

Mobilizing and Weakening Peer Influence as Mechanisms for Changing Behavior

Implications for Alcohol Intervention Programs

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The dominant approach to reducing alcohol consumption on college campuses involves giving students accurate statistics on what their peers think, feel, and do in drinking situations. This so-called social norms approach to alcohol intervention grew out of two consistent empirical findings. First, perceptions of peers' alcohol use is strongly correlated with own alcohol use (Perkins, Haines, & Rice, 2005; Perkins & Wechsler, 1996). This finding has been taken as evidence that students are affected by what they think their peers are doing, even though very little of the evidence supports a causal inference. Second, students misperceive their peers, assuming more drinking, more heavy drinking, and more comfort with heavy drinking than is actually the case (Borsari & Carey, 2003; Perkins et al., 2005). This finding has been viewed as a golden opportunity: If, in fact, heavy drinking by college students is driven by an overestimation of this behavior among peers, then providing students with true, accurate information about their peers' behavior should reduce alcohol use.

Inspired by the promise and apparent simplicity of this approach, colleges and universities have adopted it with abandon. For example, in a survey of 118 four-year colleges and universities across the United

States, Wechsler and colleagues (2003) found that 57 of them (48%) had implemented a social norms campaign. However, as studies evaluating these campaigns accumulate, it is clear that their success in reducing drinking among college students is mixed at best (Lewis & Neighbors, 2006; Wechsler et al., 2003). One source of variability in the success of these campaigns is their uneven implementation, but another is an incomplete understanding of what social norms are and how they influence drinking behavior.

In this chapter, I examine how, when, and why social norms influence alcohol use among college students and consider the implications of this analysis for alcohol intervention programs. My argument, in a nutshell, is that social norms offer numerous routes to changing drinking behavior, routes that differ in whether they mobilize peer influence processes or weaken peer influence processes. Moreover, these two routes differ in the populations and contexts for which they are best suited, the details of their implementation, and the consequences, positive and negative, of their success. I begin by describing the properties of social norms that determine how and how much they influence behavior.

SOCIAL NORMS

Social norms are properties of groups; they characterize where a group is located along an attitudinal or behavioral dimension (Miller & Prentice, 1996). Researchers have found it useful to distinguish between two types of norms: descriptive norms, which characterize what group members are like, and injunctive norms, which characterize what group members are supposed to be like to fit in (Cialdini, Kallgren, & Reno, 1991). Descriptive norms for college students might include studying during the week, partying on the weekends, going to home football games, wearing jeans, participating in many extracurricular activities, and holding moderate political views. Some of these might also be injunctive norms (e.g., partying on the weekends, going to home football games), whereas others might not (e.g., studying during the week, wearing jeans). In addition, there might be injunctive norms that prescribe behaviors that the majority of students cannot quite attain (e.g., being highly socially skilled). Thus, descriptive and injunctive norms are typically overlapping, but not isomorphic.

Two properties of a social norm determine its influence on group members' behavior. One is its central tendency—that is, where, on the dimension in question, the group is located. For example, college students tend, in general, to dress casually, party often, and spend a lot of

time on e-mail. Of course, not every college student manifests these qualities, but the average student, the typical student, and most students do. This property of the norm determines what attitudes and behaviors the group promotes in its members, the direction of its influence.

A second important property of the norm is its dispersal—that is, how uniform the group is on the dimension in question. For example, suppose on one campus, students average 20 hours of study time a week, with a range from 15 to 25 hours. On another campus, students also average 20 hours of study time a week, but here the range is 0–40 hours. The central tendency of the norm, and therefore the direction of its influence, is the same on these two campuses; however, the strength of that influence is likely to be very different. On the first campus, studying behavior is highly uniform; everybody does pretty much the same thing. On the second campus, the range is so great that almost anything goes. As a consequence, the studying norm is likely to have much stronger influence on the first campus than on the second.

PERCEPTION VERSUS REALITY

Thus far, I have considered norms as objective properties of groups that can be assessed through scientific measurement and calculation. However, people rarely measure and calculate the norms of their social groups. Instead, they construct these norms in their heads, as they perceive and communicate with their fellow group members. Elsewhere, I have considered this construction process in considerable detail (Miller & Prentice, 1996). Here, I simply note that the process can lead to systematic discrepancies between the actual norms of the group and the norms that group members perceive. These discrepancies are important, for it is the perceived norms, not the actual norms, that influence group members' behavior.

Consider, for example, the norms for alcohol use on college campuses. Researchers have documented several systematic discrepancies between the aggregate of how students represent themselves (the actual campus norms) and the representations they have of their campus as a whole (the perceived campus norms). These discrepancies take the following forms.

First, students overestimate how much their peers drink. For example, in a study of 76,000 students at 130 colleges and universities, Perkins and colleagues (2005) found that 71% of students overestimated the amount their peers drank, whereas just 15% of students underestimated the amount. Discrepancies of this magnitude have been obtained in countless other studies (e.g., Baer, Stacy, & Larimer, 1991; Haines &

Spear, 1996; Steffian, 1999). These findings reveal that students err systematically in where they locate the descriptive drinking norm. Interestingly, studies have revealed a similar overestimation for other kinds of drug use (Perkins, Meilman, Leichliter, Cashin, & Presley, 1999) and for other health-risk behaviors (Gibbons, Helweg-Larsen, & Gerrard, 1995). The majority of studies of norm misperception have focused on this error in locating the descriptive drinking norm.

Second, students overestimate how comfortable their peers feel with heavy drinking. For example, Prentice and Miller (1993) asked students to indicate their own comfort with alcohol use on campus and the comfort of the average student. Male and female students rated the average student as more comfortable than they were (see also Schroeder & Prentice, 1998). This discrepancy, too, has been replicated in numerous other studies (e.g., Bourgeois & Bowen, 2001; Perkins & Berkowitz, 1986; Suls & Green, 2003). Thus, students err not just in where they locate the descriptive drinking norm but also in where they locate the injunctive drinking norm. In fact, in a recent meta-analysis, Borsari and Carey (2003) found that the latter error was larger in magnitude than the former. This discrepancy, too, has been found for other health-risk behaviors, and also for comfort with media portrayals of health-risk behaviors (see Hines, Saris, & Throckmorton-Belzer, 2002; Lambert, Kahn, & Apple, 2003).

Finally, students underestimate the variability in how comfortable their peers feel with heavy drinking. That is, students range more widely in their attitudes toward alcohol use than they themselves recognize. An illustration of this error comes from Prentice and Miller (1993, Study 1). They asked students to estimate not just the comfort of the average student but also the range within which the comfort levels of 50% of students fall. Students underestimated this range by a full point on the 11-point rating scale, indicating that they perceived more uniformity of student opinion than was actually the case. Note that the error students make in estimating the dispersion of the injunctive norm is independent of the error they make in estimating its location. Whether they make a similar error in estimating the dispersion of the descriptive norm has not, to my knowledge, been examined.

SOURCES OF NORM MISPERCEPTION

Faced with this catalogue of errors, one obvious question is how students could be so wrong. After all, people are usually quite good at estimating the attitudes and behaviors of their peers (Morrison & Miller, 2006; Nisbett & Kunda, 1985). The most common answer to this ques-

tion traces misperception of the drinking norms to a psychological state known as “pluralistic ignorance.”

Pluralistic ignorance is a psychological state characterized by the belief that one is feeling differently from others even though one is acting similarly (Miller & McFarland, 1991; Prentice & Miller, 1996). It typically arises in situations in which people act in ways that belie their private feelings, perhaps out of fear of embarrassment, fear of social censure, or just plain uncertainty (Miller & McFarland, 1991). Under these circumstances, a curious divergence between self- and other-perception emerges. People interpret their own behavior in terms of their internal states but take others’ similar behavior at face value. That is, they assume that others are acting on their own private desires and convictions.

Numerous studies have documented pluralistic ignorance in the context of alcohol use on campus (Prentice & Miller, 1993; Schroeder & Prentice, 1998; Suls & Green, 2003). These studies have shown that students overestimate their peers’ comfort, conform to those overestimates, and feel alienated when they perceive their alcohol-related attitudes to vary from those of their peers (Prentice & Miller, 1993). Male students, in particular, feel embarrassed by their concern about drinking and believe they would experience negative social consequences if they expressed it (Suls & Green, 2003). In addition, interventions that dispell pluralistic ignorance reduce drinking, particularly among students who are socially anxious (Schroeder & Prentice, 1998). All of these findings support the claim that students experience pluralistic ignorance in the context of alcohol use on campus and that this state has the effect of increasing their alcohol consumption.

At the same time, pluralistic ignorance can account for only some of the misperceptions students have of the drinking norms. The prototypical situation in which pluralistic ignorance arises is one in which everybody at a party is drinking and appears to be having a good time but is privately harboring misgivings. Here, uniformity of behavior across self and other yields to divergent interpretations of that behavior. This situation produces overestimations of peers’ comfort and of the uniformity of that comfort, but it does not produce overestimations of peers’ drinking. In fact, pluralistic ignorance only occurs in situations in which everybody was drinking and recognized that everybody was drinking. Thus, pluralistic ignorance can explain misperceptions of the location of and consensus around the injunctive norm. It cannot explain misperceptions of the descriptive norm.

What does explain misperceptions of the descriptive norm? Researchers have documented a number of psychological and social processes that lead certain behaviors to be overrepresented in the norm. For example, the presence of behaviors is more noticeable than their absence

(e.g., drinking as compared with not drinking); some behaviors are more noticeable than others (e.g., heavy drinking as compared with light drinking); and some behaviors are more likely to be discussed than others (Miller & Prentice, 1996). Indeed, it is much easier to tell a good story about a night of heavy drinking than about a night of moderation (Berger & Heath, 2005). For all of these reasons, examples of excessive drinking are likely to be perceptually salient, memorable, and therefore prominent in students' thoughts about their peers' alcohol use. More generally, the important point here is that pluralistic ignorance is not the only process that produces misperceptions of drinking norms. These misperceptions are overdetermined phenomena, with multiple processes giving rise to them.

In summary, I have distinguished between different types of drinking norms (descriptive versus injunctive), different misperceptions of these norms (of their location versus dispersion), and different psychological and social processes that underlie these misperceptions. The view of alcohol use among college students that emerges from this analysis is complex, but necessarily so. The various norms, misperceptions, and processes I have documented are all relevant to an understanding of why students often drink to excess, as well as to the crafting of intervention strategies designed to change students' drinking behavior. I now turn attention to these intervention strategies.

STRATEGIES FOR CHANGING DRINKING BEHAVIOR

Alcohol intervention programs are nothing new on college campuses, and neither is the recognition of peer influences on drinking. Traditionally, most intervention programs dealt with peer influence by fortifying individuals to withstand it. Students were taught the deleterious consequences of excessive alcohol consumption, how to monitor their own alcohol intake, and how to say no. These programs foundered by failing to recognize that students typically do not want to resist peer pressure. They want to be accepted by their peers and to fit in with their peer group (Baumeister & Leary, 1995). Indeed, peer influence is best conceived not as a weakness to overcome, but instead as a basic feature of human psychology (Turner, 1991).

Now, with the discovery that students misperceive drinking norms, alcohol intervention programs have a new focus. Rather than fortifying individuals to withstand peer influence, recent programs have sought to alter the norms to which they conform. Peer influence processes can then proceed unfettered and result in a healthier level of alcohol consump-

tion. There are two variants on this general strategy, which map onto the two types of errors students make in perceiving drinking norms.

Mobilizing Peer Influence

The first strategy is to mobilize peer influence by giving students information about what their peers actually think, feel, and do. This information has the potential to reduce alcohol use to the extent that students overestimate their peers' level of drinking and/or comfort with heavy drinking. By providing them with accurate information about their peers, this strategy alters the direction of peer influence toward a more moderate, less permissive norm. It thereby co-opts the peer influence process to promote healthier behavior.

One of the great advantages to this strategy is that it can be implemented, via media campaigns, at low cost and on a large scale. Thus, it is not surprising that dozens of campuses have experimented with this approach, producing posters, leaflets, table tents, greeting cards, and advertisements designed to convey accurate information about students' drinking. The vast majority of these so-called social norms marketing campaigns have focused on correcting misperceptions of the descriptive norm on campus—that is, communicating that most students drink in moderation. By publicizing, for example, that “64% of . . . students have 0–5 drinks at a time” (Granfield, 2002) or that “70% of . . . students have never let drinking get in the way of academics” (Mattern & Neighbors, 2004), these campaigns signal that moderation is the norm and excessive drinking is deviant. An example of a poster from a social norms marketing campaign is shown in Figure 8.1.

This approach to alcohol intervention has had some notable successes at reducing excessive drinking behavior (see, e.g., Glider, Midyett, Mills-Novoa, Johannessen, & Collins, 2001; Haines & Spear, 1996; Mattern & Neighbors, 2004). However, it has also had at least as many outright failures. In some cases, norms campaigns have yielded reductions in drinking for certain groups of students (e.g., women, novices; see Granfield, 2002; Werch et al., 2000). However, more typically, these campaigns have changed students' perceptions of the amount their peers drink without changing their own drinking behavior (e.g., Clapp, Lange, Russell, Shillington, & Voas, 2003; Gomberg, Schneider, & DeJong, 2001; Granfield, 2005; Thombs & Hamilton, 2002). This latter result has also emerged in studies in which norm-correcting information was administered in a group setting (e.g., Peeler, Far, Miller, & Brigham, 2000; B. H. Smith, 2004; Stamper, Smith, Gant, & Bogle, 2004; Steffian, 1999).

Why have so many of these social norms marketing campaigns failed to reduce drinking? One culprit is their message. Social norms

excellent and very
creative

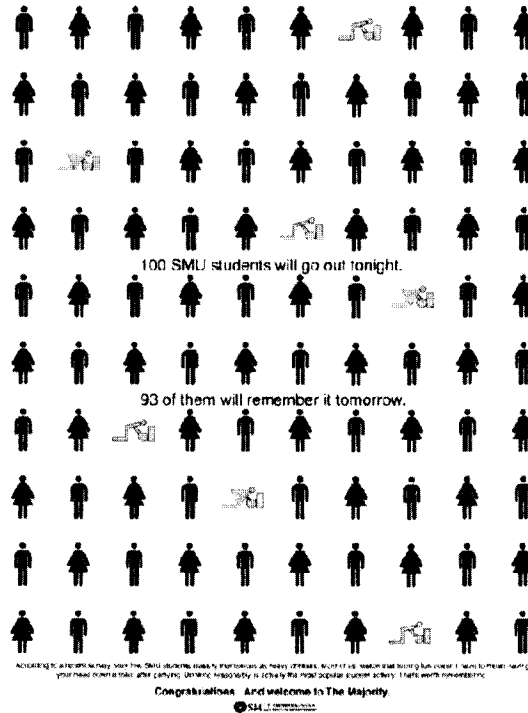


FIGURE 8.1. Poster from a social norms marketing campaign designed to correct misperceptions of the location of the descriptive drinking norm. Reprinted with permission of . . .

campaigns rely on statistical information to convince students' that their perceptions of alcohol use on campus are erroneous. Those statistics may be true, according a campus survey, but usually they are not true to students' experiences. Faced with a discrepancy between their own experiences and a message on a poster, which do students believe? Evidence suggests that their experiences often dominate the message (Polonec, Major, & Atwood, 2006; Russell, Clapp, & DeJong, 2005; S. W. Smith, Atkin, Martell, Allen, & Hembroff, 2006; Thombs, Dotterer, Olds, Sharp, & Raub, 2004).

A second weakness of social norms campaigns is their broad-based, scattershot approach. Imagine a college health administrator, concerned about alcohol use on her campus and eager to implement a social norms intervention. She makes up posters like the poster in Figure 8.1, hangs them up all over campus, and waits. What is she hoping will happen? She is hoping that heavy drinking students will see the poster. She is hop-

← ac?
Do you have perm. to use? who is copyright holder? Please send me copy of letter.

table tent that give accurate statistical information, distributes them in dining halls across campus, and waits.

ing that they will take in its message. She is hoping that they will think about its relevance to their own behavior (“I guess I was in the 7% of ~~students who couldn't remember what happened~~ last Saturday night”). The problem is there is no guarantee that any of these things will happen. Heavy drinking students may not see the ~~poster~~, may not read it, and may not compare their own behavior to the campus standards it invokes. As easy as social norms marketing campaigns are to implement, they are also easy for students to ignore.

10% of students who consumed more than five drinks
a table tent

An alternative approach that deals with this set of issues is the personalized normative feedback (PNF) intervention. The theory behind this approach is identical to that of the social norms marketing campaigns: Give students accurate information about the prevalence of heavy drinking on campus so that they will bring their behavior into line with more moderate campus norms. However, it recognizes, in addition, that normative information must be connected to the self if it is to lead to changes in personal standards and behaviors (Agostinelli & Grube, 2005). Thus, unlike norms marketing campaigns, PNF interventions provide students with personalized information on their own levels of alcohol consumption and where they stand relative to the norm. In addition, these interventions typically target heavy drinkers—the population of most concern and the one most likely to be affected by accurate information about drinking norms. This approach is still in its early days, but the initial evaluations of it are quite promising (Neighbors, Larimer, & Lewis, 2004; Neighbors, Lewis, Bergstrom, & Larimer, 2006; although see Collins, Carey, & Sliwinski, 2002, and Neal & Carey, 2004, for more qualified results).

Thus far, I have attributed the mixed success of social norms marketing campaigns to their implementation; now, let me turn to the limitations inherent in the approach. I describe three such limitations.

First, social norms marketing campaigns are least effective where they are most common (and perhaps most needed). Wechsler and colleagues (2003), in their nationwide survey of norms marketing campaigns, found that these campaigns were most likely to be implemented at large, heterogeneous, public universities with sizable commuter populations. This finding is not surprising, in that these are the schools with high levels of alcohol consumption and, often, serious budget constraints. However, by design, norms marketing campaigns are, in fact, best suited to reduce alcohol use on small, homogeneous, and residential campuses, campuses that function as a single community. These are the campuses on which the “typical student” is a meaningful entity, and pressures to conform to the typical student are strongest.

Second, students' tendency to misperceive drinking norms is inversely related to the power of those norms to influence their behavior.

As I have documented, misperceptions of the drinking of the “typical student” are widespread and robust; however, misperceptions of “one’s friends” are usually much closer to self-ratings (see Borsari & Carey, 2003, for a review). This finding, too, is not surprising, in that students are likely to have a great deal of firsthand information about their friends’ drinking and are also likely to assume that their friends drink more or less as they do. However, given that students are much more likely to be influenced by perceptions of their friends than by perceptions of the typical student (Campo et al., 2003), the fact that people do not misperceive their friends calls into question the effectiveness of a norm-correcting approach. In other words, the norms students misperceive are not the ones that influence their behavior, and the norms that influence their behavior are not the ones they misperceive. This disjunction between misperception and influence may help to explain why norms campaigns so often influence perceptions but not behavior. It may also help to explain why these campaigns prove to be ineffective for athletes (Thombs & Hamilton, 2002), fraternity members (Carter & Kahnweiler, 2000), and other groups whose local norms promote heavy drinking.

Finally, there is a paradox embedded in the logic of these programs. The main message they seek to communicate to students is that most of their peers drink in moderation, that the norms for alcohol use on campus are healthy. One obvious implication of this message is that widespread problem drinking is illusory, and thus there no need for concern. However, the very existence of the message signals concern. Moreover, we know from other data that students themselves feel concern. Information about the moderate drinking habits of the typical student is unlikely to address this perfectly legitimate feeling. And, to the extent that it does address their feelings, it may leave them unconcerned about the risks of heavy drinking rather than committed to a course of moderation (see Buunk, van den Eijnden, & Siero, 2002, for a discussion of a similar dynamic regarding condom use). In short, the messages conveyed by norms marketing campaigns may not be as simple and straightforward as their architects intend.

One way to deal with this problem is to shift the focus of norm correction from the descriptive norm to the injunctive norm, from “most students don’t drink heavily” to “most students don’t approve of heavy drinking.” This focus creates a much more coherent message, and one that is less vulnerable to disconfirmation from simple behavioral observation. Indeed, because they target private thoughts and feelings, injunctive norms campaigns are likely to be more believable than descriptive norms campaigns. Moreover, to the extent that students themselves harbor disapproval, they may resonate to the idea that others do too. The

potential downside of this approach is its judgmental tone, which runs contrary to campus norms of tolerance and freedom from restraint. However, on campuses that have experienced a lot of negative events tied to excessive drinking, this judgmental tone may capture well the community's sentiment and thus may be quite effective. Unfortunately, this is all speculation, as injunctive norms campaigns have not yet come under systematic investigation. However, a number of campuses have implemented such campaigns; a poster from one of these is shown in Figure 8.2.

Clever

In summary, mobilizing peer influence around a more moderate, and accurate, drinking norm can be an effective intervention strategy. It works best for heavy drinkers (Borsari & Carey, 2000), on small, residential campuses (Wechsler et al., 2003), and when accompanied by personalized feedback (Lewis & Neighbors, 2006). It also works best when the message about the true norms falls within students' latitude of accep-



FIGURE 8.2. Poster from a social norms marketing campaign designed to correct misperceptions of the location of the injunctive drinking norm. Reprinted with permission of . . .

← 70%
Same here.

tance (S. W. Smith et al., 2006), and when it encompasses a group with which students identify (e.g., fraternity members, teammates, friends). Obviously, these are mighty qualifiers that seriously restrict the viability of this approach, but it is important to remember that all approaches are limited. Correcting the location of the drinking norm is a useful tool, in combination with others and under the right circumstances (DeJong, 2002). Let me consider now a second strategy for intervening in the peer influence process.

Weakening Peer Influence

As I noted earlier, social norms have two important properties: their location and their dispersion. Location determines the direction of peer influence, and dispersion determines its strength. Both of these properties of drinking norms are misperceived and thus offer possibilities for intervention. Having explored the former, I now turn to the latter.

Correcting misperceptions of the dispersion of the norm involves drawing people's attention to the variability in their peers' thoughts, feelings, and behaviors. This serves to weaken the influence of the norm by dispelling the perception that there is a right way to think, feel, or behave. In the case of alcohol use on campus, heightening students' awareness of the variability of their peers' attitudes and behaviors should dispell the perception that everybody is drinking to excess. It should free students up to act on their own attitudes and dispositions, which, given what we know about those attitudes and dispositions, should promote a more moderate level of alcohol consumption. This effect should be most apparent for students who are most influenced by their peers, in particular, social drinkers and students high in social anxiety.

The effectiveness of this intervention strategy is difficult to evaluate, as few programs have explicitly sought to change students' perceptions of the dispersion of the norm. Nonetheless, it is quite likely that many norms marketing campaigns have influenced perceptions of the norm's dispersion, as well as its location. Consider, for example, the message that "64% of . . . students have 0–5 drinks at a time" (Granfield, 2002). Is this a message about the location of the norm or the dispersion of the norm? In fact, it contains information about both. Interventions involving small-group discussion may also have produced effects on the perceived variability of student opinion and behavior, although without appropriate measures, one cannot know for sure.

The most direct evidence for the effectiveness of weakening peer influence as an intervention strategy comes from Schroeder and Prentice (1998). Their intervention focused on dispelling pluralistic ignorance in a small-group setting. Students were presented with evidence that they

themselves overestimated their peers' comfort with heavy drinking and then discussed, as a group, the phenomenon of pluralistic ignorance and what might give rise to it in drinking situations. The message of the intervention was just because everybody is doing it does not mean they all feel good about it. The result was a 40% drop in drinking behavior, relative to a control intervention, at a follow-up assessment 4 to 6 months after the discussions.

Additional findings suggested that this reduction in drinking was a result of a weakening of peer influence, not a relocation of the norm. First, there was no evidence for a change in perceptions of the average student's comfort with drinking as a consequence of the pluralistic ignorance intervention (in fact, perceptions of average-student comfort dropped in all conditions), nor any evidence that a change in the perceived location of the norm-mediated drinking behavior. Second, the intervention was most effective at reducing heavy drinking among students high in social anxiety, suggesting a reduction in perceived peer pressure. Third, the intervention left nondrinking students feeling more comfortable on campus, again suggesting a reduction in perceived peer pressure (see Prentice & Miller, 1996). All of these findings point to a weakening of peer influence as a consequence of the pluralistic ignorance discussions.

With so few studies available that explore the utility of weakening peer influence as an intervention strategy, it may be premature to speak of its prospects and limitations. Nevertheless, let me make three observations about the potential limitations of this approach. First, like all norms-based approaches, its effectiveness for reducing alcohol consumption depends on the extent to which it targets the norms that are driving drinking behavior. Thus, interventions that target the typical student or the average student will only work on campuses where this entity has some meaning and importance for students—that is, small, homogeneous, residential campuses. Interventions that target more proximal groups are likely to have more impact, but fewer misperceptions available to dispell. An exception to this generalization is the misperceptions associated with pluralistic ignorance, which occurs in groups of all sizes. Indeed, pluralistic ignorance regarding alcohol use is likely to be strongest in face-to-face groups that engage in heavy drinking. This suggests that dispelling pluralistic ignorance may be an effective intervention strategy for sports teams, fraternities, and other traditionally challenging populations.

Second, as liberating as it might be, the strategy of weakening peer influence deprives students of something they very much want and need: a way to fit in with their peer group. Group norms are double-edged swords: They thwart individuality but at the same time provide identity

and belongingness (Prentice, 2006). If students cannot connect themselves to the group and establish themselves as good group members by drinking alcohol, they may very well find another way to do it. Or, they may seek out like-minded peers, who share their perceptions and habits, with whom they can establish more well-grounded norms. The point is that intervention efforts may be able to weaken peer influence in a particular domain, but they will not be able to eliminate it across domains. Nor should they try. Instead, they should include activities that provide students with alternative (healthier) ways of establishing their connection with the group. This inclusion is likely to be especially important in interventions with pre-college-age populations, whose sense of self is less well developed and whose need for peer approval is especially strong.

Third, the success of a norm-weakening approach to alcohol intervention rests entirely on the question of what will guide students' behavior once peer pressure is reduced. The assumption we have made is that students will fall back on thoughts and feelings that encourage moderation. This assumption may be more valid for some populations and on some campuses than others. At highly selective, private universities, where a night of heavy drinking is merely a temporary respite from the relentless drive to achieve and succeed, it may be a perfectly reasonable assumption. In other contexts and with other populations, it may not. However, even if weakening the norm is not sufficient to produce desirable behavior, it may be a necessary component of an effective intervention. Combined with strategies that teach students how to drink responsibly, it may be effective for a wide range of populations.

Summary

In summary, I have outlined four broad types of norms-based alcohol interventions that vary in whether they target the descriptive or the injunctive norm and whether they seek to correct misperceptions about the norm's location or its dispersion. The vast majority of intervention programs have taken just one of these four forms: They have sought to correct misperceptions of the location of the descriptive norm and thereby to mobilize peer influence around a more moderate norm. At the same time, many of these programs have implicitly or explicitly included information in their messages about the dispersion of the norm. The results have been mixed, with some successes, but many failures (Wechsler et al., 2003). The foregoing analysis suggests the following three conclusions about the design of norms-based interventions going forward.

First, correcting the location of the norm and the dispersion of the norm are viable intervention strategies, though they operate through very different psychological mechanisms. In fact, it may be ill advised to

combine these two strategies, for the mechanisms by which they change behavior may interfere with each other. As an illustration of this point, consider once again the message, "64% of . . . students have 0 to 5 drinks at a time." This message includes information about the location of the norm (the average level of alcohol consumption on any drinking occasion is somewhere between zero and five), and also its dispersion (64% of students have fewer than five drinks and 36% have more than five drinks at a sitting). The first piece of information seeks to set a moderate norm, and the second undermines it by highlighting the variability in students' behavior. Campaigns that use messages like this often show effects on perceptions but not behavior, and it is easy to see why. Students can remember the percentage of students who drink zero to five drinks at a time without perceiving any clear implications of this information for their own drinking behavior.

Second, injunctive norms may offer better alcohol intervention possibilities than do descriptive norms. In fact, one of the biggest problems with interventions that target descriptive norms is that students do not believe their message about the level and prevalence of alcohol consumption. Their own observations and experiences belie claims of widespread moderation. Interventions that target injunctive norms are much less likely to run into this problem, in that students' attitudes—their approval of and comfort with heavy drinking—are much less easy to observe. Students cannot know for sure how their peers feel, and their own discomfort lends credence to claims about widespread misgivings. Moreover, norm misperception is considerably greater for injunctive than for descriptive norms (Borsari & Carey, 2003). For all of these reasons, injunctive norms present a very attractive intervention target.

Third, weakening peer influence may be a more reliable intervention strategy than redirecting it (though it may have unintended consequences). Students often misperceive the location of the drinking norm, but they almost always misperceive its uniformity. And even when behavior is uniform (e.g., in heavy-drinking subpopulations), attitudes almost never are. Thus, the most consistently vulnerable flank of a drinking norm is the perception that everybody privately supports it. That vulnerability can easily be exploited in intervention programs that reveal the variability in students' private views. Of course, as I have noted, the ultimate effects of such programs depend on what guides behavior once peer influence is weakened.

As for remaining questions, the most important and pressing one, in my view, is how norms-based interventions influence behavior in real time. That is, what do students do differently by virtue of having participated in one of these interventions? Do they drink a little less at every party? Attend fewer parties? Choose their activities differently? Choose

their friends differently? Broadly speaking, do these interventions lead students to see situations differently and therefore respond to them differently (what I will call the perceptual view)? Or do the interventions lead students to choose different types of situations (the behavioral view)? One of the most striking findings of the Schroeder and Prentice (1998) intervention study was that most of the students did not remember participating in the alcohol discussion groups by the time of the follow-up assessment. This finding seems to argue against the perceptual view, for if students were perceiving situations differently by virtue of the intervention, one would expect them to remember why. More likely, the alcohol discussions, which occurred during students' first week on campus, initiated a pattern of behavior that became self-sustaining, even after its source was forgotten. Empirical research on this point is sorely needed.

CONCLUDING REMARKS

Despite the uneven success of norms-based alcohol intervention programs to date, the foregoing analysis provides ample reason for optimism. In particular, it suggests that there are many different ways to intervene in the peer influence processes that drive so much excessive drinking behavior, and that these interventions can have strong and lasting effects. However, it also highlights the importance of attention to details, including many details that have been overlooked in previous intervention efforts. Decisions about who participates, which norms and misperceptions are targeted, how messages are constructed, what medium is used, and what additional features are included in the intervention all must be tailored to the particulars of the campus and its drinking situation. Peer influence may be a ubiquitous feature of drinking among college students, but each case of peer influence is different. The first step in any successful intervention is to identify whether and how peer influence processes are operating to produce excessive drinking and what opportunities exist to redirect or weaken them. In this chapter, I have suggested a set of distinctions and considerations that are important to this task.

The relevance of this analysis extends well beyond the domain of alcohol use by college students. In fact, norm misperception and peer influence characterize alcohol and drug use by preadolescents and high school students as well (e.g., Hansen & Graham, 1991; Martino-McAllister & Wessel, 2005; Ott & Doyle, 2005), though how these processes operate in younger populations is not well understood. Younger cohorts differ systematically from college students in their life circum-

stances and developmental stages. Peer relations have different dynamics and alcohol use a different social meaning in these cohorts. Thus, the peer influence processes that facilitate drinking among adolescents and younger children are likely to be importantly different from those that facilitate drinking among college students. An understanding of exactly how these processes work will be critical for the development of successful intervention strategies to curb drinking in these younger age groups.

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