

Effecting a traffic safety culture: Lessons from cultural change initiatives

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Overview

While discussions of traffic problems and the search for solutions are typically focused on traffic behavior itself, the recognition that traffic safety is a fundamentally cultural issue suggests the utility of deriving lessons from other culturally defined problems in order to inform and provide an analytical reference point for traffic safety cultural change approaches. Accordingly, instead of examining traffic behavior *per se*, the focus here is on major issues from other policy arenas that have been prominent on the public agenda and in which fundamental cultural change has been the preeminent policy goal: solid waste recycling, drug abuse, and tobacco use.

By examining their basic goals and parameters, detailing their practical applications and approaches, and assessing their relative effectiveness, related anti-waste, anti-drug, and anti-smoking intervention strategies can provide practical insights to inform future efforts for improving traffic safety culture.

Review of related approaches reveals that, while specific details may differ, general strategies have been largely the same across areas. An examination of successful and unsuccessful initiatives reveals most emphatically that such problems must be addressed at, not only the individual level, but the cultural level involving the attitudes and values affecting behavior. Practically speaking, most change initiatives will only be effective when supplemented with other efforts at community capacity building and deployed in combination with others. Moreover, a crucial point derived from consideration of various cultural initiatives is that, even if change initially occurs, it cannot be maintained in the face of inconsistent norms in the larger society without subsequent reinforcement.

Applying lessons gleaned from anti-waste, anti-drug, and anti-smoking interventions to problems of traffic safety, recommendations are offered focusing on 1) education programs addressing home, school, and community influences, 2) multilevel strategies addressing social environments, and 3) interventions addressing social and economic conditions. Moreover, these recommendations are linked to a variety of intervention approaches using multiple tactics at multiple levels of influence, involving a variety of societal sectors, focusing on general cultural determinants, and employing both short- and long-term perspectives. In short, coordinated, sustained, multilevel approaches offer the greatest promise for realizing a traffic safety culture.

Introduction

Traffic safety is an outgrowth of broader cultural conventions, norms, attitudes, and behaviors. Indeed, recognizing that traffic safety culture is part and parcel of the broader societal culture can help to explain some of the wide variation in driving behavior from place to place—witness the differences in driving in Los Angeles, Washington, D.C., and Paris, France. Traffic behavior is marked by cultural dynamics and, accordingly, concern over behaviors detrimental to traffic safety, such as aggressive driving, driving while intoxicated, or running red lights, has led to campaigns that seek to change the norms, attitudes, and actions that affect traffic safety—in other words, that seek to change the traffic culture into a traffic *safety* culture.¹

However, what kinds of approaches are effective? How can traffic culture be changed, in practical terms, to increase safe behavior? What kinds of initiatives can lead to positive outcomes?

Thinking about cultural change often implies thinking about changes in “solutions that use social resources to repair conditions and/or to encourage or coerce individual change,” that is, about changes in related public policies (Schneider and Ingram 1990; Loseke 2003, 101). However, while changes in laws and policies might coerce changes in given individual behaviors, they do not necessarily affect the ways that people think overall. Indeed, policies often fail when they are not supported by real cultural changes (Polletta 1997; Loseke 2003).

Considering this relationship between culture and policy effectiveness, we suggest that adopting a broader perspective on cultural effects and approaches might provide a fruitful avenue for addressing traffic safety problems as a fundamental societal concern. Cultural change initiatives that are directed at social problems seek to encourage the overall condemnation of a behavior that has been defined as socially negative. Whether concerning, for example, drunk driving, smoking, or child abuse, cultural change means producing attitudinal shifts that are subsequently linked to behavioral modifications. Hence, smoking cigarettes went from being generally acceptable (even romantic) to unacceptable (and distinctly unromantic); “safe sex” is more commonly practiced than previously; “child spanking,” rather than discussed as a simple parental right, has drawn increasing public criticism; and “drunk driving” has gone from being laughed about to being considered distinctly not funny (Loseke 2003, 113–14).

Moreover, research shows that policymakers will not seriously address a problem unless it is attached to some image of courses of action to eliminate the problem or alleviate related negative effects (Loseke 2003). This concern about what should be done involves determining and legitimating certain solutions along with constructing indicators of success and expected outcomes.

Here, we can invoke an image of culture as a “tool kit” of symbols, practices, and views that people use in varying configurations to address different kinds of problems (Swidler 1986). Culture provides a tool kit or repertoire of resources from which diverse strategies of action can be constructed and, by selectively considering different “styles and habits of action” from different arenas, we might be able to bring them to bear on the problem of traffic safety culture.

¹ E.g., the “Smooth Operator” campaign in the Washington, D.C. metro region.

The impact of the “culture of driving behavior” on safety has been widely examined in the traffic literature (see, e.g., Zaidel 1992; Aberg, Larsen, et al. 1997; Aberg 1998; Musselwhite 2006; Ozkan, Lajunen, et al. 2006). Some studies have also examined the effectiveness of various programs and policies aimed at promoting safer driving, such as stricter law enforcement and higher police presence (Castella and Perez 2004; Guria and Leung 2004; Blincoe, Jones, et al. 2006) and educational programs (McKnight and McPherson 1986; Guria 1998; Owsley, Stalvey, et al. 2003). Other investigations have attributed some 200,000 traffic deaths in the United States (U.S.) in the last few decades to the U.S. tendency to focus on more technologically determined outcomes (e.g., crash survivability due to automobile design improvements) in policy making rather than also attending to behaviorally oriented policies to improve traffic safety (Evans 2006). Yet, traffic culture is part of a wider cultural system, which behooves us to recognize affective elements of cultural experience and practice that locate behavior not only in subjective individual values and actions, but also in the context in which meaning is attached to that behavior.

While most discussions of traffic problems and violations and the related search for solutions are internally focused, we suggest that casting a wider net might prove useful for determining strategies that can affect traffic safety culture. That is, by examining approaches aimed at cultural change in other social problem areas, we might learn ways by which to effectively address traffic safety. Thus far, the efficacy of most traffic safety campaigns have not been sufficient to create a significant and lasting change, to the extent that U.S. traffic safety policy has been called a “dramatic failure” (Evans 2006). However, as a fundamentally cultural issue, traffic safety arguably can be informed by insights from other cultural arenas. By thinking conceptually in terms of broader cultural dynamics, rather than simply addressing characteristics of traffic problems per se, we can consider the modes of cultural reproduction and how they might be affected in order to improve outcomes for traffic safety.

To that end, we propose a model that assumes the dynamic interaction of cultural factors where behavior is shaped by a variety of features—not only, for example, age, gender, and socioeconomic differences, but also more explicitly attitudes, beliefs, values, and norms as cultural foci. Such factors can directly and indirectly account for differences in traffic behavior and, thus, in the overall traffic culture. However, instead of organizing our discussion around the obvious and direct issues of traffic behavior per se, we instead look to other issues in which fundamental cultural change has been the preeminent policy goal: recycling, drugs, and smoking. Selected in part due to their prominence on policy agendas in the U.S. and elsewhere, these issues have been identified as critical problem areas to which large amounts of funding and attention to program development have been dedicated. By investigating strategies that have been used to produce cultural change in these arenas, we hope to derive lessons that can inform general approaches to traffic safety given its identity as a fundamental cultural issue.

Accordingly, after briefly describing the problem areas and the basic issues surrounding them as such, we delineate and assess related cultural change initiatives in terms of their implementation approaches and outcomes. We then consider the possible cross-sector applicability of these approaches, considering their implications for affecting traffic safety culture. We conclude by summarizing the specific lessons learned from analysis of the cultural change approaches relative to traffic safety culture. We also present recommendations for strategies to undertake in developing initiatives aimed at realizing a traffic safety culture.

Cultural change issue areas

Recycling, drug abuse, and smoking have received a great deal of policy attention and funding in the U.S., with the aim of changing behavior not merely for selected individuals, but for society as a whole. While certainly other policy areas can also be identified for this purpose, recycling, drugs, and smoking have, over time, remained high on the public policy agenda.

Recycling

All fifty U.S. states have laws requiring reductions in the amount of solid waste sent to landfills. These laws have led cities and counties across the country to implement a variety of related programs, of which household or residential recycling is one of the best known. Recycling refers to the collection of used items for use in the manufacturing of new items (Schultz 2002), and household recycling programs also require residents to clean, sort, store, and deliver recyclables to curbsides for pickup or designated drop-off locations.

Although earlier efforts existed (Pellow 2002), organized recycling programs gained greater public awareness beginning in the late 1960s. Recycling drop-off centers were established in a few cities, such as Berkeley, California, Ann Arbor, Michigan, and Chicago, Illinois (Melosi 2005); curbside pickup newspaper recycling was first organized in Madison, Wisconsin in 1968; and in 1971 Oregon became the first state to offer deposit refunds on drink containers. Begun as social and environmental awareness actions, the recycling “movement” was often framed as a “counterculture” and “anti-corporate” development. Recycling was engaged more as a matter of environmental consciousness and civic morality.

However, little by little, recycling entered the mainstream. Questions of business viability were posed and related industries began to support recycling programs in the face of potential profits. In particular, the aluminum industry started aluminum can buy-backs in the 1970s.² Additionally, the mid-1980s saw tightening environmental restrictions and widespread perceptions that landfill space was growing scarce. Visions of a looming landfill “crisis” led to public initiatives for solid waste management to reduce the quantities of waste being landfilled. The most pervasive of these intervention initiatives was residential curbside recycling. Also in response to dramatically increasing waste disposal costs, more and more local and state governments launched recycling programs, to the extent that, by 1989, most large metropolitan areas had established curbside recycling, with residential participation rates ranging from 49 to 92 percent (Melosi 2005).

Drugs

A topic “bristling with emotional and political thorns,” illegal drug consumption and the design of programs to control drug use have posed some of the most difficult and divisive topics on the U.S. policy agenda (Gerstein and Green 1993, 2; Manski, Pepper, et al. 2001). Drug abuse has variously referred to, among other things, fully illicit drugs (e.g., marijuana, heroin, and crack cocaine) and also certain prescription-only drugs (e.g., barbiturates and amphetamines), and, for

2 While actively lobbying against environmental bills that would require recycling commitment.

adolescents, “adults-only” drugs (e.g., alcohol).³ Psychoactive drugs that are illegal for minors to purchase in the United States have been of particular concern as an area for preventive intervention.

Early depictions of drug use as “sinful” gained momentum during the Progressive Era, particularly through the efforts of temperance advocates for the creation of a “moral society.” Intensive lobbying resulted in regulation and restricted sales, but also in the creation of a large black market, which further fostered a perception of drug addiction as immoral and as a crime, a perception that shaped subsequent drug policy. The increased criminalization of drugs and drug users over time has been led by politicians running on “getting tough on drugs” platforms. Public officials at all levels—local, state, federal, and international—have been charged with waging the “war on drugs” (Manski, Pepper et al. 2001)—a highly protracted war. Although, there have been efforts and limited success backed by scientific evidence to frame drug use (abuse) in therapeutic terms, the prevailing approach has been one of punitive measures.

Smoking

Having traditionally been a pursuit of the upper strata of society, tobacco use started filtering down to the other social classes, principally in the form of cigarettes, during the 19th century (Kluger 1996). However, attacked on moralistic grounds by temperance advocates (as they did the imbibing of alcohol), tobacco use was banned in 14 states in the early 20th century. Yet, these restrictions were short lived and tobacco smoking soon regained not only acceptability, but also was established as desirable behavior again by the 1950s (Markle and Troyer 1979). Tobacco is a highly profitable industry and its use has been glamorized and linked to positive social features. Advertisements have depicted users as urbane, mature, sexy, and sophisticated across various social strata at various points in time. At one time, smoking was considered manly and even patriotic, and later was marketed to women as a symbol of independence and accomplishment.

However, a number of studies linking smoking to lung cancer and other illnesses began appearing in the 1950s (Parascandola 2001). Although at first ignored, these studies gained credence with the release of the 1964 Surgeon General’s report (U.S. Department of Health, Education, and Welfare 1964), which was the first in a long series explicitly stating the dangers of smoking based on scientific evidence. Furthermore, not only have health dangers been noted for smokers, but exposure to secondhand smoke has been shown to have serious and deadly effects on nonsmokers as well (U.S. Department of Health and Human Services 2006). Indeed, since the original Surgeon General’s report, research has shown repeatedly that “tobacco smoke is the cause of the most deadly epidemic of modern times,” leading to a wide variety of cancers,⁴ chronic obstructive pulmonary disease, myocardial infarction, and stroke (Stratton, Shetty, et al. 2001, 1). Yet, although less than in the 1950s, more than a quarter of the adult population in the U.S. are still smokers.

3 For adolescents, “adults only drugs” also often refers to tobacco products in the literature.

4 E.g., lung, oral cavity, esophagus, larynx, pancreas, bladder, and kidney.

Intervention approaches

Recycling, drugs, and smoking are all areas in which substantial interventions have been dedicated to changing culturally defined behaviors and values. Looking more closely at those interventions and delineating their particular features, as emphasized below, might prove instructive for determining and assessing approaches to effecting cultural change in the area of traffic safety.

Recycling

A number of intervention strategies have been employed to encourage people to recycle, *aimed at both personal and situational determinants*. Personal determinants are individual characteristics such as knowledge, attitudes, beliefs, and ascribed personal responsibility; situational determinants are context characteristics related to behavior, such as types of materials that are collected and collection locations (Schultz 2002). In general, participation in residential solid waste recycling programs have tended to be higher among more affluent and older people, and lower among less affluent and younger households, probably due in part to the availability of both storage space and time (Martin, Williams, et al. 2006). Moreover, even when attitudinal research indicates high levels of willingness to participate in recycling programs, recycling services have often been found to be too unreliable and inconvenient to allow comprehensive participation (Oskamp, Harrington, et al. 1991; Martin, Williams, et al. 2006). Accordingly, policy recommendations have included suggestions for the provision of bespoke recycling *services to suit a variety of conditions* in different residential settings and for the provision of *regular feedback* to households regarding recycling services and performance (Martin, Williams, et al. 2006).

Although further research is needed to identify underlying psychological and social attitudes that influence recycling participation, we know that recycling behavior is open to a range of influences, including environmental values, situational characteristics, and psychological variables (Vingilis, Stoduto, et al. 1994). Accordingly, strategies for promoting a “culture of environmental responsibility,” which includes household waste recycling, must take such factors into account. Recycling participation has been the highest in municipalities with *mandatory programs*. The *capacity to impose sanctions* in the case of mandatory programs, or to issue verbal warnings or reminders in case of voluntary programs, has also had positive effects. Making recycling easier, through, for example, curbside pickup and provision of free recycling containers, increases participation as well. In the case of voluntary programs, *citizen involvement in program design* itself enhances participation (Folz 1991).

Recycling is typically framed as virtuous behavior that benefits the environment and society. To improve household recycling behaviors, school courses have emphasized a *moral obligation* to nature and society as a cultural norm. Also, initial recycling experience quickly sets attitudes that are stably maintained into the longer term (Tucker and Speirs 2003). Thus, teaching children “responsible environmental behavior” early on is crucial to increasing participation rates. As such, school programs in which children are taught not just the “virtues” of recycling, but also that frame recycling behavior as an appealing personal characteristic, and in which they are encouraged to take part in related activities in the classroom, are recognized as a significant

socialization strategy. However, *regular reinforcement* is also needed to counteract specific subsequent adverse experiences that might be encountered, from which attitudes might weaken and drop-out might occur (Tucker and Speirs 2003).

There is a strong positive relationship between *normative beliefs* (i.e., perceptions of social pressure) and recycling behavior. Practical approaches for making recycling normative include, for example, *engaging community influences* (Schultz 2002). One suggestion is neighborhood leader programs in which leaders take responsibility for recycling within their neighborhoods, recycling diligently, and encouraging neighbors to recycle. These programs have been shown to have a direct effect on normative beliefs and have been successful at producing sustained increases in recycling behavior. Another approach for making recycling normative is through the *dissemination of information* on recycling and the recycling program to residents (e.g., through newsletters, newspaper articles, public service announcements, or billing inserts) to support beliefs about, for example, recycling levels and efforts of other residents.

Furthermore, the *education* of citizens on the importance of recycling also positively affects the participation rate, and *procedural information* about the where, when, and how of recycling and typically disseminated through brochures, advertisements in local newspapers, presentations in local meetings, etc., is a practical requirement for program fulfillment. The most common interventions for promoting recycling employ education approaches, based on the assumption that low recycling rates result from a lack of information and that increasing information will translate into a behavior change (Schultz 2002). Arguably, procedural information campaigns often will be ineffective if that they do not attend to the *motives for participation*, concerning in particular motivational factors such as 1) benefits of recycling, 2) personal inconvenience, 3) external pressure, and 4) financial motives (Oscamp, in Schultz 2002, 72).

Most research on recycling has focused on procedural information and has, in fact, revealed that the more procedurally knowledgeable a person is, the more likely that person is to recycle. However, this is not necessarily a causal relationship and further research has indicated that *information is not sufficient to produce a change* in recycling behavior (Schultz 2002). Even when changes have been observed following information interventions, they typically have been short-lived.

Drugs

Anti-drug interventions have been found to be, across the board, “effective, not effective, and countereffective” (Gerstein and Green 1993, 3)—a mixed bag in need of more focused evaluation. *Enforcement of laws* that prohibit the possession and use, in addition to the manufacture and sale, of illegal drugs has been the primary anti-drug strategy in the U.S.⁵ However, intervention also has encompassed an array of noncoercive activities intended to prevent, reduce, or delay illegal drug use, with mixed results (Manski, Pepper, et al. 2001, 8).

For example, *education programs* were developed to provide information as a kind of “social marketing” tactic with the goal of motivating people to act or behave in a particular way (Schultz

5 Comprehensive research has been sorely lacking on the actual effectiveness evaluation of law enforcement as an anti-drug use and prevention strategy. For further discussion and references on this point, see (Manski et al. 2001).

2002). As education interventions, anti-drug *media campaigns* have operated largely to provide information about associated risks in the hope that they would engender behavioral change. Although they have sometimes attempted to directly affect people,⁶ for the most part anti-drug campaigns have simply provided information (Wallack 2000, 345). Focused principally on education, these and similar programs rest on approaches in which “the problem is operationally defined as people just not knowing any better. The goal, then, is to warn and inform people so they can change.... The message is always about personal change rather than social change” (cf. Wallack 2000, 346). Developed on the same basis, most school anti-drug programs are constructed around intervention strategies that typically do not “deal directly with the training of behavior between peers, but rather focus only on increasing knowledge about health effects, improving interpersonal skills, or improving feelings of self-esteem” (Gerstein and Green 1993, 4). Note that these programs have been deemed largely ineffective.

Even programs such as the much touted Project D.A.R.E. (Drug Abuse Resistance Education) have been found ineffective. Focused on peer-pressure resistance and self-esteem building, the D.A.R.E. intervention produced a few initial improvements in student attitudes toward drug use. However, changes did not persist over time; there were no effects on actual drug use initially or during follow-up periods (Lynam, Milich, et al. 1999; West and O’Neal 2004). Another example is the highly visible, billion dollar National Youth Anti-Drug Media Campaign. First authorized in 1998 and reauthorized in 2003 by the U.S. Congress, it also has produced little evidence of effectiveness in reducing drug use among teenagers (Eddy 2004). Frankly, even when school-based drug education programs have shown some effect, results have tended to be neither strong nor long lasting when taken alone.

In general, while teaching children to refrain from drug use is a widely accepted strategy, many popular approaches, such as “zero-tolerance” programs, have not been evaluated. Indeed, “on balance, no drug abuse prevention activities have been adequately evaluated and found to be reliably effective, in all cases, with all groups” (Gerstein and Green 1993, 3). Having said that, although several caveats apply, there is some evidence of effectiveness in school setting interventions that have focused on counteracting or resisting explicit peer pressure toward use, “lodged within a more *general curriculum* emphasizing self-efficacy, interpersonal social skills, and specific knowledge of health effects, followed up with *booster sessions* in a subsequent school year, and concomitant with continuing public health *efforts on a community-wide basis*” (cf. Gerstein and Green 1993, 3).⁷ Yet, most anti-drug programs are not well-contextualized. They treat drug abuse as if it occurs in a vacuum and, as discussed above, related initiatives primarily have been aimed only at individual personal behaviors, not at social factors.

Smoking

In response to the 1964 Surgeon General’s report on the damaging effects of cigarette smoking, U.S. federal and state governments began introducing *legislation* aimed at curbing the level of smoking and sponsoring a variety of related programs. In addition, a number of *nonprofit organizations* became increasingly active in this area, pursuing various approaches to effect

6 E.g., the recent anti-drug campaign that tries to encourage parents to talk to their children about drugs.

7 Note that in regard to tobacco, which is often discussed as an “adults only” drug, such approaches have shown some effectiveness “in delaying the onset of cigarette smoking for a sizeable fraction of students who would otherwise have begun smoking early in their adolescence” (Gerstein and Green 1993, 3).

smoking cessation. Significantly, in 1981, the American Cancer Society, American Lung Association, and American Heart Association combined forces, creating the Coalition on Smoking or Health in order to lobby Congress for anti-smoking regulation in keep with three priority issues: 1) supporting FTC proposals for larger warning labels, 2) increasing the federal excise tax on cigarettes, and 3) stopping federal tobacco price support programs. The Coalition has stood as the strongest advocate challenging the tobacco industry and supporting anti-smoking initiatives.

The continuing toll of smoking has prompted the development of a wide range of efforts aimed at harm reduction for those who cannot or will not stop using tobacco and associated risk to others, and at curbing tobacco use altogether. Also, since the vast majority of smokers begin during adolescence (Stratton, Shetty, et al. 2001), major efforts have targeted young people in particular. Anti-smoking programs tend to fall into one of two main strategies: 1) limiting consumer choices and 2) helping them make better choices (i.e., to quit or not begin smoking). Choice limitation has relied on *legislated actions*, such as higher taxes on tobacco products, making it illegal to sell such products to minors, designating “clean air” areas and limiting smoking in public areas. Helping consumers make better choices refers primarily to *informational strategies*, such as requiring health warnings on cigarette packs, media campaigns, and school curriculum initiatives.

The findings of efficacy studies on anti-smoking initiatives are uneven. Little clear evidence exists on the deterrence effectiveness of tax increases or on the effectiveness of limiting minor access to tobacco products. However, the effectiveness of minor-access limitation is arguably a question of enforcement, an area in which most states fail (American Lung Association 2005). Research suggests some positive effects of *media campaigns*, both informational and aimed at deglamorizing smoking. However, analysts recommend caution because the studies reflect short-term findings only and also are highly specific and cannot be generalized to anti-smoking campaigns as an encompassing approach (Sly, Hopkins, et al. 2001; Hyland, Wakefield, et al. 2006). In general, there is some indication of media efficacy in preventing the uptake of smoking in young people, but the overall evidence is not strong (Sowden and Arblaster 2005). Also, evaluations of school anti-smoking programs have been highly variable. In fact, one of the largest and most rigorous studies, which assessed the Hutchinson Smoking Prevention Project, an intensive 8-year program on smoking behavior, found no long-term effect. There are few rigorous tests of the efficacy of information provision and, also, little high-quality evidence about the effectiveness of combinations of social influences and social competence interventions, nor of *multi-modal programs* that include *community interventions* (Porter and Berry 2001).

The better anti-smoking campaigns, like anti-drug campaigns, have been “characterized by at least three important factors. First, these campaigns are more likely to use mass communication and behavior change theory as a basis for campaign design. This means *using a variety of mass communication channels*, making sure the audience is exposed to the message, and providing a clear and specific action for the individual to take. Second, they are more likely to *use formative research*, such as focus groups, in order to develop messages and inform campaign strategy. Many better-designed interventions also include various *social marketing strategies*, such as market segmentation, channel analysis, and message pretesting. Third, they are more likely to *link media strategies with community programs*, thus reinforcing the media message and providing local support for desired behavior changes” (Wallack 2000, 346).

In general, although conflicting reports on current adolescent smoking behavior leave the current situation unclear (National Research Council (NRC) 2006), we can say that it appears that the effects of *school-based anti-smoking initiatives* are best sustained when *related changes in the larger community* also take place and when there is *reinforcement over time*. When behaviors promoted by the school-based programs are inconsistent with the larger community norms, maintenance of the positive behaviors is significantly limited (Perry 2000). Research showing associations between anti-smoking attitudes and beliefs, as well as reduced smoking among students with exposure to anti-tobacco advertising, also suggested the importance of *periodic repeated exposure* to related advertisements for the general teen viewing audiences (Preidt 2006). Furthermore, while reports of studies on anti-tobacco *media campaigns and message development* indicated their association with more favorable anti-smoking attitudes and beliefs and reduced prevalence of smoking (Preidt 2006), *economic disincentives* (e.g., increases in cigarette excise taxes and higher pricing of tobacco products) and enforcement of *regulatory directives* (e.g., indoor air quality laws, restrictive regulations on cigarette vending machine use, minimum age for purchase laws, and controls on advertising), when *applied simultaneously with individual-level interventions* (e.g., behavioral and pharmacological approaches) and smoking cessation programs, have proved most effective. That is, while individual level interventions have yielded only marginal success at best, greater progress in reducing the prevalence of smoking has resulted when they were engaged in coordination with population-wide interventions; the most successful anti-smoking campaigns have reflected a combination of approaches (Warner 2000).⁸

Lessons for traffic safety initiatives

Review of intervention approaches that have been employed in anti-waste, anti-drug, and anti-tobacco efforts reveals a variety of features in common, despite targeting different policy areas. These common features suggest the possibility of cross-sector applicability of approaches, or certainly of implications for effecting policy strategies in other fields. While traffic safety obviously encompasses different issues and concerns, the underlying dynamics and the logic of affective cultural change may be more broadly applicable. Accordingly, examination of initiatives in other fields might profitably inform efforts relative to specific traffic safety aims and might help to identify cultural factors and approaches, along with social and behavioral ones, that could be useful in improving traffic safety for everyone.

For example, the social acceptability of smoking has changed significantly in recent decades, and the acceptance of solid-waste recycling as “normal” household behavior has grown substantially. In both cases, explicit cultural programs and initiatives were developed that placed a heavy focus on public education and media campaigns, on school curriculum programs, and on legislative support. Anti-drug initiatives have followed a similar path. While specific details may differ, the general strategies have been very much the same, with varying degrees of success.

As do those of traffic safety, discussions of recycling typically focus on technical issues. However, recycling is a behavior and, “like all human behaviors, recycling is motivated and constrained by the context in which it occurs. The success or failure of a recycling program hinges on participation by community residents” (Schultz 2002, 9). The same point can be made in

⁸ Also, see papers by Perry, Gostin, Warner, and House and Williams in Smedley and Syme (2000).

regard to traffic safety behavior. A narrow individual behavioral focus can deflect attention away from social and structural behavioral determinants by attending exclusively to individual actions, which in effect places the sole burden for change on the individual (Wallack 2000). Obviously, individual behavior must change, but sole emphasis on individual risk-factor modification, which, for example, is the core of most mass media campaigns, has been “spectacularly unsuccessful” (Lomas 1998, 1183). As has traffic safety, solid waste, drug abuse, and tobacco use all have been identified and addressed in terms of social problems, and defining a problem at the community or societal level and then applying primarily individual-level “solutions” is in itself problematic (Wallack 2000).

Behavior-oriented media campaigns, while useful, have typically been limited in creating significant behavior change, in part due to a failure to adequately integrate and contextualize their approach. That is, while individual actions and personal responsibility is obviously important, related behavior is inextricably linked to the larger social, political, and economic environment. Attempting to address publicly defined problems, such as drug abuse or smoking, without attending to the context in which they exist “inevitably produces, at best, limited solutions” (cf. Wallack 2000, 338). The same argument can be made in regard to behaviors directly affecting traffic safety. The need to attend to more generic cultural determinants of behavior is grounded in recognition of the fact that culture has a broad and profound impact on behavior across society. While there may be subcultural and individual differences to consider, balance is also needed in consideration of overarching cultural dynamics and values. Thus, intervention at multiple levels and through multiple sources of influence reflects recognition of crosscutting influences and related determinants of behavior (interpersonal, institutional, community, society, etc.).

Focused most specifically on the provision of information, media campaigns have been a central feature of change initiatives across the board. Moreover, in a very practical sense, information can be a fundamental factor for influencing behavioral change. For example, in the case of recycling, procedural information may not be a motive for recycling, but may still play an important behavioral role since lack of knowledge can be a barrier to action; when people are motivated to act, dissemination of information is likely to produce an increase in recycling behavior (Schultz 2002). However, as has been observed in all three issue areas, information alone is wholly inadequate for engendering lasting change.

Then, what kind of media approaches can increase capacities for positive change? In discussing public health and social change initiatives, Wallack (2000) has suggested civic journalism, media advocacy, and photovoice, along with the Internet, as possibly promising approaches.⁹ By providing information and other forms of support, *civic journalism* seeks to increase public participation in problem solving. Reflecting partnerships across newspapers, television, and radio stations, civic journalism typically encompasses three broad activities: 1) extensive information development and data-gathering; 2) extremely extensive and coordinated coverage to increase issue visibility, legitimacy, and urgency; and 3) substantial efforts and development of means to insure and facilitate participation.

Media advocacy refers to the strategic use of mass media in combination with community organizing efforts, focusing primarily on news media and secondarily on paid advertising. The

⁹ See (Wallack 2000) for more detailed discussion and examples of these approaches, along with related references.

principal aim is to “raise the volume of voices” for change and shape the sound so that it resonates with values that are presumed to be the basis for positive behavior. Generally part of a broader strategy, media advocacy focuses on four primary activities: 1) strategy development; 2) agenda setting; 3) debate framing; and 4) policy advancement. Media advocacy has been applied to a variety of public health and social issues, including, child care, alcohol, tobacco, handgun control, and suicide prevention.

Photovoice focuses on grassroots involvement in creating and using photography for social change through participation in the policy process, employing “visible data” to 1) understand issues and concerns through the eyes of most affected groups, 2) promote knowledge and crucial discussion among participants, and 3) mobilize policy makers to create change. The use of pictures in addition to words might arguably increase the effectiveness of efforts for change.

The *Internet* can potentially supplement and increase any media approach; it allows for quick access to a vast array of information and specialized help from virtually anywhere in the world, thus enhancing potential contributions of the other approaches. Again, note that each of these suggestions encompasses broad involvement at various levels of social interaction.

Furthermore, it seems clear that children and adolescents must be a major focus for cultural intervention and change initiatives. Many of the attitudes and values affecting behavior—including traffic behavior—are instituted as part of the socialization process and are, in fact, encouraged by current adult values. There is a disassociation between outcomes and process that often conflicts with the notions of safety—e.g., advertising and movies that imply that traffic “rudeness” and driving aggression is manly or sexy or glamorous. In order to institute a culture of “traffic civility,” then an etiquette that is instilled as an expected mode of behavior—not merely a response to laws—must somehow be promoted. Adolescence is a time marked by a focus on peer and social rewards. However, although adolescents are heavily influenced by peer attitudes and conduct, peer group norms themselves can be influenced to improve behaviors associated with positive outcomes as long as those behaviors are supported by consistent and complementary school and community efforts (Smedley and Syme 2000).

Normative beliefs can be a powerful motive for action, especially under certain conditions. In particular, research suggests that “normative social influence works best with behaviors that are publicly observable,” as indicated in curbside recycling participation (Schultz 2002, 78). On the one hand, observable behaviors can be monitored by others; on the other hand, observable behaviors can reinforce (or undermine) existing normative beliefs. These considerations are kept practical by providing standards against which an individual can compare his or her behavior and targeting specific behaviors. Moreover, important to the normative process is making the comparison groups those whom individuals know or with whom they can readily identify, rather than making broad comparisons. Other affective factors include perceived similarity with others in the community, status of people engaging in the behavior, prior commitment to act in a particular way, group size, and group cohesion (Schultz 2002).

Consideration of the causal effects of culture and on culture makes clear the necessity of employing a wide range of action strategies if values leading to negative outcomes are to be countermanded. Moreover, a crucial point derived from consideration of cultural initiatives that is particularly relevant to addressing issues of traffic safety is that, even if change initially occurs, it cannot be maintained in the face of inconsistent norms in the larger society without subsequent bolstering and encouragement. Thus, for example, while anti-smoking campaigns have had some

success in the U.S., based on overall decreases in the prevalence of smoking, it appears that smoking rates may again be on the rise, indicating the need for continual reinforcement—at least until the previous behavior is overwhelmingly and consistently de-valued and de-legitimated and is replaced as the social norm.

Additionally, across issue areas, the pressing need for in-depth comprehensive evaluation to inform policy initiatives is highly apparent. Research on anti-waste, anti-smoking, and anti-drug interventions illuminates the fact that interpretation of the results of population-wide and multilevel initiatives require different criteria from those targeting individuals, and that broad identification and assessment of factors mediating change at various levels of social interaction are required for understanding pathways for cultural change (Smedley and Syme 2000). The collective efficacy of society at various levels represents the potential for mobilizing real and sustained change. Accordingly, a singular myopic focus on individuals and information—or primarily on vehicle safety and technological fixes—is highly insufficient to effect any real and lasting change in traffic safety culture.

Summary and recommendations

Our goal here has been to determine approaches that could effectively ameliorate problems of traffic safety in the U.S. today. Recognizing that traffic safety is a fundamentally cultural issue, we looked to determine and draw upon “lessons learned” from approaches to other culturally defined problems in order to inform and provide an analytical reference point for traffic safety cultural change approaches. Accordingly, we examined selected major cultural change strategies in other arenas, delineating and comparing their basic goals and parameters, detailing their practical applications and approaches, and assessing their relative effectiveness in order to provide insight and inform future efforts to improve traffic safety culture. In addition, we examined how initiatives and their relative efficacy have been assessed and how they have been “interpreted” for public consumption—something that is not always consistent with or backed by actual evidence (Evans 2006). The overall focus on cultural dynamics and lessons learned suggests a fresh perspective on analyzing traffic safety culture and developing solutions to related problems.

Although we have organized our discussion around interventions aimed at addressing negative behaviors associated with specifically identified cultural problems, the principal aim has been to identify social and behavioral approaches that can influence the related cultures and the broader context in which those problems exist. Ideas and practices from other venues might offer prospects for adaptive change to occur in traffic safety culture. The lessons learned from consideration of recycling, drug, and smoking initiatives suggests the utility of further identifying promising areas and approaches, along with specific programmatic efforts, that could inform and facilitate the effective construction of a traffic safety culture. We hope that this approach will stimulate new thinking about approaches to encourage traffic safety and to obviate damaging cultural characteristics in this area.

In particular, we posit culture’s causal significance not in defining ends of actions, but in providing the cultural components or tools that can be used to construct strategies for change. This perspective makes possible new approaches for affecting behavior and modeling forms of authority and cooperation. It is, however, the concrete situations in which these cultural models

are enacted that determine which take root and thrive, and which wither and die (cf. Swidler 1986). As stressed across cultural change approaches, *the principal point to keep in mind is that traffic safety culture does not happen in a vacuum and that the broader cultural context must be a critical consideration in developing effective policies and initiative for change*. Emphasis here has been on the essential need to focus attention not only on individual and personal traffic behaviors, but also on those social and cultural forces in the environment that shape and support those behaviors. Practically speaking, most change initiatives will only be effective when supplemented with other efforts at community capacity building and deployed in combination with others for a synergistic effect. Thus, we argue, for example, that simple information dissemination alone is not enough. Of course, mass media campaigns play a significant role in increasing awareness, providing knowledge, and shifting attitudes. However, they must be part of a more comprehensive strategy for contextualizing the values and related risks within the broader issues of societal concern for lasting cultural change (Wallack 2000, 357).

A review of successful and unsuccessful initiatives reveals most emphatically that such problems must be addressed at, not only the individual level, but the cultural level involving shifting attitudes and values. While policy messages may speak to individuals, it is the overall establishment of a culture that supports or, indeed, institutionalizes those messages that has the best chances of success. To that end, a fundamental question that must be addressed is whether an approach connects the problem at hand to broader social forces, placing emphasis on how behavior is influenced not merely by individual reaction, but also by broader cultural patterns. This perspective means that such features must be explicitly considered in developing related policies and programs aimed at changing the traffic culture into a traffic *safety* culture. It also means moving beyond only one-on-one interventions, whether punitive or therapeutic, to look to broader notions of cultural dynamics in order to provide more effective approaches for traffic safety at individual, community, and societal levels. Thus, attention to the culture of traffic behavior as such is necessary if policies and programs are to be developed to support and promote traffic safety practices as a behavioral norm.

Keeping in mind that the efficacy of behavioral change strategies depends on consideration of the cultural context that may encourage or may hinder related efforts for change, we suggest variations on three recommendations from drug and smoking interventions to address traffic safety culture:¹⁰

- High-quality, center-based education programs should be more widely implemented, and other interventions aimed at children and youth should address relevant features in the home environment, along with school and community influences.
- Especially as regards adolescents, multilevel interventions should address social environments as they affect behavioral outcomes, including peer norms, role models, performance expectations, social supports, and ties to community institutions.
- Interventions aimed particularly at adults should focus on the social and economic conditions that affect their attitudes and behavior.

On the one hand, these points may seem somewhat obvious. Yet, they typically are not taken directly into consideration in evaluating cultural change programs. If we are to take seriously the

10 Cf. (Smedley and Syme 2000, 10).

mandate of realizing a traffic safety culture, then it behooves us to engage such issues directly, rather than merely assume them.

Throughout this discussion, we have emphasized a longitudinal perspective in designing and assessing cultural change initiatives. A discussion of change implies attention to process and, accordingly, we have considered programs that necessarily engage their issues as subjects of process. Moreover, change maintenance requires continued reinforcement for effective institutionalization. This is a critical point that must inform the design of initiatives for establishing a traffic safety culture; that is, both short- and long-term approaches must be self-consciously employed to determine effective change relative to a traffic safety culture. Our review of initiatives in other arenas suggests that a traffic safety culture can be facilitated by a variety of intervention approaches:¹¹

- using multiple tacks (education, social support, laws, incentives, etc.), while simultaneously addressing multiple levels of influence;
- involving a variety of sectors of society (schools, law, media, business, social services, etc.) to effect broad cultural diffusion;
- focusing on generic cultural determinants of behavior, while also taking into account the special needs of target groups; and
- employing both short- and long-term perspectives, addressing both instrumental and intrinsic cultural features.

In other words, *coordinated, sustained, multilevel approaches offer the greatest promise for effecting cultural change*. Linking initiatives and providing consistent messages, support, and follow-up over time in an integrated approach across levels would seem the most effective strategy for positive behavioral outcomes.

The cultural context encompasses the social norms, attitudes, and behaviors in which people engage, which in turn directly and indirectly affect traffic outcomes. Accordingly, such factors must be treated as critical elements in designing related cultural initiatives. Legal and regulatory interventions represent a powerful tool for promoting traffic safety through social control and punitive threat. However, evaluations are needed to determine the extent to which these interventions, as such, can achieve fundamental cultural shifts. Clearly, they are not sufficient on their own. Further research in general is needed to identify and map ways in which the cultural context and related features directly and indirectly affect traffic behavior and outcomes. That is, “research is needed that will contribute to our understanding of how best to create linkages between levels of influence, and how to sequence or coordinate interventions across levels,” and on the effectiveness of “intervening on additional levels in order to establish the most efficient intervention methods” (Smedley and Syme 2000, 26).

Cultural interventions can modify trajectories for traffic behavior to the extent that experiential expectations can also be changed and sustained cultural initiatives can improve extended outcomes and general expectations. Programs aimed at children and youth tend to emphasize prevention strategies in order to stop negatively defined behavior before it begins. Once it has begun, of course, it is more difficult to stop. If deeply imbued from the outset with a culture emphasizing traffic safety behavior, valuing it as desirable above conflicting imagery in society

11 Cf. (Smedley and Syme 2000, 6).

and, importantly, representing the conflicting unsafe behavior as deeply unappealing along a variety of dimensions (de-glamorizing it), then a safety culture is more likely to be valued and adopted in practice. However, this image must be reinforced at every turn in order to institute what would be effectively a paradigmatic break. There are many institutionalized factors operating to maintain a glamorized and enticing image of risky traffic behavior and to prevent society from adopting a fully realized traffic safety culture. Clearly, as in the examples of anti-smoking, anti-drug, and anti-waste initiatives, a broadly encompassing multilevel and sustained approach will be required if a traffic safety culture is to flourish in the United States today.

Acknowledgement

The authors gratefully acknowledge the assistance of Sherzod Abdukadirov in the preparation of this paper. Errors are the responsibility of the authors.

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