to circumvent prohibitions

against cigarette advertising on television. Expenditures like those of the magnitude of the \$350,000 paid by Philip Morris for exposure of Lark cigarettes in the movie *License to Kill* made it clear that product placement was a definite force in the movie production arena and that products associated with the technique stood to gain from its use. (Balasubramanian, 1994).

Several academic studies have suggested that product placement, while not being as overt as more traditional advertising methods, had the potential to be a factor in the choosing behaviors of viewers who, ultimately, were consumers. DeLorme and Reid (1999) examined how product placement interacted with moviegoers' perspectives and the significance achieved by the brands displayed. Moviegoers indicated they had a stronger relationship with characters that used "their brands." Other researchers employed content analysis to determine that the mean number of product placements embedded in movies for the benefit of national brands was 14 (Sapolsky & Kinney, 1994). Karrh (1994) conducted a study to gauge the effectiveness that product placement had on brand awareness and whether there was a long-term effect, finding a positive impact on the memorability of a brand relative to other brands in the product category. A similar study looked at the effect product placement had on movie audiences and the reasoning behind the use of the technique (Vollmers & Mizerski, 1994). In a follow-up study in 1999, DeLorme and Reid analyzed how moviegoers interpreted product placement occurrences in relation to their own lives, noting that the effects included an enhanced realism and an increased ability to be able to relate to the character, both of which aided in the viewer identifying with the character.

A trend has been documented upon examining the appearance of smoking behaviors in movies, whether through paid placement or not,. In the decade preceding 1997, tobacco was used once every 3-5 minutes in sampled movies as compared to once every 10-15 minutes in the prior two decades (Stockwell & Glantz, 1997).

Cumulatively, research showed that there had definitely been an increase in product placement since the federally mandated television advertising ban (Miller, 1990; Elliott, 1992). Essentially, it had been shown that the appearance of tobacco products in movies had increased since the 1971 mandated ban and the voluntary ban of 1988. Product placement has been taking place for many years and does not show any signs of slowing, according to the research cited earlier.

While there has been considerable research in the areas of smoking frequency and tobacco product placement in movies, the analysis needed to assess smoking behaviors in movies and their influence on smoking onset by adolescents has not been done. By assessing and cataloging different factors which affect the onset of smoking that appear in movies, this study will provide further input that may prove useful in determining the impact smoking portrayals have on smoking onset. The availability of that data could prove to be important in the ongoing debate of whether movies should be more strictly regulated for smoking behaviors. This study will supply that data.

### Research Questions

The literature review shows that considerable research has been done in different topic areas relevant to this study including (a) factors that affect an adolescent's decision to begin smoking, (b) social modeling as it applies to the relative importance of those factors, (c) the impact of movies on social modeling forces, (d) frequency of smoking in

movies, (e) trending of frequency, and (f) demand for further governmental regulation of smoking in movies. Much of the research done in the area of tobacco displayed in mass media content as a result of product placement has been quantitative, (e.g., how many incidents of smoking in movies and how many minutes of on-screen showed tobacco products). What has not been studied, though, is the ways in which smoking behaviors appear in recent, top-grossing popular films. What remains to be done is connecting these different topics in order to provide an assessment of, not only the frequency of smoking in movies but, the context and landscape in which the smoking occurs as they relate to social modeling and the onset of smoking.

To provide that connection, the study will answer the following question:

RQ1: What is the frequency of smoking portrayals in the top-grossing American movies between 2004 and 2008?

Considering Bandura's findings (1971) that witnessing aggressive behavior being rewarded prompted children to imitate that behavior, while witnessing aggressive behavior being punished deterred imitation of the behavior, and further associating reward with the "good guy" and punishment with the "bad guy," the following questions are posed:

RQ2a: How often is smoking portrayed by a good guy character in the top-grossing American movies between 2004 and 2008?

RQ2b: How often is smoking portrayed by a bad guy character in the top-grossing American movies between 2004 and 2008?

Balasubramanian (1994) showed that the portrayal of positive consequences following product use facilitated learning through demonstration of products. Considering the use



of tobacco products by a character in a movie as a demonstration, the following questions are posed:

RQ3a: How often is smoking portrayed as a positive event in the top-grossing American movies between 2004 and 2008?

RQ3b: How often is smoking portrayed as a negative event in the top-grossing American movies between 2004 and 2008?

Botvin, Botvin and Baker (1983) found that eighth-grade students perceived smokers as being more attractive to the opposite sex, having more fun with friends and being tough in difficult situations. These characteristics relate to the context of smoking appearances in movies. Thus, the following research questions are posed:

RQ4a: How often is smoking portrayed in a social situation in the top-grossing American movies between 2004 and 2008?

RQ4b: How often is smoking portrayed in a sexual situation in the top-grossing American movies between 2004 and 2008?

Goldberg's work (2003) determined that smoking was twice as likely to begin with those whose self-image (and demographic profile) lined up most closely with the smokers in movies. It would be useful, then, to pose the following questions:

RQ5a: What are the genders of the characters portraying smoking behaviors in the top-grossing American movies between 2004 and 2008?

RQ5b: What are the ethnicities of the characters portraying smoking behaviors in the top-grossing American movies between 2004 and 2008?

RQ5c: Are the characters portraying smoking behaviors in the top-grossing movies American movies between 2004 and 2008 members of the 12-24 age group (which includes adolescents) that dominates movie attendance?

Botvin, Botvin, Michela, Baker and Filazzola (1983) reported a shift, over time, among adolescents whose perceptions of smoking went from being positive to being negative. If the outcomes of characters are related to their smoking behaviors, it is reasonable to pose the following questions:

RQ6a: Would the ultimate outcome of the smoker be characterized as positive in the top-grossing American movies between 2004 and 2008?

RQ6b: Would the ultimate outcome of the smoker be characterized as negative in the top-grossing American movies between 2004 and 2008?

Pechmann and Shih (1999) reported a tendency among adolescents to perceive smokers in movies as being smarter and more successful, thus equating success with socioeconomic status.

RQ7a: How often is smoking portrayed by a character of higher social or socioeconomic status in the top-grossing American movies between 2004 and 2008?

RQ7b: How often is smoking portrayed by a character of lower social or socioeconomic status in the top-grossing American movies between 2004 and 2008?

### CHAPTER III

#### METHODOLOGY

The study utilizes content analysis to examine top-grossing American movies as a means to quantify smoking behaviors depicted in these movies. In addition to coding for frequency of smoking behaviors, the study also analyzes the context in which they occur. The specific focus is on factors that may contribute to adolescents starting to smoke.

The first section of this chapter discusses content analysis, what it is, studies that have employed it and why it is the appropriate methodology for this study. The second section details procedures followed in conducting the content analysis.

##### *Content Analysis*

As researchers have examined the effects of mass communications, one of the methods that has been established as a vital tool in understanding those effects has been content analysis (Riffe, Lacy & Fico, 1998, p. 3). Krippendorff's (1980) definition of content analysis focused on reliability and validity, stating "content analysis is a research technique for making replicative and valid inferences from data to their context" (p. 21). As defined by Berelson (1952), "Content analysis is a research technique for the objective, systematic, and quantitative description of the manifest content of communication" (p. 18). Riffe, Lacy & Fico (1998) expanded on Berelson's definition, writing content analysis was, "The systematic assignment of communications content to categories according to rules, and the analysis of relationships involving those categories

using statistical methods” (p. 18). These systematic and context-driven natures of content analysis are particularly appropriate for an assessment of movies.

Content analysis is an appropriate research method to use in the study because it is a nonreactive measurement technique that recognizes that “messages are separate and apart from communicators and receivers (Riffe et al, 1998, p. 30). In addition, content analysis allows large amounts of data to be reduced to numbers, while still retaining distinctive information (Riffe et al, 1998). In this instance, the method will distill data from more than 100 hours of content into a manageable set of results.

Content analysis has been used extensively in mass communications studies and has become a method of choice among researchers. Of studies published in the *Journal of Broadcasting & Electronic Media (JOBEM)* in the 1950s, less than 3% of studies used content analysis. This number has steadily risen since that time: during the period from 1956 to 2001, 15.6% of JOBEM studies employed content analysis and, in 2001, more than 39% were content analyses (Dupagne, Carroll & Campbell, 2005). In the subject area of this study, tobacco in media content, content analysis has been used extensively in the research cited in this document. The early work of Hazan, Lipton and Glantz (1994) employed content analysis, as did Glantz’ later work at the Center for Tobacco Control Research and Education (Polansky & Glantz, 2004). Separate research by Sargent, Tickle, Beach, Dalton, Ahrens and Heatherton (2001) also made use of content analysis to assess smoking behaviors in movies.

### *Sample*

The top ten grossing domestic movies for the five-year period spanning 2004 to 2008 comprise the sample population. Only movies with ratings of G, PG, PG-13, or R,

as listed by [worldwideboxoffice.com](http://worldwideboxoffice.com), were included in the sample population. The G rating is used for movies intended for all audiences. A PG rating denotes that some parental guidance is suggested, while a PG-13 rating signifies that parents are strongly cautioned that some material may be inappropriate for children under 13. The R rating requires that children under the age of 17 be accompanied by a parent or adult guardian. (Use of the ratings classifications to stratify the sample will restrict the analysis to movies that would be nominally accessible to adolescents.) The movie ratings system now in use (see Appendix A) originated in 1968. It was intended as a means by which parents could receive advance information about films in order to decide what movies their children should or should not see (“Reasons for Movie Ratings,” 2005). While it could be argued that R-rated movies, by their nature, are generally off-limits for adolescent viewing in theaters and should not have been a part of this study, they are ultimately seen on television (whether via broadcast, cable and satellite) by adolescents and smoking behaviors are not typically edited out for these purposes, as are scenes with significant sex, violence and adult language. Therefore, study includes R-rated movies in order to align results with the issue of adolescent exposure to smoking behaviors.

### *Procedures*

Content analysis was used to determine the context in which tobacco products were used by movie characters. The selection of movies for analysis used a variation of the techniques developed by Sargent et al. in their 2001 study. For the purposes of this study, the sample population consists of 50 movies.

Whether a smoking event was coded depended on whether the character was determined to be a principal, supporting or minor character. The definitions developed

by Smith (1999) were used to make the determinations. A principal character is one around whom the plot centers and whose presence is essential to the story; and a supporting character is one who has a significant relationship with and active impact on some aspect of the principal character's life. Events involving these types of characters were coded. A minor character is one who has no active impact on the story and events involving this type of character were not coded.

Coding for the different contextual factors followed the work of previous studies involving content analysis of movies which included coding for variables such as, (a) good guy vs. bad guy (Escamilla et al., 2000; McIntosh et al. 2003), (b) portrayal of smoking as a positive or negative event (Stockwell & Glantz, 1997), (c) social or sexual situation (Escamilla et al., 2000; Kunkel et al., 2007), (d) smoker's gender and (e) smoker's ethnicity (Stockwell & Glantz, 1997), (f) smoker's age, (g) ultimate outcome of smoker, and (h) perceived social or socioeconomic status of smoker (Hazan & Glantz, 1995).

Good guy versus bad guy coding utilized the Goodness scale of McIntosh, Murray and Murray, which ranges from 0 for extremely immoral (e.g., mass murderer) to 10 for extremely moral or saintly (e.g., clergy member) (2003). Coding of the smoker's ultimate outcome also followed the work of McIntosh et al., by using a scale that starts at 0 (extremely negative, e.g., death) and ends at 10 (extremely positive, e.g., struck it rich and "lived happily ever after"), with a rating of 5 indicating no change in the smoker's circumstances (2003). The coding of age was based on whether the smoker was clearly of a secondary or post-secondary school age, and whether their occupation was that of someone typically older than the mid-20s. The coding of socioeconomic status used a

scale ranging from 0 (extremely poor, lower class) to 10 (extremely rich, upper class) as developed by McIntosh, et al. (2003).

Coded movies were viewed using DVD copies obtained from either a local outlet or mail order service of a national video rental chain. In all cases, the theatrical release was coded instead of any special editions (e.g., a director's cut or an unrated version).

Coders jointly viewed four movies that were not part of the sample as a training session, during which discussions were had concerning the procedures to be used. This method was used by McIntosh, Murray and Murray (2003) in their study. This activity also validated the codebook's definitions in terms of clarity about recorded incidents. An inter-coder reliability test was performed on a small sample of scenes, with 0.90 agreement found among coders. As inter-coder reliability values above 0.80 are viewed as "almost perfect" agreement, these results provided confidence in the coding of these scenes (Landis & Koch, 1977, p. 165).

### *Reliability*

By definition, intercoder reliability "is a matter of whether a particular technique, applied repeatedly to the same object, would yield the same result each time" (Babbie, 1995). As stated above, agreement was measured at 90%, which justified having each movie viewed by only one coder, as was done in Stockwell and Glantz' study involving tobacco use in movies (1997).

### *Data Analysis*

In addition to descriptive statistics, chi-square analysis was conducted on the data. Chi-square is suitable for the analysis of categorical data, which is the type of data that was gathered using content analysis in this study.

## CHAPTER IV

### FINDINGS

The purpose of this study was to inventory depictions of smoking in movies in order to better gauge the potential those depictions have to impact the initiation of adolescent smoking. Additionally, the study results will contribute to the discussion of whether the movie rating system should factor in such depictions more strongly. It should be noted that, after completing the content analysis, RQ4b, concerning sexual portrayals while smoking, was eliminated as there were no examples found.

The frequency of smoking incidents in movies has been a typical measurement. In this study, of the 50 movies in the sample, 14 (28%) had smoking incidents [see Table 1]. Some movies had more than one incident, which brought the total number of incidents to 36. Additionally, out of 6,033 minutes running time for all 50 movies, those 36 incidents accounted for six minutes of smoking or one-tenth of one percent of the total screen time.

Of the 36 smoking incidents coded, 16 (44%) involved a good guy character [see Table 2]. These characters ranged from the kindly professor in *The Tales of Narnia*, to Lois Lane in *Superman Returns* to Wolverine, playing the part of the anti-hero in *X3: X-Men – The Last Stand*. In the latter two instances, the characters knew (and tacitly acknowledged) that smoking was not good for them, mitigating the portrayal being made by a positive role model. Based on an expectation that half of the characters would be



Table 1

*Movies That Contained Smoking Incidents*

Movie Title	Number of Incidents
The Chronicles of Narnia: The Lion, The Witch, and The Wardrobe	1
Dark Knight	1
The DaVinci Code	1
Indiana Jones and the Kingdom of the Crystal Skull	2
Iron Man	4
King Kong	11
Mr. and Mrs. Smith	1
The Pursuit of Happyness	2
Quantum of Solace	1
Spider-Man 2	4
Spider-Man 3	1
Superman Returns	4
Wedding Crashers	2
X-Men 3: The Last Stand	1

Table 2

*Good Guy versus Bad Guy Portrayals*

Portrayal Type	Frequency(%)	Expected(%)
Good Guy	16(44%)	18(50%)
Bad Guy	20(56%)	18(50%)

$(\chi^2[\text{df}=1]=.44, ns)$

good guys, an insignificant difference was found ( $\chi^2[df=1]=.44$ , *ns*), indicating there was no particular bias in character type that smoked.

Bad guy characters accounted for 20 (56%) of the smoking incidents coded. These characters covered a broad spectrum. Although classified as a bad guy, the newspaper editor in *Spider-Man 2* (as well as its sequel) merely made life more unpleasant for Peter Parker, whereas a character such as Dr. Octopus was bent on destroying and killing Spider-Man (the hero), much like Lex Luthor was determined to kill Superman. With bad guys, smoking generally occurred as they were hatching their evil plans or making a grand pronouncement. Still, the difference between the numbers of portrayals of good guys and bad guys was not statistically significant.

Since the study considered social modeling factors, it was reasonable to look at whether the smoking events occurred in situations that could be considered positive or negative (RQ3a and RQ3b), as the context would color the impact on the viewer. Of the 36 recorded events, negative smoking events accounted for 26 (72%) of those recorded and included those in *Superman Returns*, *King Kong*, and *Dark Knight* during which villains or bad guys were hatching their plots [see Table 3]. Seven events (20%) were comprised of five events that mixed positive and negative elements and two events that were neutral. The remaining three (8%) were positive. These included two scenes in *The Wedding Crashers* in which Owen Wilson's and Christopher Walken's characters first meet and establish a collegial relationship over cigars. Due to overall small *n*, the researcher could not use a chi-square to determine whether there was a significant difference in how smoking events were portrayed.

Table 3

*Positive or Negative Contexts of Smoking Incidents*

Context Type	Frequency(%)	Expected(%)
Positive	3(8%)	12(33.3%)
Negative	26(72%)	12(33.3%)
Mixed/Neutral	7(20%)	12(33.3%)

RQ4a dealt with whether the smoker was in the company of others (in a social situation) or was alone. The premise was that if smoking were depicted as a solitary, anti-social activity, it would not be a desirable behavior in terms of social modeling. In 34 instances (94%), the character smoking was with other characters (but generally was the only smoker) or was smoking along with others [see Table 4]. In those instances such as in *Spider-Man 2*, the lead villain and his henchmen were smoking together. Only twice (6%), was the character smoking alone. Due to overall small  $n$ , the researcher could not use a chi-square to determine whether there was a significant difference in how smoking events were portrayed.

Since social modeling theory suggests self-identification as a factor that affects the viewer's alignment with a character, RQ5a considered the gender of the smoker. Males smoking made up 32 (89%) incidents [see Table 5]. In four instances (11%), the character smoking was a female. Since females make up 48% of the smoking population in the United States ("Cigarette smoking statistics", 2008) the low number of female smokers was not aligned with actual behaviors. Additionally, only one female character (the wife/mother in *The Pursuit of Happyness*) was coded as a bad guy. Due to overall small  $n$ , the researcher could not use a chi-square to determine whether there was a significant difference in how smoking events were portrayed.

RQ5b examined the ethnicity of smoking characters. In all but one instance, 35 (97%) smokers depicted in the movies coded were Caucasian [see Table 6]. In the one exception, the character was an African-American. In reality, Caucasians actually account for just 80% of the U.S. population, African-Americans account for 13% and other ethnicities make up the remaining 7%. Due to overall small  $n$ , the researcher could

Table 4

*Smoking in Social Situations*

Context Type	Frequency(%)	Expected(%)
Social (with others)	34(94%)	18(50%)
Alone	2(6%)	18(50%)

Table 5

*Gender of Smoker*

Gender	Frequency(%)	Expected(%)
Female	4(11%)	18(50%)
Male	32(89%)	18(50%)

Table 6

*Ethnicity of Smoker*

Ethnicity	Frequency(%)	Expected(%)
African-American	1(3%)	12(33.3%)
Caucasian	35(97%)	12(33.3%)
Other	0(0%)	12(33.3%)

The final facet of self-identification had to do with the age of the smoking character (RQ5c). Since adolescents fall into the pre-dominant movie-attending age group of 12-24 year olds, it was important to assess how many smoking incidents involved that age group. Even recorded smoking incidents involved characters of 12-24 years [see Table 7]. Due to overall small  $n$ , the researcher could not use a chi-square to determine whether there was a significant difference in how smoking events were portrayed.

Referring again to the work of Bandura, which examined the influence of reward (or punishment) for good (or bad) behavior in terms of viewer actions, RQ6a and RQ6b assessed whether smoking characters ultimately had good or bad outcomes. Of the 36 incidents of smoking, there were 20 (55%) incidents in which characters experienced negative outcomes [see Table 8], and many showed characters who experienced the ultimate negative outcome of being killed. Those characters usually were killed in very dramatic fashion, often at the hands of the good guy character. Or, as in the case of Linda, the mother character in *The Pursuit of Happyness*, her outcome was abandonment of her child and family. Not nearly as spectacular an end, but definitely very negative. There was a significant difference in the number of smoking events that were connected to negative outcomes ( $\chi^2[\text{df}=2]=8.4, p<.02$ ). Nine incidents (25%) portrayed a character who ultimately achieved success and had a positive outcome. These ranged from Wolverine (Hugh Jackman), in *X3: X-Men – The Last Stand*, defeating the villains to John Beckwith (Owen Wilson), in *Wedding Crashers*, getting the pretty girl and finding true love. The remaining seven (20%) incidents depicted a character that had no significant change in status quo.

Table 7

*Age of Smoker*

Age	Frequency(%)	Expected(%)
12-24 years	0(0%)	18(50%)
25+ years	36(100%)	18(50%)

Table 8

*Outcome of Smoker*

Outcome	Frequency(%)	Expected(%)
Positive	9(25%)	12(33.3%)
Negative	20(55%)	12(33.3%)
No Change	7(20%)	12(33.3%)

( $\chi^2$ [df=2]=8.2,  $p<.02$ )

The socio-economic status of characters was also examined, in RQ7a and 7b. In 14 (38%) incidents, the characters that were smoking were upper/upper middle class, in that they were well-to-do or had a high-level job [see Table 9]. The character of Obadiah Stane (Jeff Bridges) in *Iron Man* was an immensely successful and rich corporate titan. Similarly, Christopher Walken played the role of a Treasury Secretary in *Wedding Crashers*. Interestingly, both smoked cigars in their portrayals of powerful characters. An additional 11 (31%) incidents involved characters who were middle class. These ranged from Lois Lane in *Superman Returns* to John Beckwith in *Wedding Crashers*, (both aspirational characters) to mob henchmen in *The Dark Knight* and bad guys in *Indiana Jones*, who also were trying to get ahead. Incidents involving characters who were working class/lower class totaled 11 (31%). These characters included, among others, a cab driver in *Superman Returns*, henchmen for the bad guys in *Spider-Man 2*, and the cook on a tramp steamer in *King Kong*. Due to overall small  $n$ , the researcher could not use a chi-square to determine whether there was a significant difference in how smoking events were portrayed.



Table 9

*Socio-economic Status of Smoker*

Outcome	Frequency(%)	Expected(%)
Upper Class	14(38%)	12(33.3%)
Middle Class	11(31%)	12(33.3%)
Working/lower Class	11(31%)	12(33.3%)

## CHAPTER V

### IMPLICATIONS

#### *Summary*

This study was conducted to assess the context of smoking incidents in box office top-ten, domestic movies in terms of how the behaviors exhibited related to social modeling factors that might influence whether adolescents initiated smoking. Unlike other studies which focused solely on the frequency with which smoking incidents occurred, this study noted the frequency but also determined the context. By viewing the incidents in terms of context, it was possible to make inferences as to whether these incidents would contribute to smoking initiation or, conversely, would deter smoking initiation. The study examined the top ten movies of the period running from 2004 to 2008. In general terms, there were not as many incidents as were expected, to the point that the data concerning some research questions were not sufficient to draw statistically significant conclusions. However, the data did point out some notable issues.

#### *Discussion*

The most important observation deals with Research Question 1 and the details concerning the frequency of smoking portrayal. At first glance, the fact that 14 (28%) of the movies examined did contain at least one smoking portrayal would suggest that a lot of smoking goes on in movies and that there should be a concern. A closer analysis, though, shows that the amount of time during which smoking appeared on the screen was only one-tenth of one percent of the total screen time for all 50 movies. Put another way, 99.9% of the total running time of the 50 movies examined did not contain any smoking

incidents. This suggests that the issue about smoking in movies is much ado about nothing.

What this study's results cannot address is why there is so little smoking in movies. The amount of smoking in movies does not appear to mirror the real world. Why, then, do directors choose to not have characters smoke? One possibility is that directors are acutely aware of the negative publicity that movie smoking has received and have consciously chosen to avoid association with the negative issue in order to not offend the movie-going public. The expressed stance of some directors is that whether a character smokes or not is a creative decision and not one that should be subject to the MPAA system, which some feel is a form of censorship. In practical terms, though, the reality is that directors of major motion pictures are not likely to choose a character being able to smoke over the revenue that an inoffensive movie can produce.

Setting aside the topic of frequency of smoking, it is important to examine the findings in terms of social modeling and whether the context of smoking incidents is notable. Research Questions 6a and 6b, which considered the ultimate outcome of smokers, related to the work of Botvin which described how adolescents' perceptions of smoking as being a positive or negative event changed over time. If the smoking character had a negative outcome, that result would color the perception of smoking negatively. These questions (and their results) also lead to a compelling observation which ties back to Bandura's work. The *Rocky and Johnny* films study showed that children who witnessed aggressive (read negative) behavior being punished did not imitate that behavior. With more than half of the smokers in the movies viewed reaching negative outcomes (including very dramatic, violent deaths), the message was very clear

that bad behavior (read smoking) results in bad outcomes. With negative outcomes outweighing positive outcomes by more than 2:1, these kinds of portrayals presented an anti-smoking message that is very meaningful to adolescents. In light of this significant finding ( $\chi^2[df=2]=8.2, p<.02$ ), the appearance of smoking behaviors in movies could actually be considered a deterrent to smoking initiation. Allowing adolescents to see such portrayals (instead of shielding them from such movies through a more restrictive rating system) might be considered beneficial in the effort to stop adolescent smoking.

Although the findings were not statistically significant, it is worth noting that a majority (56%) of the smoking portrayals depicted bad guys, as examined by Research Questions 2a and 2b. Just the mere fact that there were more bad guys (truly bad guys, not just anti-heroes) reinforces the concept that what smoking incidents there were (most of them involving bad guys) may have actually had a deterrent effect due to their association with the bad guy characters. Citing Bandura's work again, reward was associated with the good guy and punishment was associated with the bad guy. In the end, though, the notion that a character's "goodness" or "badness" would have a major contribution to modeling effects adolescents experienced from watching the movies analyzed was not supported. This is important in how it relates to efforts to limit (through more restrictive MPAA ratings) adolescents' exposure to smoking depictions, presumably by potential role models.

In terms of social modeling (as represented by Goldberg's findings concerning the alignment of an adolescent's self-image (and demographic profile) with smokers in movies as a determinant of smoking initiation), the fact that there were not any smoking incidents that featured adolescents is more notable. Research Questions 5a, 5b and 5c

explored the premise that viewers who see people like themselves engaging in certain behaviors are more likely to also engage in those behaviors. In that sense, the absence of adolescent smoking in the movies viewed suggests that the smoking that did occur (which was by adults) had little impact on adolescents viewing those movies. Again, while the study's findings cannot conclusively determine why there is an absence of adolescent smoking, it is reasonable to surmise that movie directors (who are sensitive to critical remarks and their impact on box-office revenues) chose not to have adolescent characters smoking in their movies in order to protect profits.

A similar situation was seen in the areas of gender and ethnicity of smokers. While the data was not sufficient to use chi-square to determine whether there were significant differences, the observations were that smokers in movies were overwhelming Caucasian and male, circumstances that do not mirror the real world. Again, the misalignment between the smoking characters and the self-image of those moviegoers who weren't Caucasian or male would likely minimize the social modeling effect of viewing smoking.

The results for Research Questions 3a and 3b could not be tested for significance, but did show that a majority of the smoking events were in a negative situation or context. This ties to Balasubramanian's work that considered the circumstances under which a product (in this case, tobacco) was demonstrated and the consequences of that product use as a facilitator of learning about using the product. For adolescents who do not yet know the nuances of smoking, observing smoking as being something that happens in a negative setting would likely serve as a deterrent.

Research Question 4a examined whether the smoking incidents occurred in a social situation, following on Botvin's work that studied the concept of adolescents equating smoking with having more fun with friends. While the results did not allow chi-square analysis to be performed, the fact that all but two of the 36 incidents recorded depicted smokers within a social situation. It is worth mentioning, though, that in most cases, the smoker was with people but was the only person smoking, which would portray smoking as a solitary activity. Research Question 4b continued on the Botvin tangent (which equated smoking with being more attractive to the opposite sex, in adolescents' eyes) and examined whether smoking occurred in a sexual situation. As there were no recorded incidents involving sexual situations, that question was dropped from the findings and the analysis.

The connection between perceived intelligence, success and socioeconomic status of smokers was explored in Pechmann's work, which suggested that adolescents saw smokers as ranking higher in all three measures. Research Questions 7a and 7b sought to determine whether smoking characters were of a higher or lower social status. The results were not sufficient to run chi-square analysis for these questions, but the observation was that the smoking incidents were relatively evenly spread among upper class, middle class and working class characters

What could not be determined by this study was what the driving forces were that resulted in the limiting of smoking portrayals, but there is room for speculation. There is substantial research that shows there is an undesirable connection between movie smoking and adolescent initiation of smoking. Given the publicity about that connection and public outcry about smoking in the movies, it is reasonable to assume that movie

directors are aware of the issue and have responded accordingly. Perhaps directors are aware of the consequences (an “R” rating) of characters smoking and, fearing that result, make a decision based on the economics of fewer ticket sales to adolescents. It may be that in the interests of commerce, directors are forsaking the creative license that might otherwise prompt them to have a character smoke. While filmmaking is a creative expression, it is also a big industry and directors are very sensitive to ticket sales and any factors that can negatively impact revenues. Regardless, the very small amount of smoking on-screen time suggests the overarching notion that the total exposure of adolescent viewers to smoking portrayals, whatever the context, is insignificant.

#### *Study Limitations*

The study examined the top-ten grossing domestic movies for a five-year period, based on the premise that adolescents (among the predominant age group that attends movies) were more likely to have seen movies that were among the more popular. It might be, though, that a director’s decision to have characters smoke or not could be affected by a desire to curtail offensive behaviors, i.e., smoking, in an attempt to maximize box office returns. The results of the study might have been different if less-popular movies had been studied or if the sample had included more movies from each year. That is, movies that are produced in hopes of big box office returns might be less likely to include smoking and incur an “R” rating, where movies that are more strongly driven by the creative intent of the director might be less concerned about the pressure to avoid smoking. Consider, though, a movie such as *Pulp Fiction*, which had extensive smoking scenes. Granted, it was released in 1994 (well before the 2007 MPAA change)

and was rated “R” for many other reasons, but it also came in as number 10 in the top-grossing movies for that year.

Likewise, the sample viewed was comprised of releases by major, domestic producers. An assessment that included independent films (which are, presumably, less concerned about receiving an “R” rating) may have seen more smoking incidents and yielded different results. Similarly, foreign films might have had a greater degree of smoking given different attitudes and social mores about smoking that are found in other countries.

Ultimately, there were a limited number of coded, smoking incidents in the movies that were screened. This did prevent chi-square tests from being performed for some of the research questions.

#### *Future Research*

The debate continues as to whether movies should be rated as critically for the presence of smoking portrayals as they are for sexual content, violence, language or drug use. In response to that debate and calls for action, a modification to the rating system used by the MPAA was instituted in 2007 that began to factor in smoking portrayals, based on: (a) the pervasiveness of smoking, (b) whether smoking is glamorized or not through on-screen portrayals, and (c) the context, historical or not, in which smoking occurs (“MPAA Makes Smoking Bigger Factor in Ratings”, 2007).

Proponents of tougher restrictions felt the revised system did not go far enough and would not make a difference. The MPAA believed, though, that in revising the system they were acknowledging an awareness of smoking as a health issue from which adolescents should be protected. Opponents of the stricter rating system felt mandating



that a director's decisions to include smoking portrayals would automatically incur an R rating equated to censorship.

It would be interesting to research filmmakers' attitudes and philosophies to better gauge whether their decisions to include (or exclude) smoking behaviors were based on creative factors or economic factors. That research would most likely be difficult because a director's motives might not be something that they cared to openly discuss, especially in light of the contentious nature of the issue.

As stated above, it would be helpful to catalog additional years' movies since the MPAA system changed in 2007 to determine if there is, in fact, a decreasing trend in smoking portrayals which might indicate that a reduction of portrayals has occurred that could be linked to the change. This might provide evidence that the current system is working and that more dramatic restrictions are unnecessary. Conversely, further data could reveal that the decrease noted in this study was not the beginning of a trend and that further restrictions might be desirable.

This study suggests that smoking portrayals cataloged in the five years under consideration were not universally of the type that encourage smoking initiation or reinforce smoking habits in adolescents. Countering factors observed were the limited positive portrayals and positive outcomes experienced by smokers. More often, the portrayals were those likely to discourage smoking in light of social modeling forces that were in play (e.g., negative situations), negative social implications and, most importantly, highly negative outcomes. These aspects, coupled with the finding that smoking portrayals in movies were limited to a very minute part of the total movie

experience, suggests that proposed restrictions of a more dramatic nature are unwarranted and would have little practical impact if implemented.

## REFERENCES

- Aloise-Young, P. A., Hennigan, K. M., & Graham, J. W. (1996). Role of the self-image and smoker stereotype in smoking onset during early adolescence: A longitudinal study. *Health Psychology, 15*(6), 494-97
- Babbie, E. (1995). *The practice of social research* (7th ed.). N.Y.: Wadsworth Publishing.
- Balasubramanian, S. K. (1994). Beyond advertising and publicity: Hybrid messages and public. *Journal of Advertising, 23*(4), 29-46.
- Bandura, A. (1971). *Social learning theory*. New York: General Learning Press.
- Barton, J., Chassin, L., Presson, C. C., & Sherman, S. J. (1982). Social image factors as motivators of smoking initiation in early and middle adolescence. *Child Development, 53*, 1449-1511.
- Botvin, E. M., Botvin, G. J., & Baker, E. (1983). Developmental changes in attitudes toward cigarette smokers during early adolescence. *Psychological Reports, 53*, 547-553.
- Botvin, E. M., Botvin, G. J., Michela, J. L., Baker, E., & Filazzola, A. D. (1991). Adolescent smoking behavior and the recognition of cigarette advertisements. *Journal of Applied Social Psychology, 21*(11), 919-932.
- BRFSS Coordinators (1996). Projected smoking-related deaths among youth--United States. *MMWR: Morbidity & Mortality Weekly Report 45*(44), 971-974.
- Brody, J.E. (2008, February 12). In adolescents, addiction to tobacco comes easy. *New York Times* [online edition]. Retrieved September 12, 2009 from <http://www.nytimes.com>

- Chapman, S., & Davis, R. (1997). Smoking in movies: Is it a problem? *Tobacco Control*, 6, 269-271.
- Charlesworth, A. & Glantz, S.A. (2005). Smoking in the movies increases adolescent smoking: A review. *Pediatrics*, 116:1516–1528
- Charters, W. W. (1933). *Motion pictures and youth: A summary*. New York, NY: The MacMillan Company
- Chassin, L., Presson, C. C., Sherman, S. J., Corty, E., & Olshavsky, R. W. (1984). Predicting the onset of cigarette smoking in adolescents: A longitudinal study. *Journal of Applied Social Psychology*, 14(3), 224-243.
- Cieply, M. (2007, May 10). Puffing away that PG rating. *New York Times* [online edition]. Retrieved September 8, 2008 from <http://www.nytimes.com>
- “Cigarette smoking statistics”, (2008). National Center for Health Statistics. Retrieved April 16, 2011 from <http://www.americanheart.org/presenter.jhtml?identifier=4559>
- Dalton, M.A., Sargent, J.D., Beach, M.L., Titus-Ernstoff, L., Gibson, J.J., Ahrens, M.B., et al. (2003). Effect of viewing smoking in movies on adolescent smoking initiation: A cohort study. *Lancet*, 362:281–285.
- DeLorme, D.E., Reid, L.N., & Zimmer, M.R. (1994). Brands in films: Young moviegoers’ experiences and interpretations. *The Proceedings of the 1994 Conference of the American Academy of Advertising*, 60.
- DeLorme, D. E., & Reid, L. N. (1999). Moviegoers’ experiences and interpretation of brand in films revisited. *Journal of Advertising*, 28, 71—95.
- Distefan, J.M., Pierce, J.P., & Gilpin, E.A. (2004). Do favorite movie stars influence adolescent smoking initiation? *American Journal of Public Health*, 94:1239–1244
- Duran, R. L., & Prusank, D. T. (1997). Relational themes in men's and women's popular nonfiction magazine articles. *Journal of Social and Personal Relationships*, 14(2), 165-189. doi:10.1177/0265407597142002

- Dutka, E. (1996, September 5). Force of habit. *Los Angeles Times*, F1.
- Egan, K. (2001) Despite ban, actors continue to light up on screen. *CA: A Cancer Journal for Clinicians*, 51(2), 142-143.
- Elliott, S. (1992, September 2). Product placement is under new attack. *New York Times*, D4.
- Escamilla, G., Cradock, A. L., & Kawachi, I. (2000). Women and smoking in Hollywood movies: A content analysis. *American Journal of Public Health*, 90(3), 412-414.
- Evans, R. (1978). Deterring the onset of smoking in children: Knowledge of immediate physiological effects and coping with peer pressure, media pressure, and parent modeling. *Journal of Applied Social Psychology*, 8(2), 126-135.  
doi:10.1111/j.1559-1816.1978.tb00771.x.
- Evans, R., Rozelle, R., Maxwell, S., Raines, B., Dill, C., Guthrie, T., . . . Hill, P. (1981). Social modeling films to deter smoking in adolescents: results of a three-year field investigation. *Journal of Applied Psychology*, 66(4), 399-414. Retrieved from Business Source Premier database.
- Glantz, S. A. (2003). Smoking in movies: A major problem and a real solution. *The Lancet*, 362, 258.
- Goldberg, M. E. (2003). American media and the smoking-related behaviors of Asian adolescents. *Journal of Advertising Research*, 43(1), 2-11.
- Goldstein, A. O., Fischer, P. M., Richards, J. W., & Creten, D. (1987). Relationship between high school student smoking and recognition of cigarette advertisements. *Journal of Pediatrics*, 110(3), 488-491.
- Haugen, H.M. (2005). *Teen smoking*. Retrieved from <http://www.enotes.com/teen-smoking-article/40316/print>
- Hazan, A. R. & Glantz, S. A. (1994). Letters to the editor. *American Journal of Public Health*, 85(1), 116.

- Hazan, A. R., Lipton, H. L., & Glantz, S. A. (1994). Popular films do not reflect current tobacco use. *American Journal of Public Health*, 84(6), 998-1000.
- Heatherton, T. F., & Sargent, J. D. (2009). Does watching smoking in movies promote teenage smoking?. *Current Directions in Psychological Science* (Wiley-Blackwell), 18(2), 63-67. doi:10.1111/j.1467-8721.2009.01610.x
- Hitti, M. (2007). *Smoking to sway movie ratings*. Retrieved from <http://www.webmd.com/smoking-cessation/news/20070511/smoking-to-sway-movie-ratings>
- Holsti, O. R. (1969). *Content analysis for the social sciences and humanities*. Reading, MA: Addison-Wesley.
- Jarvis, A. R. (1991). The Payne Fund reports: a discussion of their content, public reaction, and affect on the motion picture industry, 1930-1940. *Journal of Popular Culture*, 25(2), 127-140.
- Karrh, J. (1998, Fall). Brand placement: A review. *Journal of Current Issues and Research in Advertising*, 20, 31-49.
- Kelman, H. C. (1958). Compliance, identification, and internalization: Three processes of attitude change. *Journal of Conflict Resolution*, II(1), 51-60.
- Krippendorff, K. (1980). *Content analysis: An introduction to its methodology*. Beverly Hills, CA: Sage.
- Kunkel, D., Farrar K.M., Eyal, K., Biely, E., Donnerstein, E., & Rideout, V. (2007). Sexual socialization messages on entertainment television: comparing content trends 1997-2002. *Media Psychology* 9(3), 595-622.
- Landis, J.R., & Koch, G.G. (1977). The measurement of observer agreement for categorical data. *Biometrika*, 33, 159-174.
- Legal Information Institute (2011). US Code 1335. Retrieved May2, 2011 from [http://www.law.cornell.edu/uscode/uscode15/usc\\_sec\\_15\\_00001335----000-.html](http://www.law.cornell.edu/uscode/uscode15/usc_sec_15_00001335----000-.html)

- Liebert, R.M., Neale, J.M., & Davidson, E.S. (1973). *The early window: Effects of television on children and youth*. New York: Pergamon.
- Lochbuehler, K., Peters, M., Scholte, R. J., & Engels, R. E. (2010). Effects of smoking cues in movies on immediate smoking behavior. *Nicotine & Tobacco Research*, 12(9), 913-918. doi:10.1093/ntr/ntq115
- Lowery, S. A., & DeFleur, M. L. (1995). *Milestones in mass communication research: media effects* (3<sup>rd</sup> ed.). White Plains, NY: Longman.
- Lyons, A., Dalton, S., & Hoy, A. (2006). 'Hardcore drinking': portrayals of alcohol consumption in young women's and men's magazines. *Journal of Health Psychology* 11:223-32.
- Maltin, L. (2008). *Leonard Maltin's movie guide 2008*. New York, NY: Plume
- McCollum, S. (2004). Up in smoke. *Scholastic Choices*, 19(5), 16-20.
- McIntosh, W. D., Murray, J. D. & Murray, R. M. (2003). What's so funny about a poke in the eye? The prevalence of violence in comedy films and its relation to social and economic threat in the United States, 1951-2000. *Mass Communications & Society*, 6(4), 345-360.
- McKennell, A. C. & Bynner, J. M. (1969). Self-images and smoking behavior among school boys. *British Journal of Educational Psychology*, 39, 27-39.
- Miller, M. C. (1990). Hollywood: The ad. *The Atlantic Monthly*, 257, 41-68.
- MPAA (2007). Film rating board to consider smoking as a factor. Retrieved September 7, 2010 from <http://mpaa.org/resources/9d558a6b-9e9a-41d2-9ac8-d7b2361ef965.pdf>
- MPAA (2007). *Movie attendance study*. Retrieved September 13, 2009 from <http://www.mpaa.org/MovieAttendanceStudy.pdf>
- "MPAA makes smoking bigger factor in ratings", (2007). *Associated Press*. Retrieved September 8, 2008 from <http://www.msnbc.com/id/18601051/print/1/displaymode/1098/>

- “New CDC survey finds first increase in high school smoking since 1997”, (2006).  
*Campaign for Tobacco-free Kids*. Retrieved May1, 2011 from  
[http://www.tobaccofreekids.org/press\\_releases/post/id\\_0922](http://www.tobaccofreekids.org/press_releases/post/id_0922)
- Ng, C., & Dakake, B. (2002). *Tobacco at the movies: tobacco use in PG-13 films*.  
 Retrieved February 27, 2005 from  
<http://masspirg.org/MA.asp?id2=8330&id3=MA&>
- Pechmann, C., & Shih, C. F. (1999). Smoking scenes in movies and antismoking  
 advertisements before movies: Effects on youth. *Journal of Marketing*, 63(3), 1-  
 26.
- “Preventing tobacco use”, (2005). *Centers for Disease Control*. Retrieved September 5,  
 2005 from <http://www.cdc.gov/nccdphp>
- “Rate smoking movies “R”, (2004). *University of California – San Francisco*. Retrieved  
 February 29, 2004 from  
[http://www.smokefreemovies.ucsf.edu/solution/r\\_rating.html](http://www.smokefreemovies.ucsf.edu/solution/r_rating.html).
- Riffe, D., Lacy, S., & Fico, F. G. (1998). *Analyzing media messages: Using quantitative  
 content analysis in research*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Sapolsky, B. S., & Kinney, L. (1994). *You oughta be in pictures: product placements in  
 the top-grossing films of 1991*. Retrieved September 5, 2005 from  
<http://sapolsky.comm.fsu.edu/research/ProductPlacement.doc>.
- Sargent, J. D., Tickle, J. J., Beach, M. L., Dalton, M. A., Ahrens, M. B., & Heatherton,  
 T. F. (2001). Brand appearances in contemporary cinema films and contribution  
 to global marketing of cigarettes. *The Lancet*, 357, 29-32.
- Sherman, E.J., & Primack, B.A. (2009). What works to prevent adolescent smoking? A  
 systematic review of the National Cancer Institute’s research-tested intervention  
 programs. *Journal of School Health*, 79, 391-399.



- Smith, A. (1999). *Girls on film: Analysis of women's images in contemporary American and "Golden Age" Hollywood films*. Unpublished master's thesis, Cleveland State University, Cleveland, OH.
- Smith, K., Twum, D., & Gielen, A. (2009). Media coverage of celebrity DUIs: Teachable moments or problematic social modeling?. *Alcohol & Alcoholism*, 44(3), 256-260. doi:10.1093/alcalc/agp006
- Smoke Free Movies. *Problem: Big Tobacco & Hollywood*. (n.d.). Retrieved from <http://smokefreemovies.ucsf.edu/problem/bigtobacco.html>
- Stockwell, T. F., & Glantz, S. A. (1997). Tobacco use is increasing in popular films. *Tobacco Control*, 6, 282-284.
- Thompson, W. & Hickey, J. (2005). *Society in focus*. Boston, MA: Pearson, Allyn & Bacon.
- Wahlberg, D. (2004, April 15). Experts fear spike in number of teen smokers. *Atlanta Journal Constitution*. Retrieved September 5, 2005, from <http://www.ajc.com>
- Wakefield, M., Flay, B., Nichter, M., & Giovino, G. (2003). Role of the media in influencing trajectories of youth smoking. *Addiction*, 98(Suppl 1), 79-103.

## APPENDIX A

---

### *MPAA Movie Ratings System (2008)*

---

Designation	Meaning
G	General Audiences/All Ages Admitted
PG	Parental Guidance Suggested. Some Material May Not Be Suitable For Children.
PG-13	Parents Strongly Cautioned. Some Material May Be Inappropriate For Children Under 13
R	Restricted, Under 17 Requires Accompanying Parent Or Adult Guardian.
NC-17	No One 17 And Under Admitted

## APPENDIX B

---

### *Top Ten Grossing Domestic Movies 2004-2008* (Movies listed in rank order)

---

Year	Title
2004	Shrek 2
	Spider-Man 2
	The Passion of the Christ
	Meet the Fockers
	The Incredibles
	Harry Potter and the Prisoner of Azkaban
	The Day After Tomorrow
	The Bourne Supremacy
	The Polar Express
	National Treasure
2005	Star Wars: Episode III - Revenge of the Sith
	The Chronicles of Narnia: The Lion, the Witch and the Wardrobe
	Harry Potter and the Goblet of Fire
	War of the Worlds
	King Kong
	Wedding Crashers

Charlie and the Chocolate Factory

Batman Begins

Madagascar

Mr. & Mrs. Smith

2006

Pirates of the Caribbean: Dead Man's Chest

Night at the Museum

Cars

X-Men: The Last Stand

The Da Vinci Code

Superman Returns

Happy Feet

Ice Age: The Meltdown

Casino Royale

The Pursuit of Happyness

2007

Spider-Man 3

Shrek the Third

Transformers

Pirates of the Caribbean: At World's End

Harry Potter and the Order of the Phoenix

I Am Legend

The Bourne Ultimatum

National Treasure: Book of Secrets

Alvin and the Chipmunks

2008

Ratatouille

The Dark Knight

Iron Man

Indiana Jones and the Kingdom of the Crystal Skull

Hancock

WALL·E

Kung Fu Panda

Twilight

Madagascar: Escape 2 Africa

Quantum of Solace

Horton Hears a Who!

## VITA

Kenneth C. Koch

Candidate for the Degree of

Master of Science

Thesis: FROM TOBACCO ROAD TO TINSEL TOWN: ASSESSING THE  
CONTEXT OF SMOKING IN MOVIES IN TERMS OF SOCIAL  
MODELING IMPLICATIONS

Major Field: Mass Communications/Media Management

Biographical:

Education:

Completed the requirements for the Master of Science in Mass  
Communications/Media Management at Oklahoma State University, Stillwater,  
Oklahoma in July, 2011.

Completed the requirements for the Bachelor of Science in Broadcasting/Film at  
the University of Tulsa, Tulsa, Oklahoma in 1978.

Certifications:

Accredited in Public Relations

Experience:

Director of Marketing and Communications, Francis Tuttle Technology Center,  
Oklahoma City, Oklahoma 2009 – Present

Chief Communications and Marketing Officer, Meridian Technology Center,  
Stillwater, Oklahoma 2002 – 2009

Professional Memberships:

National School Public Relations Association  
Oklahoma School Public Relations Association  
Association for Career and Technical Education  
Oklahoma Association for Career and Technology Education

Name: Kenneth C. Koch

Date of Degree: July, 2011

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: FROM TOBACCO ROAD TO TINSEL TOWN: ASSESSING THE  
CONTEXT OF SMOKING IN MOVIES IN TERMS OF SOCIAL  
MODELING IMPLICATIONS

Pages in Study: 55

Candidate for the Degree of Master of Science

Major Field: Mass Communications/Media Management

Scope and Method of Study:

This study examines the social modeling implications of smoking portrayals in movies as they relate to influencing whether adolescents begin smoking or not. Drawing on the work of Bandura and others, the study identifies key factors that influence a decision to begin smoking or not and, through the use of content analysis, analyzes the top ten grossing domestic movies during the five-year period from 2004 to 2008 to determine whether those factors were present.

Findings and Conclusions:

The findings suggest that smoking portrayals in the movies studied are very limited and, for the most part, are not of a type that would encourage adolescents to begin smoking. Subsequently, the findings do not support the proposal of more drastic restrictions being put into place on film makers by way of a more stringent Motion Picture Association of America rating system.

ADVISER'S APPROVAL: Dr. John McGuire

---