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Specification and Misspecification of Theoretical Foundations and Logic Models for Health Communication Campaigns

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While increasingly widespread use of behavior change theory is an advance for communication campaigns and their evaluation, such theories provide a necessary but not sufficient condition for theory-based communication interventions. Such interventions and their evaluations need to incorporate theoretical thinking about plausible mechanisms of message effect on health-related attitudes and behavior. Otherwise, strategic errors in message design and dissemination, and misspecified campaign logic models, insensitive to campaign effects, are likely to result. Implications of the elaboration likelihood model, attitude accessibility, attitude to the ad theory, exemplification, and framing are explored, and implications for campaign strategy and evaluation designs are briefly discussed. Initial propositions are advanced regarding a theory of campaign affect generalization derived from attitude to ad theory, and regarding a theory of reframing targeted health behaviors in those difficult contexts in which intended audiences are resistant to the advocated behavior or message.

Mass-media campaigns to change health beliefs, attitudes, and behavior have come a long way in recent years. Attention to good practice in formative research, message testing, and program evaluation have increased (Figueroa, Bertrand, & Kincaid, 2002; Hornik, 2002; Hornik et al., 2002; Kennedy & Abbatangelo, 2005). Efforts to establish a sound theoretical foundation for such campaign efforts are also evident in such initiatives.

However, there are troubling gaps even in our most sophisticated efforts to build campaigns upon solid theoretical foundations. Too often, we mistake theories of behavior change for theories of message effects on behavior. The logic models used in campaign evaluation are a necessary but not a sufficient basis for developing a mass media health behavior change campaign (see also Kennedy & Abbatangelo, 2005). Such logic models identify the intervening variables between message dissemination and behavior, permit campaign planners to focus on likely paths to effects, and permit evaluators to develop appropriate research designs and measurement tools. However, such theories do not provide enough insight into *how* the types of messages likely to be used might be expected to have the desired impact.

For example, the theory of reasoned action (Fishbein & Ajzen, 1975), theory of planned behavior (Ajzen, 1991), social cognitive theory (Bandura, 2002), and health belief model (Maiman & Becker, 1974) are each well evidenced with respect to predicting behavior change. These theories are excellent guides for identifying key attitudes, beliefs, and social perceptions that need to be addressed in a campaign by communicators and measured by evaluators. They help us know *what* beliefs we need to influence; they do not necessarily tell us *how* to influence those beliefs, or whether the belief is a plausible candidate for change as a function of message exposure. If some specific argument or fact is available that is compelling, sufficient to alter the key belief, and has not yet been properly attended to by the recipient, that is well and good. However, having a few specific key beliefs amenable to change through such argument is often not the case, and as a result, campaign communicators do not have much theoretical guidance regarding how to construct messages either individually or as a larger campaign sequence.

Moreover, logic models for evaluation designs are also prone to possible misspecification if they are based solely on behavior change theories without careful reference to hypothesized message effect mechanisms. As is argued later,

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evaluation logic models and the designs derived from such models are based on a variety of assumptions about the duration of the effects of exposure to messages and the cumulative nature of such effects. If these assumptions are incorrect, the evaluation is likely to miss much of what is taking place as a result of the communication intervention effort because of assumptions built into the logic model and resultant campaign evaluation design.

Health communication researchers are particularly well positioned to examine theories of message processing and message effects from psychology, marketing, and education, as well as from communication, and to elucidate their implications in a given campaign context. I will also argue that, in so doing, we have the opportunity to build and develop such theory to help support more effective communication efforts in the future. Accordingly, in addition to exploring implications of several message processing theories for campaign implementation and evaluation, I propose two theories for alternative paths of message influence in health interventions.

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NATIONAL YOUTH ANTIDRUG MEDIA CAMPAIGN AND ITS THEORETICAL FOUNDATIONS

To illustrate my thesis, I will start by discussing some strengths and weaknesses of the theoretical foundations for the Office of National Drug Control and Prevention's National Youth Antidrug Media Campaign (NYAMC), and explore what might have been gained from greater attention to theories of message processing and message effects. My purpose is not to critique the NYAMC for failing to do in its initial planning what is seldom if ever done systematically at this point in the field's evolution. Rather, my purpose in discussing the NYAMC is instead to illustrate the questions that are raised when we focus our attention on message-centered theories, and to highlight opportunities that may arise as a result for more effective health behavior change efforts and more appropriate evaluation of those efforts.

The NYAMC is, at the time of this writing, the most ambitious single effort to influence health-related behaviors via mediated communication. Over the past 6 years, more than $1 billion has been spent on the campaign, the large majority of it paying for broadcast of television ads on network and cable television nationwide.

One of the impressive aspects of the NYAMC was its systematic effort to anchor the campaign in theory and literature in a single document, known as the "Burgundy Bible" (Kelder, Maibach, Worden, Biglan, & Levitt, 2000; Office of National Drug Control Policy, n.d.). This report provided a detailed discussion of the literature on the etiology of youth substance use and on various mediating variables that research suggested would be appropriate and effective in changing such behaviors if effectively addressed through the media efforts. This discussion provided a range of specific targeted populations (primarily younger teens who were not yet confirmed substance users and their parents), and identified specific mediators (e.g., perceived social norms, refusal skills, perceived negative consequences of use) to be addressed by the campaign. In so doing, the report provided essential guidance regarding what communicators needed to address and what evaluators needed to measure, as well as acknowledging the importance of producing messages that were exciting enough to capture the attention of risk-taking youth (Palmgreen, Donohew, Lorch, Hoyle, & Stephenson, 2001).

In retrospect, however, the amount of attention provided to the mechanisms of behavior change compared with how messages may be expected to influence those mechanisms is startling. Discussions of message effect processes were relatively brief and focused on only one theory of message effect: social cognitive theory (Bandura, 1986).

In some respects, this is quite understandable. Social cognitive theory provides explicit guidance regarding message design, emphasizing the importance of homophilous yet aspirational models, appropriate reinforcement, and modeling of enactment of appropriate behavioral skills (Bandura, 1986). The evidence base suggests messages using social cognitive theory based strategies can be quite influential (Bandura, 1992). However, at least with the advantage of hindsight, the limitations of social cognitive theory for developing advertising intended to reduce drug use is apparent, and it is regrettable that some of these issues were not raised early in the process.

Some of these limitations are intrinsic in the format of television advertising. Thirty seconds is not much time to develop the kind of vicarious modeling experience that has been shown to be effective in longer formats (e.g., Maibach & Flora, 1993; Singhal & Rogers, 1999). Moreover, the NYAMC ads were competing head to head in their advertising spots with the most attention-getting ads in the United States, from Nike, from Coca-Cola, from Budweiser. Audience expectations for production quality and interest would likely make it even more difficult to create social learning contexts in 30 sec that were not excessively didactic or repetitive in style.

Moreover, the strength of the NYAMC—the economies of scale of reaching a national audience—also created its own problems. Social cognitive theory emphasizes the importance of homophilous models, models similar to audience members, yet who were still aspirational for the audience (Bandura, 1986). It isn't easy to find such homophilous models when the audience is as heterogeneous as the nation's youth.

In addition, social cognitive theory focuses on behavior acquisition. Some of the mediators identified by the report, such as refusal skills, might lend themselves to a social cognitive learning mechanism. However, other—and probably in this particular domain more important—mediators, such as perceived social norms and the risks and cost–benefit of

use, are fundamentally social perceptions and are not examples of behavior acquisition. Other theories of message effects would have to be employed with respect to addressing such outcomes.

The following sections outline possible insights that arise from exploring implications of such theories of message effects for such a campaign.

ELABORATION LIKELIHOOD MODEL: SOME IMPLICATIONS FOR CAMPAIGN DESIGN AND EVALUATION

The elaboration likelihood model (ELM) of persuasion is familiar to most health communicators for its assertion that audience members for whom a message is personally relevant are likely to attend relatively closely to its central arguments. Among audience members for whom the message is less relevant, fewer cognitive resources will be engaged in processing the message, and any persuasive effects are likely to be transient and the result of peripheral cues such as source credibility or attractiveness and number of arguments provided (Petty & Cacioppo, 1986).

What If Key Audiences Are Not Highly Involved Cognitively With Messages?

It is likely, in the context of substance use prevention messages, that the message will be most relevant to those young people who are using or considering use of substances (Petty, Baker, & Gleicher, 1991). After all, in consumer contexts, people in the market for a product or service are likely to attend more closely to messages about that product (Kokkinaki & Lunt, 1999). Marijuana and alcohol use, although illegal for adolescents, is still a form of consumption.

If so, this may result in a variety of challenges. The NYAMC, like most substance prevention efforts, has as its primary goal keeping nonusers from becoming users. Nonusers who are not considering use are probably not attending closely to these messages; the ELM suggests message effects on such low-involvement processors are short-lived (Petty & Cacioppo, 1986) and influenced by source and other peripheral cues.

Moreover, this problem of key audiences who are likely to process prevention messages with at best limited use of cognitive resources is not exclusive to substance-use interventions. It is quite likely, given that people are busy, and health concerns may rarely be paramount absent visible symptoms, that processing of most health information about primary and secondary prevention may be characterized, at least initially, by low-involvement or peripheral processing mechanisms.

Such a processing pattern would lead to two problems. First, if this is the case, is the campaign worth doing, if effects are short-lived and are not necessarily cumulative? The answer may be a positive one—if campaign sponsors are willing to buy into the notion that transient effects that take place in an ongoing way in an ongoing campaign are likely to influence ongoing behavior sufficiently. (See the discussion of attitude accessibility, later, for an exploration of how such transient effects may influence behavior.) The rest of this discussion will assume, for the moment, that such effects may be substantively important and worth the effort of an expensive intervention.

Implications for Campaign Evaluation Logic Models and Design

Note, however, that the prior analysis, if correct, suggests that a typical evaluation logic model may be flawed. Models such as the theory of planned behavior (Ajzen, 1991) or stages of change (Prochaska, DiClemente, & Norcross, 1992) describe changes in behavior based on changes in cognitive structure. The assumption, normally, is that this process takes place cumulatively over time across a study population, and effects can be analyzed using prospective, longitudinal techniques and examinations of mediation. In contrast, this analysis argues for nearly concurrent effects taking place in an ongoing way.

Consider the evaluation problems this creates: If effects of message exposure are highly transitory (and most advertisers would agree that is the case for at least advertising-type messages), prospective measurement based on self-reports of exposure probably mean little. If they show effects, it is probably because exposure at the earlier time point is correlated with exposure more nearly concurrent with measurement of outcomes. True, a treatment–control design should still show the cumulative effect of many small decisions made in the treatment population; such designs, however, are a rarity in media-based interventions. Time-series or tracking analyses—which can be technically difficult and expensive, unless surveillance can match media exposure variability to behavioral outcomes on a daily or weekly basis—become an attractive option. Again, this is not merely an evaluation design issue, it is a function of the logic model that is derived from a theoretical account of how people process messages.

Another, more technical concern should also be noted: If people who are more at-risk are more likely to devote cognitive resources to a message about that risk, then they are more likely to remember it. This is likely to confound self-report measurement if this is used in campaign evaluation. It may tend to suppress campaign effects in a substance prevention campaign because at-risk people are more likely to both remember messages and become users. Conversely, in some campaigns this phenomenon may tend to create the appearance of effects that are stronger than in fact they are. For example, people positively inclined to a behavior such as colon screenings may be more likely both to remember the message encouraging such screenings and to undertake the screening behavior.

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ATTITUDE ACCESSIBILITY

Fazio's attitude accessibility theory acknowledges that there may be competing attitudes or beliefs related to a target behavior or other attitude object, and asserts that the attitude that is most accessible from memory at the moment of decision making or assessment will determine the outcome (Fazio, Chen, McDonel, & Sherman, 1982; Fazio, Powell, & Williams, 1989). Attitudes may be more accessible because of related direct experience (Fazio & Zanna, 1978); attitudes might also be more accessible because the attitude is associated with the context or cues in the environment at the time of decision, or because of recent or concurrent exposure to interpersonal or mediated communication.

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Attitude Accessibility and Slippage Between Intention and Behavior in Primary and Secondary Prevention

Attitude accessibility theory is especially applicable to one of the most frequently encountered problems in health communication and behavior change: bridging the gap between intention and behavior (Sanbonmatsu & Fazio, 1990). There are many health behaviors that people agree they should do, often want and intend to do, but do not, or at least they do not in a sufficiently sustained way. This frequently appears to be the case both for primary prevention (consider people's intentions and difficulties regarding diet, exercise, sunscreen use, etc.) and for secondary prevention (e.g., colon screenings, Pap tests, mammography, AIDS testing).

Advertising emphasizes reach, exposure, repetition, and providing memorable messages. Although it is seldom framed in these terms (only one citation, Kokkinaki & Lunt, 1999, was found on ISI Web of Science, March 15, 2006, for "attitude accessibility AND advertisement"), one can think of advertising effects as operating in part through attitude accessibility mechanisms. Ads typically do not seem to be trying to create lasting belief or attitude change regarding a product or service. Rather, they seem most often to simply make a product, or some product attribute, briefly salient in memory. Such a process certainly would be consistent with an attitude accessibility model.

It may be then, that for a screening behavior such as the Pap or AIDS test appointment to take place, the supportive attitude has to be made salient at just the right time, when the opportunity to follow through is immediately available and there are no significant obstacles such as time conflicts. That means the campaign has to try to make the relevant attitude salient as often as possible for as many people as possible, while also trying to find ways to reduce perceptions of the time or convenience costs of carrying out the behavior. Likewise, for primary preventive behaviors such as diet, exercise, and sunscreen use, maintaining salience through substantial reach and frequency of communication may be important in maintaining the behavior once trial occurs, to use stages-of-change terminology (Prochaska et al., 1992).

Of course, there are other substantive reasons for slippage between intention and behavior—external constraints such as cost and access, or internal obstacles such as lack of skills, self-efficacy, or perceived social support (Slater, 1999)—that require more complex social interventions and more developed message strategies. Likewise there may be key beliefs that would not only increase intention but increase the likelihood of acting on intentions (e.g., colonoscopies are less uncomfortable or embarrassing than one had imagined). However, to the extent that the problem is simply acting on an intention, attitude accessibility may be central.

Attitude accessibility may also be relevant in situations in which the target behavior may be the subject of fundamental ambivalence, such as drinking or marijuana use among adolescents, at least for those who haven't developed a single summary attitude about the behavior (Sanbonmatsu & Fazio, 1990). One can conceptualize this ambivalence as competing sets of attitudes (e.g., "drinking excessively is risky, it is obnoxious, it could mess up my life," vs. "drinking excessively leads to fun social encounters and experiences, it is socially appropriate given my life stage and role"). If so, one function of intervention communication may be to increase the salience of the desired set of attitudes, and the challenge may be to do so not just at the time of message reception but at the time of behavioral decision. An implication for health communicators, then, is that when audiences are receptive but simply not acting on their intentions, reach and frequency and the ability to reach audiences as proximally as possible to the point of behavioral decision are critical factors.

Implications of Attitude Accessibility Theory for Evaluation Logic Models and Evaluation Design

There is another implication of the accessibility perspective, as well, with respect to evaluation logic models and evaluation design. To the extent that message effects depend on attitude accessibility processes, message effects are not likely to be either cumulative or sustained in their effect. Effects related to such mechanisms are likely to be brief, ongoing over the course of a campaign, and short-lived. Nonetheless, their impact over time on behavior may well be nontrivial—but linking exposure to behavior in such cases would be extremely difficult absent a control group. If there can be only one point of measurement under such circumstances, it perhaps should be at the height of the campaign, and not at its end, at least if there is no treatment–control comparison that can assess total impact on behavior at the end of a specified time period. Again, such logic pushes us toward time-series or tracking designs for nonexperimental evaluations, and perhaps for quasi-experimental evaluations, as well (Palmgreen et al., 2001).

I am not arguing that post-only, pre–post, and panel designs must be replaced by time-series and tracking designs

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for all campaign evaluations (although frequently tracking designs may be preferable absent a control condition). As noted already, there are plenty of mechanisms that may also be taking place regarding change of beliefs, social judgments, or efficacy self-assessments that may be effectively captured by such designs.

I *am* arguing, however, that there needs to be a reasonable theoretical rationale to justify the assumption that exposure to a message at one time point will predict an attitudinal or behavioral outcome that may be measured many months later. Absent such a rationale and evidence to support that assumption, it may be more reasonable to believe that exposure at the first time point has no effect, and apparent effects are simply because exposure at Time 1 was correlated with exposure at Time 2 and thus served as a somewhat error-ridden proxy for concurrent effects of exposure. If so, causal explanation associated with such panel designs would be to some extent compromised.

Ideally, given inevitable uncertainties concerning predominant mechanisms, one might look for opportunities to triangulate methods relatively inexpensively. For example, if some behavior is monitored by health authorities (e.g., daily clinic Pap tests in low-income communities), and campaign intensity is also closely monitored (daily variation in radio ads with known reach or gross rating points, weekly or monthly placement of posters or transit ads, weeks when special events take place, etc.), these two forms of monitoring can be linked to provide assessment of ongoing but transient effects consistent with the accessibility perspective as well as with low-involvement processing as described by the ELM. Another triangulation opportunity is the use of market-test quasi-experiments to validate effects found using dose-response, recognition measurement (e.g., Berkowitz, Huhman, Nolin, & Potter, 2006), or even lab or panel efficacy testing using experimental designs.

EXEMPLIFICATION, NORM PERCEPTIONS, AND CAMPAIGN EFFECTS

Recent work by Robert Hornik and his colleagues and students at the University of Pennsylvania suggests that a large-scale campaign may have iatrogenic (boomerang) effects as a result of the sheer volume of messages creating an impression that a negative behavior is more widespread and normative than otherwise believed (Hornik et al., 2002; Jacobsohn, 2005). This, of course, would be a particular problem in the cases they have studied, marijuana campaigns. Research evidence suggests that perceived peer norms are predictive of use (Kandel, 1985; Oetting & Beauvais, 1987). Since marijuana use is illegal and the extent of use is therefore difficult to assess through direct observation, an intensive marijuana campaign might increase perceptions regarding the extent of peer use. This in turn could lead to possible increased likelihood of use as a result of heavier exposure to campaign messages (Jacobsohn, 2005).

While the effects of the campaign are heavily debated, certainly the possibility raised by this research group is a disturbing and provocative one. Given research results in mass communication suggesting that instances of behavior or attitude communicated through the media can be used to assess population norms (Zillman & Brosius, 2000), certainly their thesis is potentially plausible. If supported through subsequent research, it becomes crucial to identify the contingencies such as influence by perceived norms and pluralistic ignorance (O'Gorman & Garry, 1976) regarding frequency of a negative behavior being argued against. Conversely, it becomes important to explore the potential to tap such effects for desired outcomes, such as increasing the perceived normativeness of positive behaviors such as exercise, sunscreen use, and various health screenings.

ATTITUDE TO THE AD THEORY

In general, communication researchers and practitioners have been both eager and ingenious in adopting an eclectic range of theory to help inform the exceptionally difficult task of influencing health attitudes and behavior. One relevant area that has received surprisingly little attention, however, is attitude to the ad (Aad) theory (Batra & Ray, 1986; MacKenzie, Lutz, & Belch, 1986; Shimp, 1981). These researchers, and those who have followed them, have provided solid evidence that, in product advertising at any rate, liking of an ad campaign's messages results in more positive feelings toward the brand and greater purchase intention, primarily, it appears, through a conditioning process linking the ad and brand (Stuart, Shimp, & Engle, 1987). Some health implications of this model were also explored in a study that found that adolescent attitudes toward cigarette and beer ads influenced not only attitudes to the brand advertised, but attitudes regarding the desirability of cigarettes and beer (Kelly, Slater, & Karan, 2002).

Impact of Affective Responses to a Campaign on Feelings About the Targeted Behavior

What if a similar process takes place in response to a large-scale campaign regarding some health behavior? Certainly, this idea has exciting potential, in that a well-received campaign might, based on response to message execution as well as substantive content, influence attitudes toward the target behavior. For example, messages responsive to adolescent culture, values, and dispositional set (Palmgreen et al., 1991; Slater et al., 2006) might exert part of their effect on behavior via perceptions that nonuse is less "uncool" than it might otherwise be perceived to be.

Conversely, however, there is the risk that a poorly conceived or executed campaign might not only be ineffective,

but that the dislike of the message may extend to more negative feelings about the behavior advocated.

One complicating problem in this line of argument is what it means, in the context of health messaging, to like a message. There is an operational issue: most health messages are normative, given that being healthy and responsible is a common social value (Rokeach, 1968). Therefore, there may be a strong social desirability bias pushing people to report at least not disliking such messages. There is a conceptual problem in that health messages are often threat messages (Stephenson & Witte, 2001) and can be effective without being ingratiating in the way commercial ads typically attempt. Clearly, to explore the linkage between Aad and health communication interventions, there needs to be careful theoretical and empirical exploration of dimensions of affective response to a campaign and its messages.

Toward a Theory of Campaign Affect Generalization: Message Backlash and Message Enhancement of the Target Behavior

As a starting point in exploring the Aad–health intervention link, I'd suggest looking at those campaign elements that are most likely to sensitize and offend. The need to make a message relevant to an intended audience to increase the likelihood of their attending to the message is well known (Petty & Cacioppo, 1986) and is part of the normal practice of a professional communicator. However, this may involve portraying individuals and their appearance or behavior, tapping language or music from an audience culture, or implicitly or explicitly addressing given types of people (men having sex with men, risk-taking adolescents, etc.). The message, then, speaks implicitly to personal and social identity (Hecht, Warren, Jung, & Krieger, 2005). If it does so in a way that strikes a false note, condescends, or presents a portrayal that much of the audience rejects, it is likely to generate irritation or anger. Such message backlash is not reactance in the classic sense of being told what to do (Brehm, 1966). Instead, it likely would be a response to a distorted representation of who one is. Although this argument is not new, the larger proposition perhaps is more novel: Such responses may do more than turn off audience members to the campaign, they may turn off audience members to the health behavior advocated by the campaign.

Conversely, successful representations—especially ones that do not merely echo what one believes about oneself, but extend it in creative and important ways (see the framing and repositioning discussion later)—are likely to generate positive feelings about the campaign, even if elements of the message include aversive elements such as threat. Such feelings, at least under some circumstances, are likely to generalize to feelings about the health behavior addressed.

The phrase "at least under some circumstances" is a qualifier that demands explicit development. It is certainly probable that the generalization of affect from campaign to health behavior would only take place given various contingencies. I have already suggested that messages that implicitly address identity or topics such as values that are close to identity are likely to result in such effects, positive or negative. Audiences for whom identity issues are particularly salient—minorities of race, ethnicity, or sexual orientation and adolescents come to mind—may be particularly prone to such effects. It may be that topics about which there is some ambivalence (substance use), stigma (AIDS, substance use, mental illness), or which may be associated with some subpopulation's behavior patterns (AIDS, substance use) may also be more likely to show generalization from affective response to the campaign to attitude toward the health behavior. It is also possible that the effect may be a broader one in some circumstances. For example, a likeable and appealing set of campaign messages might help reduce the negative affect associated with some health behaviors, such as colon cancer screenings.

Another, and less speculative, hypothesis is based on ELM rather than identity theory or extrapolating from Aad theory: that attitude to the campaign messages is a peripheral cue used by less involved audience members, and that in the absence of careful processing of messages, it influences, at least in a transient way consistent with peripheral processing, evaluation of the message topic.

These are all empirical questions, and ones I hope our field will address in due course.

REFRAMING AS A THEORY OF MESSAGE EFFECTS IN HEALTH CAMPAIGNS

The prior discussions concerning ELM, attitude accessibility, and attitude to the campaign are particularly (though not exclusively) relevant to campaigns in which there may be resistance to actually enacting the behavior, but there is not notable cognitive or affective resistance to the message itself. As noted above, most health messages regard what most people would consider responsible and socially desirable behaviors that they are willing to endorse in principle, if not in practice.

However, there are certainly also health domains where there is considerable resistance to the health messages. Adolescents and young adults may reject messages about alcohol or other substances as exaggerated and as aversive, given that there are often substantial perceived hedonic and social benefits of use (Burden & Maisto, 2000). Farmers may resist messages about retrofitting tractors because of perceptions that risk is part of their occupation and that the costs exceed the benefits. Such domains and audiences provide difficult challenges for health communicators and health educators.

Sometimes it may be that resistance is based on an identifiable, correctable misperception. For example, it may be that teens believe that marijuana use does not influence the ability to drive, and providing both quantitative and anecdotal evi-

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dence otherwise may change that belief and change behavior. (In this example, however, the change is likely to come in the form of reduced willingness to smoke marijuana and drive—a laudable outcome—but may not produce the intended reduction in marijuana uptake.) Or, farmers may believe that rollover protection is not very effective, or that their neighbors will see it as representing excessive caution, and correcting such misperceptions would be likely to change both intentions and behavior (Fishbein & Ajzen, 1975).

Resistance Based in Identity

However, often it seems that the source of resistance to health messages is more deeply embedded in audience members' structures of beliefs and values—often, indeed, in their constructions of personal and social identity. Identity, in this context, can be conceptualized in terms of an organized schema of beliefs about self (Markus, 1977) that includes a variety of beliefs about self as a function of social affiliation and role as supported by distinctive communication behaviors (Hecht et al., 2005; Tajfel & Turner 1986). These beliefs include fundamental orientations and priorities associated with a given identity, or values (Rokeach, 1968; Schwartz & Bilsky, 1987).

Further, if the desired behavior is seen in any way as inconsistent with that personal or social identity, it is likely to be rejected regardless of all but the most compelling and inarguable facts. In our examples, risk-taking teens may believe that alcohol or marijuana experimentation is part of what defines them as adventurous, fun party people. Farmers may believe that accepting risk of injury in the interest of keeping costs low is part of what makes them farmers.

This may be conceptualized as, in attitude accessibility terms, a summary attitude that the advocated behavior change "isn't for people like me" (Sanbonmatsu & Fazio, 1990). In fact, it might not be too much of a stretch to consider messages about behaviors or attitudes potentially seen as inconsistent with identity to represent threats to that identity, and to be managed much as other threat messages are when recipients do not believe they can viably enact the recommended behavior. In other words (parallel to the attitude to campaign argument earlier) the messages might give rise to a variety of derogatory responses and other protective reactions similar to the fear control response to some threat appeals (Rogers, 1975; Witte, 1995).

I began this article by talking about the importance of utilizing theories that address how people process and are influenced by messages in communication intervention design. Perceived inconsistency of an advocated attitude or behavior with identity has, then, profound implications for the processing of a message. The message is likely to evoke a summary attitude inconsistent with the advocated position that results in, at best, strongly biased processing of the message arguments. It is likely to result in a variety of strategies that minimize the relevance or credibility of the message and those communicating it. It may even cause backlash and a more negative affective orientation to the target behavior.

Even in the presence of novel and compelling evidence strong enough to overwhelm such resistance, and vigorous attempts to communicate such evidence, the process of change is likely to be a gradual one involving incremental shifts in the relationship between identity and the behavior. The history of the social meaning of smoking, and the consequent prevalence among various populations in the United States, is a case in point (Troyer & Markle, 1983). The image of cigarette smoking as a marker of social sophistication took almost a generation to disappear in the United States. What seems to this observer to be an alternative image of social, fun, and slightly rebellious behavior remains resilient and is perhaps associated with current patterns of social smoking and "chipping" (occasional social smoking, usually at parties, clubs, and bars) among teens.

Reframing as a Method of Making an Advocated Behavior Identity-Consistent

The fundamental proposition I wish to make is as follows: When resistance is based in perceptions that the advocated health attitude or behavior is inconsistent with personal or social identity, the most appropriate approach is to seek to reinterpret the behavior in terms consistent with this identity.

This approach I call *reframing*, in acknowledgment of its roots in work in political communication on framing in news coverage and political discourse (Scheufele, 1999). Framing, in the present discussion, refers to the social priorities and values with which a topic is implicitly associated, as a function of the context of a text or message. For example, a news story or a letter to the editor about smoking bans in restaurants may frame it in terms of fairness to employees by not exposing them to carcinogens, evidence that economic return to restaurant owners is actually increased by such bans, or in terms of heavy-handed and intrusive governmental regulation. A given person—say someone who is moderately conservative, with some concern about equity and health but greater concern about the role of government and protection of small business—is likely to respond very differently depending on which of these frames is successfully associated with the topic or issue.

A comparable process might reframe health behavior change messages with respect to personal and social identity. For example, communication efforts with farmers regarding farm safety have shown encouraging results when a narrative or other communication was used that focused on the negative family and economic impacts of a farm injury (Cole, 1997; Kidd, Townley, Cole, McKnight, & Piercy, 1997). In other words, the use of techniques such as rollover protection on tractors or keeping children and teens away from high-risk chores was reframed as a means of protecting the personal and economic well-being of family members—a high priority for most farmers, and one presumably quite consistent

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with their sense of self as farmers—rather than as a means of expending farm resources to provide for their personal safety, which often apparently was inconsistent with their own self-definition.

Reframing was also used in a school- and community-based youth substance abuse prevention effort that had substantial success in reducing youth uptake of marijuana (Slater et al., 2006). One of the premises of this campaign was that, for adolescents, principal motivators are attainment of personal autonomy and aspiration toward one's goals. Minimization of risk, while no doubt motivating, especially for some, is not a primary objective for many adolescents (Zuckerman, 1994). In some ways, risk avoidance in adolescents might even be considered developmentally inappropriate given the need to explore new activities and identities. Therefore, this campaign used the theme, "Be Under Your Own Influence." The campaign, from the present perspective, sought to reframe substance use from being an exciting way to establish one's autonomy to being an action that was inconsistent with personal autonomy (by surrendering self-control to intoxication) and, as developed in message copy, also inconsistent with a commitment to achieve one's aspirations (Kelly, Comello, & Slater, 2006).

Major national behavior change campaigns that may be conceptualized as using reframing strategies include Legacy's truth™ campaign to reduce teen smoking, which also emphasizes youth autonomy by focusing on industry promotion as a form of manipulation rather than portraying non-smoking as a risk-reduction or compliance behavior (Farrelly et al., 2002) and CDC's Verb™ campaign. CDC's Verb™ campaign focuses on increasing physical activity as a way for youth to have fun with friends rather than as something that, like eating vegetables, is primarily beneficial in terms of health (Huhman et al, 2005).

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CONCLUSION

Theory is essential in guiding communication efforts to influence health-related attitudes and behavior, as well as in guiding evaluations of such efforts. A thorough grounding of communication interventions and evaluations in well-established theories of behavior change is an essential element of such efforts. However, such theories are far from adequate as a basis for developing communication content, communication strategies, and even, in some cases, evaluation designs.

Theories that deserve closer consideration with respect to how campaign messages may be attended to and processed include ELM, attitude accessibility, exemplification theories, attitude to message theory, and the identity and message reframing perspective developed here. Use of such theories can further inform content, channel selection, and evaluation approaches, and move communication and public health closer to the goal of theory-based interventions that are more reliably effective and that represent a sound use of social resources.

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