

# Communication Inequalities & Adult Attitudes toward Movie-Specific Tobacco Control Policies

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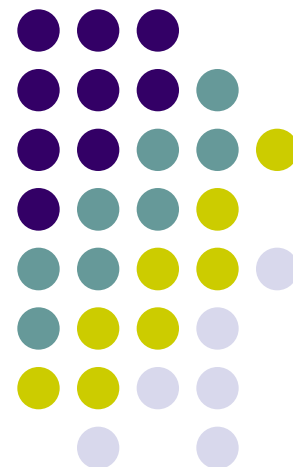
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# The Problem

- ~80% of tobacco users initiate use before they are 18
- There has been a lack of substantial decreases in the use of almost all tobacco products among middle and high school students
- Exposure to movie smoking makes adolescent viewers' attitudes and beliefs about smoking more favorable, and has a dose-response relationship with adolescent smoking
- A 2008 NCI report concluded that “The total weight of evidence from cross-sectional, longitudinal, and experimental studies indicates a causal relationship between exposure to depictions of smoking in movies and youth smoking initiation.”



## Background

- Master Settlement Agreement prohibits cigarette advertising to youth and paid product placement in movies.
  - Tobacco use remains prevalent in movies
  - Identifiable cigarette brands appear in about one-third of movies
  - Smoking images are greater in youth-rated (G/PG/PG-13) films than adult-rated (R) films
  - Nearly all youths are exposed to images of tobacco on television, via movie trailer advertising
- Tobacco control advocates have suggested:
  - “R” rating requirement for movies containing smoking
  - Other policies such as restricting brand identification and requiring antismoking PSAs before movies with smoking



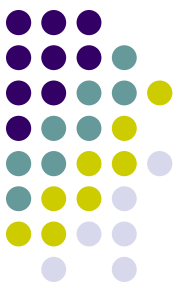
# Objective & Research Questions

- **Objective**

- Use the communication inequality framework to examine differences in movie policy attitudes among those exposed and unexposed to tobacco messaging in the media

- **Research Questions**

- Does tobacco-specific media exposure (represented by anti-tobacco advertising, news coverage of tobacco issues, and pro-tobacco advertising) play a role in the prediction of adult support for policy efforts to regulate the portrayal of smoking in movies?
- Are the observed effects of tobacco-specific media exposure on movie policy support differential for smokers and non-smokers?



# Methods

- **Data**

- American Legacy Foundation's American Smoking and Health Survey (ASHES-2), 2003
- Nationally representative sample of adults age 18 years and older
- Sampling Procedures
  - National RDD
  - Strata were formed to control sample distribution by Census Region
  - Over-sample of African Americans and Hispanics
  - Within the sampling strata, random samples of telephone numbers and listed households were selected to achieve the target numbers of completed interviews by geographic area and race/ethnicity.
- Response Rate: 27.8%; **n= 2,849**
  - No evidence of systematic differences between responders and nonresponders
- Weighting
  - Weights for probability of selection, non-response bias, and Census population estimates by region, age, gender, and race/ethnicity



## Methods

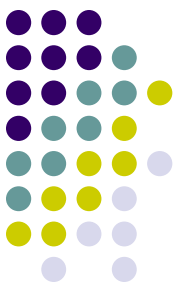
- **Outcome Variables (5)**

1. Brief anti-smoking PSAs should be required before movies that show smoking
2. Brief anti-smoking PSAs should be required before televised movie trailers that show smoking
3. Movie producers and actors should not be allowed to accept money or other items of value in exchange for including smoking in movies
4. Cigarette brands (names and logos) should not be allowed to appear in movies
5. As with violence and sex, movies with smoking should be rated “R”



## Methods

- **Predictor Variables: tobacco-specific media exposure**
  - News coverage of tobacco issues (1 item)
    - Saw news coverage about the dangers of children being around cigarette smoke
  - Anti-tobacco advertising (2 items)
    - Advertising about the dangers of children being around cigarette smoke
    - Advertising related to talking to children about avoiding tobacco
  - Pro-tobacco advertising (3 items)
    - Advertising or promotions for cigarettes or other tobacco products in a) newspapers, b) magazines, or c) on the Internet?
- **Covariates**
  - Education, income, race/ethnicity, age, sex, smoking status, knowledge that smoking causes lung cancer, and state of residence



# Methods

- **Statistical Analysis**

- Complete case analysis
- Multivariable logistic regression
  - Tests for effect modification using interaction terms for media exposure variables and smoking status variables
  - Tests of significance at  $p < 0.05$  level
- Individual weighting factors applied to all estimates





# Results

**Table 2. Prevalence Estimates (Weighted, Unadjusted)**  
**U.S. Adult Opinions Toward Proposed Policies to Limit Portrayals of Smoking in Movies**  
 American Smoking and Health Survey 2 (ASHES-2) (2003)

	% agree	% disagree	% neutral/no opinion
Anti-smoking PSAs <u>should</u> be required before movies which show smoking (n=2808)	55	28	15
Anti-smoking PSAs <u>should</u> be required before television movie trailers which show smoking (n=2796)	51	34	15
Producers and actors <u>should not</u> be allowed to accept money for including smoking in movies (n=2790)	69	13	18
Cigarette brand names and logos <u>should not</u> be allowed to appear in movies (n=2814)	64	20	16
As with violence and sex, movies with smoking <u>should</u> be rated “R” (n=2788)	40	46	14

*Cell counts may not add to 100% due to refused or missing responses.*

*Sample size for each question varies due to refused and missing responses.*

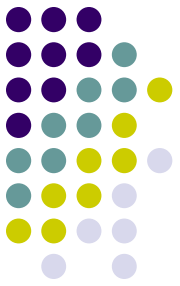
# Results

**Table 3. Multivariable Logistic Regression Models for Odds of Supporting Policies to Regulate Smoking in Movies, by Exposure to Tobacco-Specific Media Messages**  
American Smoking and Health Survey (ASHES) 2 – 2003

	<i>Response in Support of Proposed Policies to Regulate Smoking in Movies</i>									
	Anti-smoking PSAs <u>should</u> be required before movies which show smoking N=2287	Anti-smoking PSAs <u>should</u> be required before trailers (TV) which show smoking N=2288	Producers and actors <u>should not</u> be allowed to accept money for including smoking in movies N=2279	Cigarette brand names and logos <u>should not</u> be allowed to appear in movies N=2292	As with violence and sex, movies with smoking <u>should</u> be rated “R” N=2276					
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
<i><u>Exposure to Neutral or Anti-Tobacco Information*</u></i>										
News: Dangers to kids	<b>1.29**</b>	<b>(1.06, 1.58)</b>	<b>1.23*</b>	<b>(1.01, 1.50)</b>	1.10	(0.87, 1.36)	1.11	(0.90, 1.37)	<b>1.25*</b>	<b>(1.02, 1.53)</b>
Ads: Dangers to kids	1.16	(0.95, 1.44)	<b>1.26*</b>	<b>(1.02, 1.55)</b>	<b>1.30*</b>	<b>(1.08, 1.63)</b>	<b>1.39**</b>	<b>(1.11, 1.73)</b>	<b>1.30**</b>	<b>(1.05, 1.61)</b>
Ads: Talking to kids	<b>1.34***</b>	<b>(1.10, 1.62)</b>	<b>1.22*</b>	<b>(1.01, 1.48)</b>	1.06	(0.86, 1.31)	1.13	(0.92, 1.38)	1.12	(0.92, 1.37)
<i><u>Exposure to Pro-Tobacco Advertising*</u></i>										
Ads for cigarettes in newspaper	0.94	(0.78, 1.15)	1.06	(0.87, 1.28)	1.18	(0.96, 1.46)	<b>1.35**</b>	<b>(1.10, 1.66)</b>	<b>1.25*</b>	<b>(1.02, 1.52)</b>
Ads for cigarettes in magazine	0.90	(0.74, 1.09)	0.89	(0.73, 1.07)	0.96	(0.79, 1.20)	<b>0.71***</b>	<b>(0.58, 0.87)</b>	<b>0.79*</b>	<b>(0.65, 0.97)</b>
Ads for cigarettes on Internet	0.97	(0.74, 1.29)	0.83	(0.63, 1.08)	0.83	(0.63, 1.11)	0.78	(0.59, 1.03)	0.93	(0.70, 1.23)

Key: \*p<0.05, \*\*p<0.01, \*\*\*p<0.0001

\*Questions representing exposure to neutral, anti-, and pro-tobacco advertising were asked only of respondents who reported at least some media exposure in the past 30 days (e.g., television, radio, newspaper, magazine, or Internet).



## Summary

- Exposure to tobacco-specific media is associated with attitudes toward movie-specific tobacco policies
- The direction of effect mostly follows a pattern we may expect:
  - exposure to anti-tobacco advertising and neutrally-presented tobacco news predicts supportive attitudes toward movie policies
  - exposure to pro-tobacco advertising in magazines works in favor of the tobacco industry to lessen support for some movie policies
    - but exposure pro-tobacco advertising in newspapers has the opposite effect
- No evidence of effect modification by smoking status



## Limitations & Strengths

- **Limitations**

- Cross-sectional data
- No measures of political ideology or party identification
  - Parameter estimates may slightly overestimate observed effects
- Low response rate

- **Strengths**

- One of the first studies to examine attitudes toward policies to limit the portrayal of smoking in movies
  - First multivariable study to examine how tobacco-specific media exposure affects those attitudes
- Contributes to the communication inequality framework, by looking at differences between those exposed and unexposed to tobacco messaging in the media
- Suggests broad value of anti-tobacco communication efforts