



## Alcohol advertising and adolescents

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“Whether we like it or not, alcohol advertising is the single greatest source of alcohol education for Americans.” — Representative Joe Kennedy (D, Mass.), cosponsor of the Kennedy-Thurmond bill to require strict labeling of all advertisements for alcohol products. *American Medical News*, April 20, 1992

“You don’t see dead teenagers on the highway because of corn chips.” — Jay Leno, when asked why he does commercials for corn chips but refuses to do beer commercials. *TV Guide*, June 10, 1989

The so-called “war on drugs” has been waged by the US government for decades and in a variety of locales, except the media (Fig. 1). At the same time that parents and school programs are trying to get children and teenagers to “just say no” to drugs, \$10 billion worth of cigarette and alcohol advertising and many movies and TV shows are very effectively working to get them to “just say yes” to smoking and drinking [89]. According to three recent content analyses, television programs, movies, and popular music and music videos all contain appreciable content depicting smoking, drinking, or illicit drug use (Fig. 2, Table 1) [32,44,76]. Although few data show that drug advertising or drug content has a direct, cause-and-effect impact on adolescents’ drug use, numerous correlational studies speak to the impact of a variety of media on teenagers. Considering all of the studies done to date, sufficient evidence warrants severe restrictions on alcohol advertising and major changes in the way that alcohol is portrayed in movies.

### Adolescent drug use

Illegal drugs certainly take their toll on US society, but two legal drugs—tobacco and alcohol—pose a far greater danger to children and teenagers. Both

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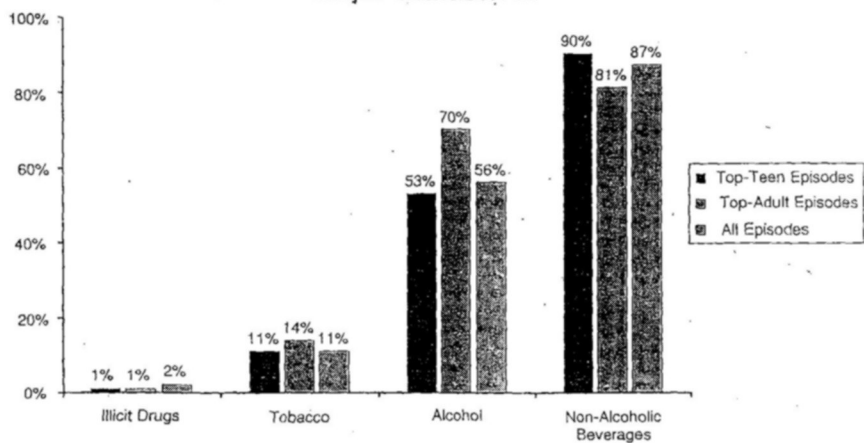
Fig. 1. One editorial cartoonist's view of the "War on Drugs," copyright Jim Borgman, Cincinnati Enquirer, King Features Syndicate.

are significant "gateway" drugs and are among the earliest drugs used by children or teens. A child who smokes tobacco or drinks alcohol is 65 times more likely to use marijuana, for example, than a child who never smokes or drinks [66], the younger a child begins to use cigarettes, alcohol, or other drugs, the higher the risk for severe health problems and abuse carrying over into adulthood [16].

Alcohol is a killer, with more than 100,000 deaths annually in the United States attributed to excessive consumption [38]. It is the most commonly abused drug by children aged 12 to 17 years. Alcohol-related automobile accidents are the leading cause of death among teenagers, and alcohol consumption typically contributes to homicides, suicides, and drownings—three of the other leading causes of death [34]. Often, older children and preteenagers experiment with alcohol first, before other drugs. Drinking alcohol may contribute to premature sexual intercourse, lower grades, and experimentation with other drugs. Youth who drink are nearly eightfold more likely to use other illicit drugs than those who never drink [2]. And people who begin drinking as teenagers are two- to threefold more likely to sustain an unintentional injury while under the influence of alcohol [50].

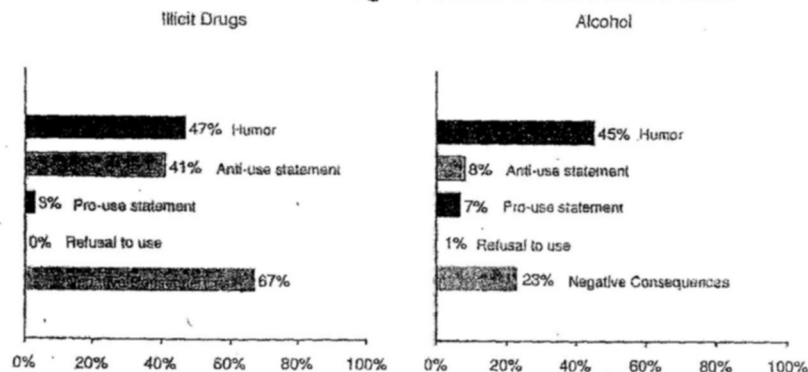
The best data regarding adolescent drug use come from the Monitoring the Future Study (Table 2) [54]. The Youth Risk Behavior Survey, sponsored every other year by the Centers for Disease Control and Prevention, also makes an excellent contribution to the field [29]. Both surveys document persistently high levels of alcohol use among teenagers. Although the percentage of "ever-users"

**A**  
 What proportion of episodes portray substance use by one or more major characters?



Percentages based on 80 top-teen episodes, 80 top-adult episodes, or all 168 episodes.

**B**  
 How often are illicit drugs and alcohol associated with:

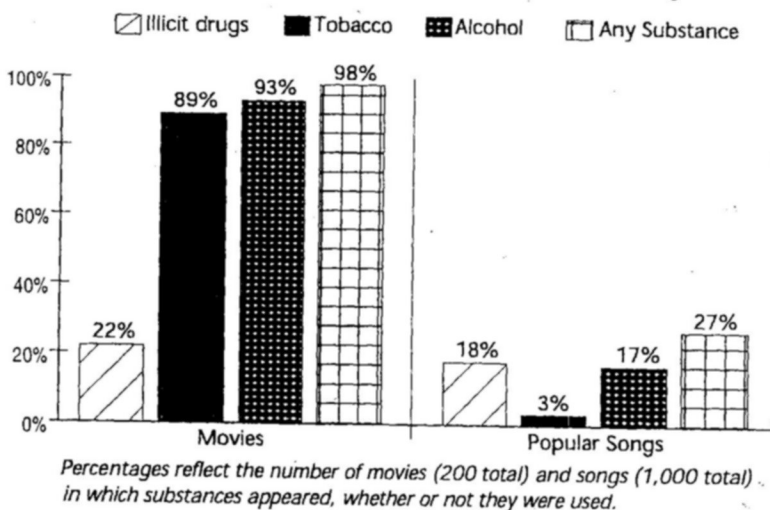


Percentages based on 32 episodes with any reference to illicit drugs. \*Percentage based on 6 episodes portraying drug use.

Percentages based on 119 episodes portraying alcohol use.

Fig. 2A-E. The most recent and comprehensive content analyses of a variety of popular media found that tobacco, alcohol, and illicit drugs are very prevalent in movies that are popular with children and teens, but considerably less prevalent in popular music. Roberts DF, Henriksen L, Christenson PG. Substance use in popular movies and music. Washington, DC: Office of National Drug Control Policy, 1999 and Christenson PG, Henriksen L, Roberts DF. Substance use in popular prime-time television.

### C Substance Appearance in Popular Movies and Songs



### D Percentage of Songs with Substance References by Genre

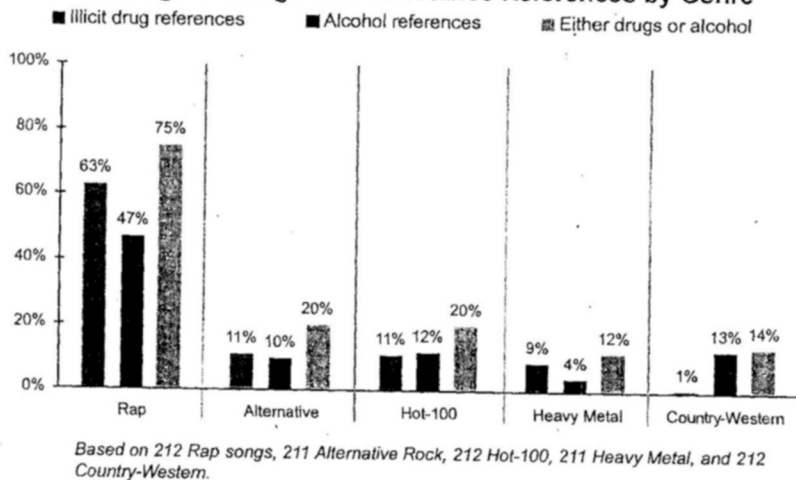


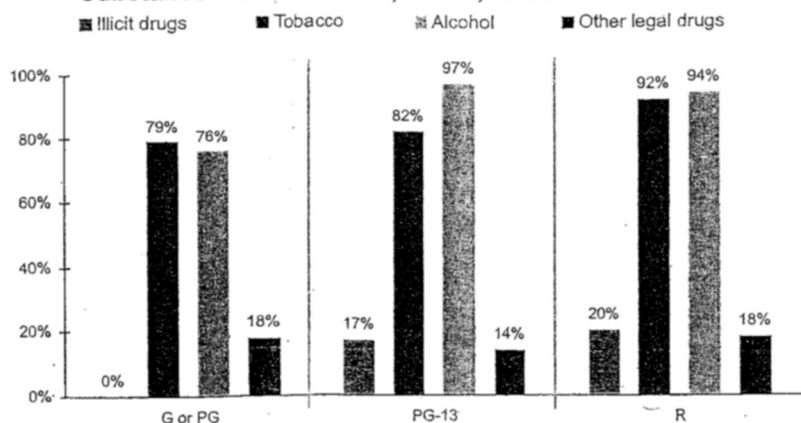
Fig. 2 (continued).

has decreased to 80% in 2000 from a high of 93% in 1980, 62% of high school seniors report having been intoxicated at least once and 30% report having had five or more drinks in a row in the 2 weeks prior to being surveyed. These data are consistent between the Michigan study and the Youth Risk Behavior Survey [29].

The United States is not alone in experiencing increasing rates of adolescent drug use. A recent survey of nearly 8000 15- and 16-year-olds throughout the



### E Substance Use in G or PG, PG-13, and R-Rated Movies



Percentages based on 38 G or PG, 65 PG-13, and 97 R-rated movies.

Fig. 2 (continued).

United Kingdom showed that nearly all had tried alcohol, and half had engaged in binge drinking. In a survey of 10% of all 12- to 15-year-old schoolchildren in Dundee, Scotland, two thirds reported having consumed an alcoholic drink and, by age 14 years, more than half reported having been intoxicated [64].

### Determinants of child and adolescent drug use

A variety of factors have been associated with the early use of drugs. Among adolescents, specific factors include poor self-image, low religiosity, poor school performance, alienation from parents, family dysfunction, physical abuse, and

Table 1  
Tobacco or alcohol content of G-rated children's films

Film	Tobacco use/exposure (s)		Alcohol use/exposure (s)	
<i>The Three Caballeros</i>	Yes	548	Yes	8
<i>101 Dalmations</i>	Yes	299	Yes	51
<i>Pinocchio</i>	Yes	223	Yes	80
<i>James and the Giant Peach</i>	Yes	206	Yes	38
<i>All Dogs Go to Heaven</i>	Yes	205	Yes	73
<i>Alice in Wonderland</i>	Yes	158	No	—
<i>Great Mouse Detective</i>	Yes	165	Yes	414
<i>The Aristocrats</i>	Yes	11	Yes	142
<i>Beauty and The Beast</i>	No	—	Yes	123
<i>Sleeping Beauty</i>	No	—	Yes	113

Adapted from Goldstein AO, Sobel RA, Newman GR. Tobacco and alcohol use in G-rated children's animated films. *JAMA* 1999; 281:1131-6; with permission.

Table 2

Adolescent drug use, 2000 (N = 12,800 twelfth graders)

Drug	Ever used (%)	Used during past year (%)
Any illicit drug	54.0	40.9
Any illicit drug other than marijuana	29.0	20.4
Alcohol	80.3	73.2
Ever been drunk	62.3	51.8
5+ drinks in a row in the past 2 weeks		30.0
Cigarettes	62.5	—
Marijuana	48.8	36.5
Amphetamines	15.6	10.5
Inhalants	14.2	5.9
Hallucinogens	13.0	8.1
Ecstasy	11.0	8.2
Other opiates	10.6	7.0
Cocaine	8.6	5.0

*Adapted from Johnston LD, O'Malley PM, Bachman JG. The monitoring the future national results on adolescent drug use: overview of key findings, 2000 [press release]. Ann Arbor, MI: University of Michigan; December 13, 2000; with permission.*

parental divorce [16,84]. The peer group has long been recognized as a unique risk factor in adolescence, and childhood temperament is gaining acceptance as another unique factor. A moody and negative child is more likely to be criticized by his parents, leading to a coercive model of parenting and a greater risk for early substance abuse. Interestingly, a recent comprehensive review of substance abuse in childhood and adolescence [16] failed to mention media influence as an etiologic force among young people initiating drug use [88].

### Peers

Peer pressure may play one of the most important roles in first drug use among young teens [53] but also may be involved in drug abstinence [77]. Teens who see their friends using drugs are more likely to partake themselves; teens who believe that their friends are anti-drug are more likely to abstain. (Another, alternative and as-yet untested hypothesis is that teens prone to drug use are more likely to search out like-minded peers.) Regardless, the media may function as a kind of "superpeer," making drug use seem like normative behavior for teenagers [87]. Because teens are so invested in doing what is "normal" for their peer group, the media could represent one of the most powerful influences on them.

Peer pressure also must be placed in proper perspective, however. Where do peers get the idea that drinking beer or hard liquor may make them "cool"? Obviously, the media play a crucial role in setting up this image in teenagers' minds [37].

### Family

Parents can be significant risk factors or protective factors, depending on the circumstances. Abused children have been found to be at increased risk for later

ance abuse [17]. Similarly, a "coercive" parenting style has been shown to lead to greater substance abuse and even delinquency in adolescence [65]. Generally, alcoholic parents are two- to ninefold more likely to produce biological children who are alcoholic [16]. The inherited risk probably also extends to other forms of abuse [35]. At the opposite end of the spectrum, growing up in a nurturing family with good communication with parents is a significant protective factor [74].

"Latch-key children" are more likely to use alcohol, perhaps because they are unsupervised or perhaps because they have unrestrained access to a variety of electronic media [31,75]. The media have sometimes been labeled "the electronic babysitters," and if parents fail to give their children appropriate messages about alcohol, the media may fill the void with unhealthy information or cues.

### Resilience

The unusual study found that certain behavioral risk factors in 3- and 4-year-olds could predict adolescent drug use [18]. The researchers found that a lack of parental control was apparent and predictive at an early age. Absence of resilience also may be important at a young age because resilience (i.e., the ability to overcome adversity) is also protective [74]. Likewise, positive self-esteem and self-image, self-control, assertiveness, social competence, and academic success are all protective resilience factors. The role of media in encouraging or diminishing resilience is completely unknown. Different children may respond to the exact same media message completely differently [23]. Children who may be more "media-resistant" are less likely to be affected by unhealthy portrayals in the media, but only one media education study has found this to be true so far [11].

### Impact of advertising on children and adolescents

An interesting and unfortunate paradox exists in American media: advertisements for birth control products, which could prevent untold numbers of teenage pregnancies and sexually transmitted diseases, are rarely broadcast on the six major national networks, yet all six networks frequently advertise a product that causes disease and death in thousands of teenagers and adults annually: alcohol [87].

Alcohol (along with tobacco) represents one of the two hugely profitable industries that require the constant recruitment of new users. For years, the alcohol industry has targeted minority groups and the young, particularly through promotion of sports and youth-oriented programming [43]. Because 5% of drinkers consume 50% of all alcoholic beverages [43], new recruits, preferably heavy drinkers, are a must for the alcohol industry as well. Celebrity endorsers commonly are used, and older children and teenagers may be particularly vulnerable to such advertisements [7,96]. Few commercials in the 1990s fail to employ some combination of rock music, young and attractive models, humor, or adventure.



Fig. 3A–B. Typical alcohol print ads, usually targeting young males with messages that combine and confuse drinking and sexuality, copyright 1997, Bacardi-Martini, USA; copyright Seagram Chateau & Estate Wines.

“Beach babes,” frogs, lizards, and dogs all are commonly seen in beer commercials. Production values are extraordinary: Costs for a single, 30-second commercial may easily exceed those for an entire half-hour of regular programming, and a single minute’s worth of advertising during the Super Bowl may cost \$2 million.

A variety of studies have explored the impact of advertising on children and adolescents. Nearly all have shown advertising to be extremely effective in increasing youngsters’ awareness of, and emotional responses to, products, their recognition of certain brands, their desire to own or use the products advertised, and their recognition of the advertisements themselves. In 1975, the National Science Foundation commissioned a report on the effects of advertising on children, which concluded [68], “It is clear from the available evidence that television does influence children. Research has demonstrated



Fig. 3 (continued).

that children attend to and learn from commercials, and that advertising is at least moderately successful in creating positive attitudes toward and the desire for products advertised.”

Although the research is not yet scientifically “beyond a reasonable doubt,” a preponderance of evidence shows that alcohol advertising is a significant factor in adolescents’ use of this drug [27,48,49,62,94]. For alcohol, advertising may account for as much as 10% to 30% of adolescents’ usage [43,56]. One group of researchers [70] notes:

To reduce the argument regarding the demonstrable effects of massive advertising campaigns to the level of individual behavior is absurdly simplistic. . . . Rather, what we are dealing with is the nature of advertising itself. Pepsi Cola, for example, could not convincingly prove, through any sort of defensible scientific study, that particular children or adolescents who consume their products do so because of exposure to any or all of their ads.

Although there is some legitimate debate about how much of an impact such advertising has on young people and their decisions to use alcohol, advertising clearly works, or else companies would not spend millions of dollars a year on it. This leaves US society with a genuine moral, economic, and public health dilemma: Should advertising of unhealthy products be allowed when society then has to pay for the disease, disability, and death that these products cause? Beer manufacturers claim that they are simply influencing "brand choice," not increasing overall demand for their products [70]. Moreover, they claim that, because it is legal to sell their products, it should be legal to advertise them as well, and that any ban represents an infringement on their First Amendment rights of commercial free speech [85].

Public health advocates counter that beer and liquor manufacturers are engaging in unfair and deceptive practices by specifically targeting young people by using attractive role models and youth-oriented messages in their ads and by making drinking seem like normative behavior [5,55,62,89]. Alcohol and tobacco manufacturers are trying to get adolescents to "just say yes" to cigarettes and beer at a time when society is trying to get them to "just say no" to drugs [55,87]. As we shall see, the available data strongly support the public health viewpoint.

### *Research About Alcohol Advertising*

Although the research about alcohol advertising is not quite as compelling as for tobacco advertising, children and adolescents do seem to comprise a uniquely vulnerable audience. Like cigarette advertisements, beer commercials are virtually custom-made to appeal to children and adolescents: images of fun-loving, sexy, successful young people having the time of their lives. Who would not want to indulge (Table 3) [55]? Using sexual imagery [6,56] or celebrity endorsers [7] increases the impact of beer and wine advertisements on young people.

Content analyses show that beer ads seem to suggest that drinking is an absolutely harmless activity with no associated major health risks [5,8,9,46,49,62,72,86,93]. Yet more than one third of advertisements show people driving or engaging in water sports while supposedly drinking [62].

As with cigarette smoking, drinking alcohol is portrayed as normative behavior, with no adverse consequences. But unlike cigarette advertising, beer

Table 3

Seven myths that alcohol advertisers want children and adolescents to believe

1. *Everyone* drinks alcohol.
2. Drinking has no risks.
3. Drinking helps to solve problems.
4. Alcohol is a magic potion that can transform you.
5. Sports and alcohol go together.
6. If alcohol were truly dangerous, we wouldn't be advertising it.
7. Alcoholic beverage companies promote drinking only in moderation.

*Adapted from* Kilbourne J. Media and values. 1991; 54/55:10-12; with permission.

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e the Budweiser frogs effective advertising? Commercial and character recall by children 9-11  
ars old

Character	Slogan or motto	% Recall (N=221)
Bugs Bunny	"Eh, what's up doc?"	80
Budweiser Frogs	"Bud-weis-er"	73
Johnny the Tiger	"They're grrreat!"	57
Smokey the Bear	"Only you can prevent forest fires."	43
Lighty Morphin' Power Rangers	"It's morphin' time!" or "Power up!"	39

Adapted from Leiber L. Commercial and character slogan recall by children aged 9 to 11 years: Budweiser frogs versus Bugs Bunny. Berkeley, CA: Center on Alcohol Advertising; 1996 (copyright American Academy of Pediatrics); with permission.

and wine advertisements are frequently featured on prime time television; children and teenagers view 1000 to 2000 of them each year [87]. Much of this advertising is concentrated in sports-related programming. In prime time, only one alcohol commercial appears every 4 hours; in sports programming, 2.4 advertisements appear per hour [47,62]. In addition, alcohol advertisements are frequently embedded in sports programming, with banners and scoreboards featuring prominent logos and brief interruptions (e.g., "This half-time report is brought to you by..."), at a rate of about three per hour [47].

Such a density of advertising seems to have a considerable impact on young people. In one survey of fifth and sixth graders, nearly 60% of them could match the brand of beer being promoted with a still photograph from a commercial [47]. Similarly, a sample of 9- and 10-year-olds could identify the Budweiser frogs as early as frequently as Bugs Bunny (Table 4) [59]. In one well-known survey of suburban Maryland children, 8- to 12-year-olds could list more brands of beer than names of US presidents [26]! Rarely do young people see advertisements or public-service announcements urging moderation [62]. Perhaps as a result, nearly three fourths of US adults think that such advertising encourages teenagers to drink [60].

Considerable research exists that the media can make children more vulnerable to experimentation with alcohol [47,49]. This survey or cross-sectional research does not yield cause-and-effect conclusions, but a few examples of such research may demonstrate the usefulness of its findings:

- A series of survey studies by Atkin [7,9,10] really began the investigations in this area. He found that adolescents heavily exposed to alcohol advertising are more likely to believe that drinkers possess the qualities being displayed in the advertising (e.g., being attractive or successful); have more positive beliefs about drinking; think that getting intoxicated is acceptable; and are more likely to drink, drink heavily, and drink and drive.
- Other studies have found that early-adolescent drinkers are more likely to have been exposed to alcohol advertising, can identify more brands of beer, and view such ads more favorably than do nondrinkers [1,94].
- A 1990 study of 468 randomly selected fifth and sixth graders found that 88% of them could identify Spuds Mackenzie with Bud Light beer. Their

ability to name brands of beer and match slogans with the brands was significantly related to their exposure and attention to beer advertisements. The greater the exposure and attention, the greater the likelihood that the children would think that drinking is associated with fun and good times, not health risks, and that the children are expected to drink when they become adults. Their attitudes about drinking were especially conditioned by watching weekend sports programming on TV [93].

Children begin making decisions about alcohol at an early age, probably during the elementary school years [12,93]. Studies document that the media can make children more vulnerable to future experimentation with alcohol because children and adolescents do not develop adult-type comprehension skills to deal with media messages until approximately the eighth grade [33]. Exposure to beer commercials correlates with brand recognition and positive attitudes toward drinking [1,14,93], and children who enjoy alcohol advertisements are more likely to drink earlier or engage in binge drinking [13]. Correlational studies indicate a small but positive (+0.15 to +0.20) effect between advertisement exposure and consumption [5]. In addition, advertising seems particularly to affect initial drinking episodes, which, in turn, contribute to excessive drinking and abuse [5]. One expert concludes [5]:

The preponderance of the evidence indicates that alcohol advertising stimulates favorable predispositions, higher consumption, and greater problem drinking by young people. Nevertheless, the evidence does not support the interpretation that advertising exerts a powerful, uniform, direct influence; it seems that advertising is a contributing factor that increases drinking and related problems to a modest degree rather than a major determinant.

But no media research is perfect. Researchers cannot willfully expose children or adolescents to a barrage of alcohol advertisements and watch who drinks or what brand of beer they choose in a laboratory setting any more than they can assess the effects of media violence by showing children violent movies and then giving them guns and knives to play with [12]. Most of the data are correlational (children who drink are more likely to have seen advertisements, for example; but heavy drinkers could conceivably choose to watch more advertisements). Although there is always the possibility that adolescent drinkers search out or attend to alcohol advertising more than their abstinent peers, this seems considerably less likely [4,46]. One advertising executive notes [82], "If greater advertising over time doesn't generate greater profits, there's something seriously wrong with the fellows who make up the budgets."

Furthermore, a few recent longitudinal studies do enable some important cause-and-effect inferences to be made. In an ongoing correlational study of fifth and sixth grade children, Grube and Wallack [49] have found that those who are more aware of alcohol advertising have more positive beliefs about drinking and can recognize more brands and slogans. Their study is unique in that they discard



a simple exposure model in favor of examining teens' beliefs and behaviors only when they have processed and remembered alcohol advertisements. In their work, the finding of positive beliefs is crucial because that is what leads to an increased intention to drink, even when other important factors, such as parental and peer attitudes and drinking behaviors, are controlled [48].

In another recent study by Austin and Knaus [12] of 273 third, sixth, and ninth graders in two Washington State communities, exposure to advertising and promotional merchandise at a young age was predictive of drinking behavior during adolescence. And a study of more than 1500 ninth grade students in San Jose, California, over 18 months showed that the onset of drinking alcohol correlated significantly with the increased viewing of both television and music videos [78]. This may point to the impact of both alcohol advertising (television) and role-modeling (music videos).

There is also a small but demonstrable effect of exposure to advertisements on actual drinking behavior among both teenagers [7,9] and college students [57,58]. Other research is less powerful but also suggestive. For example:

- Since 1960 in the United States, a dramatic increase in advertising expenditures has been accompanied by a 50% per capita increase in alcohol consumption [52].
- In Sweden, a mid-1970s ban on all beer and wine advertising resulted in a 20% per capita decrease in alcohol consumption [79].
- In perhaps the best ecological study, Saffer [81] studied the correlation between alcohol advertising on television, radio, and billboards in the 75 top media markets in the United States and the motor vehicle fatality rate. He found that greater density of alcohol advertising significantly increased the fatality rate, particularly for older drivers, and hypothesized that a total ban on such advertising might save 5000 to 10,000 lives per year.

### **Alcohol in television programming, music and music videos, and movies**

During the 1970s and early 1980s, alcohol was ubiquitous on US television. It was the most popular beverage consumed, and rarely were negative consequences of drinking shown or discussed [20,22]. Especially on soap operas, alcohol was depicted as being both an excellent social lubricant and an easy means of resolving serious personal crises. Two initiatives tried to change this: (1) new guidelines for the industry, written by the Hollywood Caucus of Producers, Writers, and Directors [21,25], and (2) the Harvard School of Public Health's Alcohol Project in the late 1980s. [80] The caucus suggested that its members avoid (1) gratuitous use of alcohol in programming, (2) glamorizing drinking, (3) showing it as a macho activity, and (4) depicting drinking with no serious consequences. The Harvard Alcohol Project worked with major networks and studios to foster the notion of the "designated driver," and this device appeared in many story lines during the next few years.

Unfortunately, several content analyses demonstrate that alcohol is a problem that simply will not go away on prime time television and in music videos. In fact, alcohol remains the most frequently portrayed food or drink on network television [63]. In addition, a new study by the American Academy of Pediatrics suggests that the "designated driver" concept may be failing as well. A survey of 16- to 19-year-olds by the American Academy of Pediatrics found that 80% think that drinking is acceptable as long as there is a designated driver. Unfortunately, nearly half think that designated drivers can still drink [90]! These data seem to confirm the Monitoring the Future findings that one fourth of all students surveyed had ridden in a car with an intoxicated driver in 1997 [69].

A 1986 content analysis was the first to suggest that alcohol was still extremely common on TV and in the movies, despite the efforts of the Hollywood Caucus: 100% of theatrical or made-for-TV movies and more than 75% of all dramatic series contained some mention of it [91]. Of the 16 most popular R-rated movies in the mid-1980s seen frequently by teenagers, every film contained alcohol use, with an average of 16 episodes per film [45]. Much of the alcohol use portrayed in both media was unnecessary to the plot, and drinking was still presented as being problem-free. In addition, adolescent drinking is often treated in a humorous fashion, and teens frequently acknowledge a desire to drink as a symbol of adulthood [36]. Again, the impact of "normative drinking" must always be considered when adolescents are involved.

Several additional content analyses were done in the 1990s. Compared with earlier analyses, the first found that the frequency of drinking episodes has remained relatively stable: 6 per hour in 1991 versus 10 per hour in 1984 and 5 per hour in 1976 [46]. Prime time drinkers are usually familiar, high-status characters, and more than 80% of the prime time programs examined contained references to alcohol [46].

In the second, Gerbner and Ozyegin [44] found that alcohol remains the most commonly portrayed drug on US television, with one drinking scene occurring every 22 minutes, compared with one smoking scene every 57 minutes and illicit drug use every 112 minutes. On MTV, a viewer sees alcohol use every 14 minutes, compared with every 17 minutes in the movies and every 27 minutes on prime time television. Popular movies are nearly equally rife with alcohol, with only 2 of the 40 highest-grossing titles not containing alcohol depictions. Even G-rated films are not safe: a recent content analysis found that nearly half of the 81 G-rated films produced since 1937 contained depictions of alcohol or tobacco use [95].

On prime time television, 71% of program episodes depict alcohol use, according to the most recent content analysis (Fig. 2A) [32]. More than one third of the drinking episodes are associated with humor, and negative consequences are shown in only 23% (Fig. 2B). A content analysis of music videos found that alcohol is portrayed in more than one fourth of videos on MTV and VH-1 [39]. In addition, it was also associated with increased levels of sex and sexuality—again, not a healthy association for teens pondering when and with whom to begin having sex. Although alcohol is relatively less common in music lyrics (17%) (Fig. 2C), 47% of rap music songs contain lyrics about alcohol (Fig. 2D) [76].

The most recent study of movies examined 200 popular films from 1996 to 1997 and showed that 93% of the movies contained alcohol depictions (Fig. 2C) [76]. A G or PG rating offers no guarantee against children viewing instances of alcohol use onscreen (Fig. 2E, Table 1). Although consequences of alcohol use were shown in 43% of the movies studied, only 14% depicted a refusal of an offer of alcohol, and only 9% contained anti-use sentiments. These findings were almost identical to another, separate content analysis of top-grossing US films from 1985 to 1995 [41].

Finally, one study cites certain media use as a possible cause of early alcohol use. The longitudinal study of 1533 California ninth graders by Robinson et al. [78] showed that increased television and music video viewing are risk factors for the onset of alcohol use among adolescents. Odds ratios for television ranged from 1.01 to 1.18, and for music videos, from 1.17 to 1.47, both statistically significant.

Further studies are needed. In particular, the continued presence or absence of product placements in movies and television programming needs to be examined, as does the behavioral impact of drug-oriented Internet advertising on children and teenagers.

## Solutions

In a decade when "just say no" has become a watchword for many parents and school-based drug prevention programs, unprecedented amounts of money are being spent in an effort to induce children and teenagers to "just say yes" to drinking. One group of researchers [70] suggests that the "discussion [should] be elevated from the scientific and legal arenas to the domain of ethics and social responsibility". Clearly, advertising and programming are creating a demand for alcohol among children and teenagers.

Discussed below are 11 ideas that, if implemented, could very well result in significant reductions in adolescent drug use without having a negative impact on any writer's or producer's First Amendment rights:

### *More research*

Media research is difficult, sometimes tedious, and often expensive. However, considering how significant the impact of the media is on young people, more media research is desperately needed, including adequate funding for such efforts. Specifically, more longitudinal analyses of adolescents' drug use compared with their media use are needed, as well as studies of how teen process drug content in different media.

### *Better dissemination of existing research*

A new Surgeon General's Report or National Institutes of Mental Health Report on Television by the year 2005 would be extremely useful to researchers, health care professionals, parents, and policymakers and might provide the impetus for increased funding for media research.

### Development of media literacy programs

Children and teenagers must learn how to decode the subtle and not-so-subtle messages contained in television programming, advertising, movies, and music videos. Parents need to begin this process when their children are young (aged 2-3 years), but school programs may be extremely useful as well. In particular, certain drug prevention programs have been extremely effective in reducing levels of adolescents' drug use, including that of alcohol (Fig. 4), but such programs must go far beyond the Drug Abuse Resistance Education (DARE) approach to include media literacy, peer-resistance skills, and social-skills building [67,83].

The United States is unique among Western nations in not requiring some form of media literacy education for its students [3]. Preliminary studies indicate that successful drug prevention may be accomplishable through this unique route [11]. However, increased media literacy is not a substitute for necessary changes in television and movie programming.

### Restriction of alcohol advertising to "tombstone ads" in all media

US society pays a high price for allowing alcohol manufacturers unlimited access to children and adolescents, and the connection between advertising and consumption is significant. Any product that is as potentially harmful to young people as alcohol should have severe restrictions placed on it. Tombstone ads involve showing the characteristics and "purity" of the product only and do not imply qualities that the purchaser will magically gain by consuming it (Fig. 5). Such restrictions have already been endorsed by the Food and Drug Adminis-

## Follow-Up Results From 4 Published Studies

(8th Grade Drug Use & 12th Grade Polydrug Use)

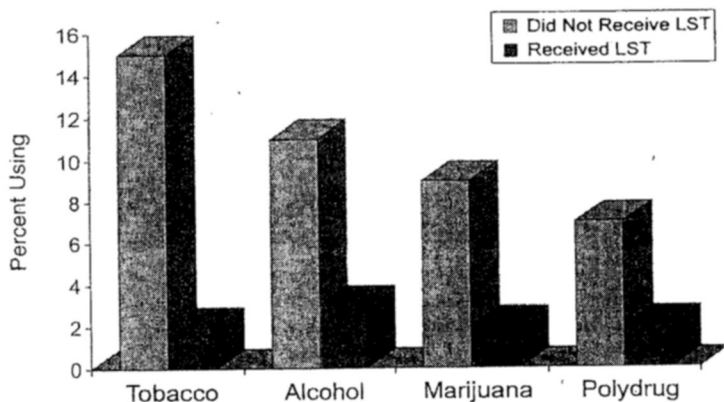


Fig. 4. A Life Skills Training (LST) approach to drug prevention has shown dramatic decreases in adolescents' use of a variety of drugs, yet has not been implemented in many communities because DARE programs already exist, copyright Princeton Health Press.

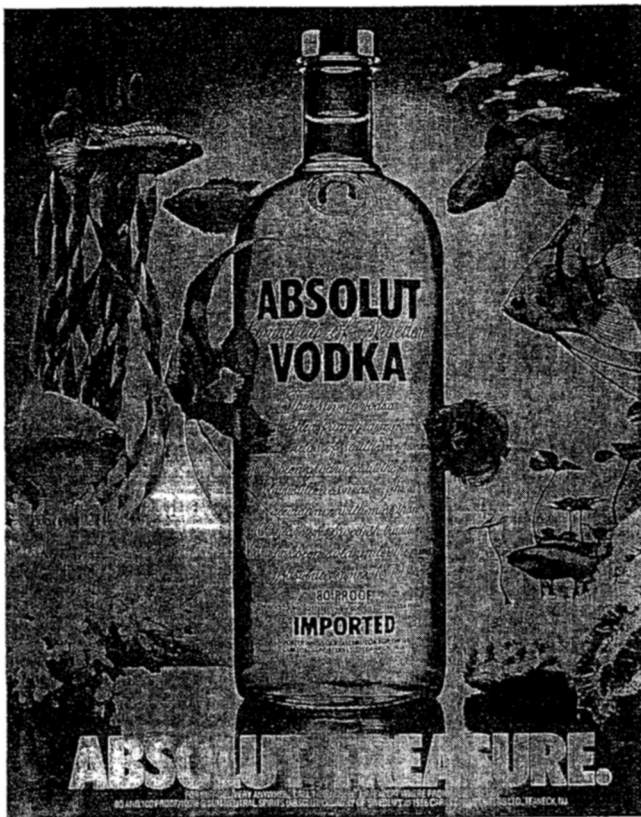


Fig. 5. One example of a “tombstone” ad for an alcoholic beverage. Such advertising is limited to the inherent qualities of the product rather than the qualities the imbiber will “magically” acquire if he or she consumes the product, copyright 1986 Carillon Importers.

tration, the Surgeon General, the American Academy of Pediatrics, and the American Medical Association and would address the deceptive and alluring quality of current advertisements [86].

#### *Higher taxes on alcohol products*

Taxes have a direct effect on consumption of products, particularly by teenagers [28]. Surprisingly, a recent study by the Centers for Disease Control and Prevention suggests that the rate of gonorrhea, for example, could be decreased by nearly 10% simply by raising the beer tax by \$0.20 per six-pack [30]. This is because of the well-known association between drinking alcohol and unsafe sexual practices, particularly among adolescents [61]. Of course, when taxes are raised and consumption goes down, revenues accruing to state and federal governments decrease, people live longer, and the costs of Social Security payments go up. Although medical costs would decrease as well, this scenario re-

presents a very complicated financial issue of whether society can "afford" less consumption of alcohol.

### *More aggressive counteradvertising*

Counteradvertising can be effective, but only if it is intensive, well planned and coordinated, and uses a variety of media (Fig. 6) [15]. To be truly effective, counteradvertising must approach both the occurrence rate and the attractiveness of regular advertising [49]. Some researchers speculate that the decrease in adolescent smoking in the mid- to late 1970s may be attributable to a very aggressive, preban, counteradvertising campaign in which one public service announcement aired for every three to five cigarette ads [5,24,62,92]. Unfortunately, a part of the agreement that the tobacco companies made in accepting a ban on smoking advertisements was that anti-smoking advertisements would be eliminated as well [43].

Currently, the density of public-service announcements about alcohol has never remotely approached that of regular advertisements, nor are the production values comparable. Of the 685 total alcohol advertisements examined in one recent content analysis, only 3 contained messages about moderation and another 10 involved very brief public-service announcements (e.g., "Know when to say 'when'.") [62]. In another study of one week of television commercials from 1990, commercials promoting legal drugs and alcohol outnumbered network news stories and public-service announcements about illegal drugs by 45 to 1 [42].

The best-known and most sophisticated example of aggressive counteradvertising is the campaign mounted by the Partnership for a Drug-Free America. From 1987 to 2001, \$3 billion was donated to create and air more than 600 antidrug public-service announcements [71]. In a study of nearly 1000 public school students aged 11 to 19 years, more than 80% recalled exposure to such advertisements and half who had tried drugs reported that the ads convinced them to decrease or stop using them [73]. Unfortunately, to date, not a single ad has aired dealing with alcohol.

### *MTV and VH-1*

MTV and VH-1 are excellent, specific media for targeting older children and adolescents with prosocial health messages about not using alcohol.

### *Increased sensitivity*

Increased sensitivity on the part of the entertainment industry to the health-related issue of alcohol use in television programming, music videos, and movies. A few programs popular with teens, including *Beverly Hills 90210* and after-school specials, have taken the lead in this area; but soap operas, MTV and VH-1, and movies need to follow their example. Alcohol should not be depicted as a way of resolving crises or a shortcut for creating a rebellious character (Fig. 7). In addition, rock music lyrics should avoid glamorizing drinking [2].



Fig. 7. Until a court case was decided in 2000, Bad Frog Beer was marketed in New Jersey with a picture of a frog making an obscene gesture. The ad also states, "He just don't care" and "An amphibian with an attitude." This plays right into the hands of adolescents, who are attracted by advertising that makes drinking seem rebellious, cool, and anti-authoritarian, copyright Bad Frog Brewery.

#### *Reassessment of the "designated driver" campaign*

Is it working, or do teenagers misunderstand it [90]? Many public health experts question whether this campaign does not suggest that everyone else accompanying the designated driver can safely drink excessively [93].

#### *Revision of the ratings systems for both television and movies*

The current television ratings are not specific enough regarding content and lack any descriptors to denote drug use [89]. Several studies show that parents would prefer a more specific, content-based system [19,40]. The movie ratings system, originally developed by Jack Valenti in the mid-1960s, has not been revised since that time and tends to be overly skewed toward sexual content rather than violence or depictions of drug use.

#### *Campaign finance reform in Congress*

This recommendation may seem strange contained within an article about the effects of media on young people, but three major industries arguably control much of what is media related in Congress—the National Rifle Association, the



## B

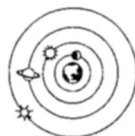
Advertisement

## THE ANTI-DRUG.

The most effective deterrent to drug use among kids **isn't the police, or prisons, or politicians.** One

of the most effective deterrents to drug use among kids is their parents. Kids who learn about the risks of drugs from their parents are **36% less likely to smoke marijuana** than kids who learn nothing from them. They are 50% less likely to use inhalants. 56% less likely to use cocaine. 65% less likely to use LSD. So if you're a parent, talk to your kids about drugs. Research also shows that 74% of all fourth graders **wish their parents would talk to them about drugs.**

If you don't know what to say, visit [www.theantidrug.com](http://www.theantidrug.com). We can help you.



The Geocentric System

Five hundred years ago, the sun was thought to revolve around the earth. People did not know then what we know now. Truths change. We now know smoking marijuana is harmful. The younger you are, the more harmful it may be. Research has shown that people who smoke marijuana before the age of 15 were over 7 times more likely to use other drugs than people who have never smoked marijuana.

Illegal drugs are estimated to cost America over \$110 billion each year in treatment, enforcement, incarceration and social damage. But **what else** could you buy for \$110 billion? Well, you could build 169 new hospitals. Or 687 new universities. Or operate 366 national parks. You could hire 278,481 new high school teachers. And 400,947 more clerks at the post office. Or you could put 75,862 new buses on the road. You could send KISS on tour to every major city in America and give everyone a free ticket. This message is brought to you by the Office of National Drug Control Policy/Partnership for a Drug-Free America!

5A and B. Two examples of dramatic counter-advertising. The questions are: Does such advertising work (e.g., appeal to teenagers) and can it compete with the current density of mainstream advertising and drug content on TV and in movies. While MADD clearly targets alcohol, the Office of National Drug Control Policy and the Partnership for a Drug-free American have yet to target either tobacco or alcohol.



beer and wine manufacturers, and the tobacco manufacturers — and none has the best interests of the nation's children at heart. Congress can control the media, but until it is liberated from its obligations to these special-interest groups [51], US media will remain unhealthy for young people.

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