

# **Exposing Pluralistic Ignorance to Reduce Alcohol Use Among College Students<sup>1</sup>**

**CHRISTINE M. SCHROEDER**

*University of Medicine & Dentistry  
of New Jersey*

**DEBORAH A. PRENTICE<sup>2</sup>**

*Princeton University*

Research has shown that students' beliefs about alcohol use are characterized by pluralistic ignorance: The majority of students believe that their peers are uniformly more comfortable with campus alcohol practices than they are. The present study examines the effects of educating students about pluralistic ignorance on their drinking behavior. Entering students (freshmen) participated in either a peer-oriented discussion, which focused on pluralistic ignorance, or an individual-oriented discussion, which focused on decision making in a drinking situation. Four to 6 months later, students in the peer-oriented condition reported drinking significantly less than did students in the individual-oriented condition. Additional results suggest that the peer-oriented discussion reduced the prescriptive strength of the drinking norm. The implications of these results for models of social influence and for the representation of peer opinion are discussed.

Alcohol use by college undergraduates is a major concern of university administrators and public-health officials across the country. Surveys of college students estimate that over 90% have tried alcohol, and approximately 20 to 25% exhibit symptoms of problem drinking (cf. Engs, Diebold, & Hanson, 1996; Haberman, 1994; Meilman, Stone, Gaylor, & Turco, 1990;

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<sup>2</sup>Correspondence concerning this article should be addressed to Deborah Prentice, Department of Psychology, Princeton University, Green Hall, Princeton, NJ 08544-1010. e-mail: predebb@princeton.edu.

Perkins & Berkowitz, 1989; see Berkowitz & Perkins, 1986; and Prendergast, 1994, for reviews). Alcohol and alcohol-related events are cited as the number-one cause of death among young people in the United States, primarily because of alcohol-related car accidents and the role that alcohol plays in suicide (Thorner, 1986). In addition, heavy drinking among college students is associated with lower academic performance, a higher rate of getting into trouble with authorities, disruptions in personal relationships, and, for male students, an increased risk of fighting or of damaging property (Berkowitz & Perkins, 1986).

### Social Influence and Alcohol Use

There is now considerable evidence to suggest that social processes play a powerful role in promoting drinking among college students. In particular, numerous studies have shown that one of the most consistent predictors of an adolescent's alcohol use is perceived alcohol use by his or her peers (e.g., Ellickson & Bell, 1990; Kandel, 1980; Marks, Graham, & Hansen, 1992; Perkins, 1985; Stein, Newcomb, & Bentler, 1987). For example, in a review of the literature on alcohol and other drug use, Kandel found that the extent of perceived drug use in the peer group, self-reported drug use by peers, and perceived tolerance for use were all strong predictors of an adolescent's own drug use (Orford, 1985). More recently, Mooney and Corcoran (1991) found that perceived peer alcohol consumption and attitude predicted variance in alcohol consumption beyond that attributable to personal characteristics. Similarly, Werner, Walker, and Greene (1996) found that students' impressions of their friends' drinking correlated with concurrent and future risk for problem drinking. These and many similar findings have been taken as evidence that perceptions of peers exert a considerable influence on adolescents' drinking behavior, even though few of the studies have directly addressed the question of causality (Kandel, 1980).

Peer influence in and of itself is not sufficient to explain why college students tend toward high levels of alcohol consumption. Presumably, peers could as easily encourage moderation as excess. However, on most college campuses, peer influence is directed by injunctive norms that promote heavy alcohol use (Perkins & Berkowitz, 1986; Prentice & Miller, 1993). Indeed, drinking, sometimes to excess, is central to the social identity of many college students and is an important part of social life on most campuses. Thus, it is not surprising that the move to college produces an increase in alcohol consumption, especially among students with little previous experience with alcohol (Friend & Koushki, 1984; Hill & Bugen, 1979; Perkins, 1985; Wechsler & McFadden, 1979). Further evidence suggests that a normative

frequency of binge drinking (neither too often nor too seldom) is associated with greater intimacy and higher levels of disclosure in peer relations (Nezlek, Pilkington, & Bilbro, 1994). These findings are precisely what one would expect if students' alcohol use was driven by social influence processes. They reflect pressures toward increasingly uniform and norm-consistent behaviors over time (for similar examples in other domains, see Crandall, 1988; Festinger, Schachter, & Back, 1950; Newcomb, 1943).

### Pluralistic Ignorance

This emerging picture of the ways in which social influence processes promote alcohol use among college undergraduates would not be complete without one additional fact about the norm for drinking on campus: It does not map well onto the private sentiments of individual students. Indeed, even though students acknowledge the liberal drinking norm and often conform to it in their outward behavior, they still harbor considerable misgivings about the safety, wisdom, and desirability of drinking. The norm that guides their public behavior does not enjoy their private support. If students were aware of this disjunction between the behavioral norm and private attitudes, presumably the norm would lose its prescriptive force. However, students are aware of this disjunction only in their own cases: They assume that their peers hold private views that are much more consistent with the drinking norm than are their own.

In short, students' beliefs about alcohol use on campus are characterized by pluralistic ignorance: They assume that their own private attitudes are more conservative than are those of other students, even though their public behavior is identical (Miller & McFarland, 1991). Numerous studies have documented this systematic divergence of students' own attitudes about alcohol practices from their assumptions about the attitudes of their peers. For example, Prentice and Miller (1993) found that a cross-section of students sampled from all four college classes (i.e., freshman through senior years) rated themselves as less comfortable than the average student and as less comfortable than their friends with drinking on campus. In addition, students' estimates of others' attitudes were characterized by an illusion of universality (Allport, 1924): Not only did they overestimate their peers' support for the drinking norm, they overestimated the uniformity of that support (Prentice & Miller, 1993). Perkins and Berkowitz (1986) also found a sizable disparity between students' own attitudes toward alcohol use and their assessments of the general campus attitude. These researchers asked students to select from among five statements the one that best represented their own feelings about drinking and the one that best represented "the general campus attitude

toward drinking alcoholic beverages" (p. 964). Almost two thirds of their sample endorsed the moderate statement, "An occasional 'drunk' is okay as long as it doesn't interfere with grades or responsibilities," and less than 20% endorsed the two more permissive statements. By contrast, over 60% selected one of those two more permissive statements as representing the campus attitude toward drinking.

These findings reveal that students' perceptions of their peers' attitudes are in error. They exaggerate the extent to which other students are comfortable with excessive drinking. Ironically, it appears that this misperception may play a role in maintaining the pro-alcohol norm on campus. Prentice and Miller (1993), for example, found evidence for attitudinal conformity among male students, who modified their private attitudes over time in the direction of the position they mistakenly assumed to be held by the average student. In a separate study, Prentice and Miller also found that both male and female students showed signs of alienation from the university and from their peers when they (mistakenly) believed their attitudes to be discrepant from those of the average student. And as we noted earlier, previous research on substance use has shown that the perceived level of tolerance for alcohol and drug use among peers is a strong predictor of one's own use (Kandel, 1980). It is clear that perceptions of peer opinion, even if erroneous, have significant consequences.

### Changing Drinking Behavior

Thus, considerable evidence suggests that pluralistic ignorance plays a very negative role in campus social life, perpetuating dysfunctional drinking norms and engendering alienation within the campus community. At the same time, pluralistic ignorance has one positive feature: It offers a clear route to behavior change. If students' drinking practices are fostered, or at least maintained, by the erroneous perception that other students feel more positively toward these practices than they do, then correcting this misperception should lower their alcohol consumption. Most attempts to promote responsible drinking on college campuses have taken the form of informational programs, designed to convey legal and pharmacological information about the effects of alcohol (Berkowitz & Perkins, 1987). More sophisticated programs have sought to teach individual students to make responsible decisions about alcohol and alcohol consumption in drinking situations (e.g., Meacci, 1990). Yet, until recently, attempts at alcohol intervention have focused on changing individual students' beliefs and attitudes about alcohol and have ignored the social context in which most drinking on college campuses takes place (see Donaldson, Graham, Piccinin, & Hansen, 1995;

Ellickson, Bell, & McGuigan, 1993; and MacKinnon et al., 1991, for some notable exceptions using pre-college-age populations).

We wish to argue that a more effective way to change students' drinking behavior would focus instead on revealing their erroneous assumptions about the attitudes of their peers. Previous studies have shown that the majority of students already hold the moderate attitudes toward drinking that informational campaigns and individual counseling sessions seek to foster (Perkins & Berkowitz, 1986; Prentice & Miller, 1993). What students need, in addition, is to understand that those attitudes are shared. We contend that if students were made aware that their estimates of other students' attitudes were too liberal—that is, if they were exposed to the concept of pluralistic ignorance in a group setting—then they should experience much less social pressure to consume alcohol. As a result, they should drink less and should feel more comfortable with their drinking behavior.

Exposing pluralistic ignorance could change drinking behavior in at least two ways. First, it could change the level of drinking that students perceive to be condoned by their peers. Given the news that their peers are not as comfortable with current drinking practices as they had thought, students might construct a new, more conservative norm for drinking; one that corresponds to true campus sentiment. This change in the level of drinking prescribed by the norm would produce changes in drinking behavior. Students would still experience social pressure to drink, but the level of drinking they felt pressured to achieve would be lower, more in line with their private sentiments, and would have much less deleterious consequences.

Alternatively, exposing pluralistic ignorance could change drinking behavior by changing the prescriptive strength of the norm. Social norms derive much of their prescriptive power from the perception that they have universal support (Turner, 1991). Indeed, the presence of even one alternative viewpoint in a group sharply reduces the power of the group norm to induce conformity (e.g., Asch, 1951). Providing students with evidence that their peers are not entirely comfortable with current drinking practices would certainly indicate to them that support for the drinking norm is less universal than they may have supposed, and thus should weaken the norm's prescriptive power. This change in the strength of the norm would produce changes in drinking behavior. Students would no longer feel the same degree of social pressure to bring their own alcohol use into line with the campus standard.

It is important to note that the drinking norm to which we refer in this analysis is an injunctive norm, not a descriptive norm (Cialdini, Kallgren, & Reno, 1991). Descriptive norms are defined by what individuals do; injunctive norms are defined by what they approve (or disapprove) of doing. The drinking norms that drive pluralistic ignorance are defined by what

college students think is appropriate and good behavior, rather than what they think is common behavior. The discrepancy that we find between students' own comfort with campus alcohol practices and their perceptions of the average student's comfort represents a misperception of how other students feel about drinking (the injunctive norm), rather than of how much they drink (the descriptive norm). Interestingly, researchers have documented a similar misperception of the descriptive drinking norm (Baer & Carney, 1993; Baer, Stacy, & Larimer, 1991), but that finding is not directly relevant to this investigation.

### Present Study

The research reported in this article was designed to explore the behavioral and psychological consequences of correcting students' misperceptions of their peers' attitudes toward drinking. Entering students were randomly assigned to participate in one of two types of discussions about alcohol use during their first week on campus. In the peer-oriented condition, students were introduced to the data showing systematic misperception of other students' comfort with campus drinking practices, and were encouraged to talk about this phenomenon and the social dynamics surrounding drinking more generally. In the individual-oriented condition, students participated in a discussion of how to make responsible personal decisions in a drinking situation. This latter condition served as a control, from which to evaluate the effects of the peer-oriented discussion;<sup>3</sup> it was chosen as the comparison because it was representative of many existing programs designed to change drinking behavior. Four to 6 months after the discussions, all students completed self-report measures of their alcohol consumption. We expected to find lower levels of reported alcohol consumption among students in the peer-oriented condition than among students in the individual-oriented condition.

In addition to demonstrating the effects of dispelling pluralistic ignorance, we were also interested in understanding the psychological mechanisms underlying these effects. Thus, we included several additional measures designed to shed some light on why exposure to evidence of pluralistic ignorance might reduce students' alcohol consumption. First, we asked all participants to rate their own comfort with alcohol use and the comfort of the average student, both directly before the discussion sessions and at the time

<sup>3</sup>For research purposes, we would have liked to include a no-treatment control group in the design. However, ethical considerations argued against a no-treatment control. In particular, university officials felt very strongly that it was not appropriate to offer some students an opportunity to participate in a discussion group with potential benefits without offering something comparable (and also potentially beneficial) to other students.

of the follow-up. If dispelling pluralistic ignorance reduces drinking by changing the level of drinking prescribed by the norm, then we would expect the condition difference in drinking to be mirrored by a condition difference in the comfort attributed to the average student, and significant, uniform correlations between these two measures across conditions. Second, immediately following the discussion sessions, we asked all participants to complete the short form of Watson and Friend's (1969) Fear of Negative Evaluation Scale (Leary, 1983). This scale assesses the extent to which people are characteristically anxious about others' evaluations of them and fearful of a loss of social approval. We intended it to serve as a measure of the extent to which students were sensitive to normative social influence. If dispelling pluralistic ignorance reduces drinking by reducing the strength of the norm, then the effects of this manipulation should be greatest for those students who are most sensitive to, and thus most influenced by, social pressure. We expected that fear of negative evaluation might moderate differences between the individual-oriented and peer-oriented conditions.

### *Method*

#### *Overview*

First-year students participated in one of two types of discussion groups about alcohol use during their second week on campus. Brief questionnaires administered immediately before and after the discussions tapped students' demographic characteristics, attitudes and beliefs about alcohol use on campus, and fear of negative evaluation. Four to 6 months later, a subsample of the participants completed a third questionnaire that again assessed their attitudes and beliefs about alcohol use on campus and also included questions about their own drinking behavior.

#### *Participants and Design*

Princeton University has five residential colleges that provide housing for virtually all first- and second-year students. Within each residential college, first-year students are divided into residential advisor (RA) groups that range in size from 12 to 20 students. The RA groups in four of the five residential colleges were invited to participate in this study as one of a series of activities designed to orient them to campus life.<sup>4</sup> A total of 452 first-year students attended one of the September discussion sessions with their RA group. This

<sup>4</sup>The failure of one residential college to participate in the study was due to administrative and staffing difficulties that do not bear in any way on the interpretation of the results.

sample included approximately half of the students who were eligible to attend the discussions; it was representative of the first-year class in terms of all demographic categories for which class statistics were available (gender, ethnicity, and varsity athlete status). The discussions took place during the first week of classes on 3 successive nights in the residential colleges. Each college had two 1-hr discussions each evening, and each discussion was attended by the members of two RA groups.

We chose to conduct this study with entering students for two reasons. First, they did not already have well-established drinking patterns within the local environment. Having just arrived on campus, they did not yet know who their friends would be, how they would spend their evenings and weekends, or what role alcohol use would play in their social lives. We anticipated that it would be easier to affect the formation of their drinking habits than to change the already-established habits of more advanced students. Second, the perceptions that entering students had of the campus and their peers were not yet as well entrenched as those of older students. Although they certainly were not without some beliefs and preconceptions about what college life would be like, they had little direct experience with which to back those up. Again, we anticipated that it would be easier to affect their beliefs in the formative stages than to change their way of thinking later on.

There were two types of discussions: a peer-oriented discussion and an individual-oriented discussion. RA groups were systematically assigned to discussion type so that both types were represented on all 3 nights and in all residential colleges. This procedure was designed to minimize possible confounds due to scheduling or to different characteristics of the residential colleges. In all, 235 students participated in peer-oriented discussions and 217 in individual-oriented discussions.

Four to 6 months after the discussions, 143 of the students completed the follow-up questionnaire. The representativeness of this subsample was assessed by comparing students who returned for the follow-up to those who did not, on a number of measures. Likelihood of returning for the follow-up did not vary with gender, ethnicity (ethnic groups considered were African American, Asian American, Caucasian, and Hispanic), or varsity athlete status (all  $\chi^2 < 1$ ). In addition, follow-up participants did not differ from dropout participants in their self-reported comfort with alcohol use on campus or in their fear of negative evaluation; separate logistic regressions predicting return for the follow-up from comfort with alcohol and fear of negative evaluation showed no association (both  $\chi^2 < 1$ ). Finally, and most importantly, likelihood of returning for the follow-up did not vary with discussion condition,  $\chi^2(1, N = 143) = 1.93, p > .10$ . Thus, we could be reasonably certain that the follow-up sample was representative of the

population of interest and that students were not electing to return for the follow-up based on their comfort with alcohol, their social anxiety, or the type of discussion they had attended in September. The final sample included 66 students (35 males, 31 females) in the peer-oriented condition, and 77 students (44 males, 33 females) in the individual-oriented condition. The analyses reported in this article include data from only those students who participated in all phases of the study.

### Measures

*Predisussion questionnaire.* At the beginning of the discussion sessions, participants completed a brief questionnaire that assessed their membership in various demographic groups, their own comfort with alcohol use on campus, and their estimates of the average student's comfort with alcohol.

Students were first asked to indicate their gender, ethnicity, religious background, home state, whether they attended a public or private high school, whether they were members of a varsity sports team, and the last four digits of their Social Security numbers. For purposes of the current research, only gender was of interest. Other demographic data were used to match the initial questionnaires with the follow-up questionnaire for each participant and to assess the representativeness of the sample.

In addition, students were asked to indicate their own comfort with alcohol use on campus and to estimate the comfort of the average student, as in Prentice and Miller (1993). The two questions were as follows:

1. How comfortable are you with students' drinking habits?
2. Given what you know about Princeton students, how comfortable do you think the average Princeton student is with students' drinking habits?

Students responded to each question by circling a number on the corresponding 11-point scale, ranging from 1 (*not at all comfortable*) to 11 (*very comfortable*).<sup>5</sup>

<sup>5</sup>We did not include a measure of students' drinking behavior in this initial assessment because it would not have provided a valid baseline to which to compare later drinking. The discussion sessions were conducted with first-year students in their first week on campus; neither the number of drinks they had had in the last week nor the number of drinks they had in a typical week would serve as a relevant comparison for their drinking behavior during the upcoming semester. Thus, we relied on the between-subjects comparison across conditions, rather than the within-subjects comparison across time, to assess the effects of the discussion sessions. It is worth noting that the effectiveness of alcohol interventions has been shown to vary with baseline levels of consumption (e.g., Ellickson et al., 1993). However, because we randomly assigned participants to conditions, we had no reason to expect baseline drinking to have a differential effect across the two types of discussion groups.

*Postdiscussion questionnaire.* Following the discussions, participants completed a second questionnaire that included questions about their plans for their first year at college, their reactions to the discussion groups, and, of particular relevance to the present investigation, their fear of negative evaluation (FNE).

FNE was assessed with the short form of Watson and Friend's (1969) Fear of Negative Evaluation Scale (Leary, 1983). This 12-item index measures the extent to which an individual is characteristically anxious about the evaluations of others. Items include: "I worry about what people will think of me even when I know it doesn't make any difference"; "I am afraid that others will not approve of me"; "Other people's opinions of me do not bother me" (reverse scored). Students indicated their agreement with each statement using a 5-point scale ranging from 1 (*not at all like me*) to 5 (*extremely like me*). Each student's ratings of the 12 items were summed to create a single index of fear of negative evaluation ( $\alpha = .90$ ). Possible scores on the index ranged from 12 to 60, with higher scores indicating higher levels of fear.

*Follow-up questionnaire.* Approximately 4 to 6 months after the discussions, follow-up participants completed a final questionnaire. They were asked to indicate their gender and the last four digits of their Social Security numbers on the questionnaire so that each student's responses could be matched with his or her earlier questionnaires.

In the follow-up questionnaire, students were again asked to indicate their own comfort with students' drinking habits and the comfort of the average student on 11-point scales, as in the prediscussion questionnaire. In addition, they were asked a series of standard questions about their own alcohol consumption. The first two items assessed whether they drank alcohol:

1. Have you ever tried alcohol at all?
2. Have you consumed alcohol for recreational or social reasons in the past semester?

Students responded to each of these questions by circling *Yes* or *No*. The next two items assessed how much alcohol they drank, using an open-ended format:

3. How many alcoholic drinks have you had in the past week?
4. How many alcoholic drinks do you have in a typical week during the semester?

Students estimated their weekly alcohol intake.<sup>6</sup>

#### *Procedure*

The discussion groups were conducted as part of the orientation program for first-year students. They were led by peer facilitators who were second-, third-, and fourth-year students at the university. The facilitators were recruited from several existing peer-education programs on campus. Peer facilitators participated in a 3-hr workshop several days before the discussion groups began, in which they were trained to lead one of the two types of discussions. Each facilitator led only peer-oriented or individual-oriented discussion groups.

The discussions took place in the residential colleges in closed-off lounge areas with TV and VCR equipment. When students arrived, they were introduced to the project by the peer facilitator and were asked to sign an informed consent sheet. They then completed the prediscussion questionnaire.

Next, students saw a video presentation that lasted approximately 7 min. The video portrayed several alcohol-related social scenes in a university setting. The video clips were meant to be descriptive, rather than prescriptive; their primary purpose was to provide a basis for the following discussion.

After the video, students took part in a 20-min discussion about drinking on campus. The format was the same for all discussions, but the specific topic varied by condition. In the individual-oriented condition, the discussion centered on the individual and how he or she makes responsible decisions about alcohol consumption. Students were encouraged to reflect on the types of situations in which they might encounter alcohol at the university, to explore their options in those situations, and to consider the personal and social consequences of various courses of action. They also talked about the effects of alcohol and how it might interfere with their decision-making abilities. In the

<sup>6</sup>Although the self-report measure of alcohol consumption that we used in this study is similar to those used in virtually all studies of drinking among adolescents and college students, its validity is still dependent on participants' willingness and ability to accurately report on their own drinking behavior. Encouraging evidence for the validity of these self-reports comes from consistent findings of sensible relations between self-reported alcohol consumption and a variety of factors known to influence drinking behavior (e.g., gender, ethnicity, religiosity, fraternity, and sorority membership) across many previous investigations (see Berkowitz & Perkins, 1986; Prendergast, 1994, for reviews). The present study replicated these findings. In addition, it showed no evidence of a systematic relation between self-reported alcohol consumption and scores on the Fear of Negative Evaluation scale, an individual difference measure of sensitivity to others' views of the self. Thus, it appears that social desirability did not have a strong influence on students' reports of their drinking behavior.

peer-oriented condition, the discussion centered on pluralistic ignorance and its implications. The facilitator began by describing to students the finding of a self-other discrepancy in comfort with drinking on campus and briefly explaining the phenomenon of pluralistic ignorance. Students were encouraged to talk about how and why these misperceptions of peer opinion might have developed. They were also asked to reflect on how misperceiving each other's attitudes toward drinking might affect social life on campus. An outline of the discussion questions used in each condition appears in the Appendix.

The length and format of the two types of discussion sessions were identical. In both, the peer facilitator introduced the topic of the discussion and interjected occasional questions to keep the discussion on track. Students were encouraged to speak openly about their opinions and experiences with alcohol. After the discussions, students completed the postdiscussion questionnaire. No mention was made of any follow-up assessment at this time.

Follow-up participants were contacted 4 to 6 months after the discussion sessions and were asked to complete an attitude survey for first-year students. No mention was made of the alcohol discussion groups until after they had completed the questionnaire, and none of the students reported making the connection themselves. Students were contacted on an individual basis, via campus mailings, posters, and telephone; they received \$3 for completing the follow-up questionnaire. It is important to note that very few of the students who were contacted for the follow-up refused to participate. Instead, data collection had to be terminated when an article describing the project and related research appeared in the student newspaper. Again, we have no reason to believe that the follow-up participants were a biased subset of the original sample.

### *Results*

The primary goal of this investigation was to assess the effects of educating students about pluralistic ignorance on their drinking behavior. We expected that students who had learned about pluralistic ignorance in the peer-oriented discussion would report drinking less than students who had participated in an individual-oriented discussion. In addition, we sought evidence regarding the mechanism underlying the effect. The data allowed us to test two possibilities. One, the peer-oriented discussion could reduce drinking behavior by changing the level of drinking prescribed by the norm, moving it in a more conservative direction. In this case, we would expect to find condition differences in drinking mirrored by differences in pluralistic ignorance and a significant and consistent relation between estimates of the average

student's comfort and drinking behavior across conditions. Two, the peer-oriented discussion could reduce drinking by reducing the level of perceived support for the norm, thereby weakening social pressure to conform to it. In this case, we might or might not find a difference in pluralistic ignorance across conditions, but we would expect to find moderating effects of condition and fear of negative evaluation on the relation between estimates of the average student's comfort and drinking behavior.

Students answered four questions about their drinking behavior: (a) whether they had ever tried alcohol, (b) whether they had used alcohol for social or recreational purposes in the past semester, (c) how many alcoholic drinks they had had in the past week, and (d) how many alcoholic drinks they had in a typical week. Their responses to the latter two questions were highly correlated,  $r(141) = .70, p < .0001$ , and thus were averaged to form a single index of alcohol consumption. Descriptive statistics on this index are shown in Table 1.<sup>7</sup> To evaluate the representativeness of these data, we compared students' reports of their drinking to data gathered on the same campus in the 1992 Core Alcohol and Drug Survey.<sup>8</sup> The 1992 survey indicated that 10% of students had never tried alcohol, whereas 21% had not used it in the past 30 days. In the current sample, 10% of the students indicated having never tried alcohol, and 20% indicated that they had not used it for social or recreational purposes in the past semester. On the 1992 survey, male students reported consuming 5.4 drinks per week on average, and female students reported consuming 3.0 drinks per week. In the current sample, at the time of the follow-up, the figures were 5.0 drinks for male students and 3.2 drinks for female students. In addition, Prentice and Miller (1993) found comparable levels of drinking in their research on the same campus. Thus, the current data on drinking behavior were in line with recent campus samples.

The primary hypothesis of this study was that students in the peer-oriented condition, who had been educated about pluralistic ignorance, would drink less than would students in the individual-oriented condition. A  $2 \times 2$  (Student Gender  $\times$  Condition) ANOVA on students' scores on the drinking index revealed the predicted effect of condition,  $F(1, 137) = 3.80, p = .05$ . As

<sup>7</sup>An initial exploration of scores on the drinking measure (separately for men and women in each condition) revealed no outliers, so all data were included in the analyses.

<sup>8</sup>The Core Alcohol and Drug Survey is a standardized questionnaire that was developed in 1988 with the funding of the United States Department of Education. It is administered yearly to samples of students at a number of American universities, and the data are tabulated and made available by the Department of Education. Because the data are aggregated across all 4 years of college, they do not provide an ideal standard of comparison for the data in the present study. Nevertheless, they do provide a useful context in which our data can be evaluated.

Table 1

*Average Number of Drinks Per Week Reported by Condition*

	Condition	
	Peer-oriented	Individual-oriented
Women		
<i>M</i>	2.29	4.02
<i>SD</i>	2.88	5.99
Interquartile range	0-3.5	0-5.5
Men		
<i>M</i>	3.81	5.81
<i>SD</i>	4.95	7.15
Interquartile range	0-6.5	0-10.0
Total		
<i>M</i>	3.10	5.05
<i>SD</i>	4.15	6.70
Interquartile range	0-5.0	0-6.5

shown in Table 1, students in the peer-oriented condition consumed significantly fewer drinks each week than did students in the individual-oriented condition. This difference was not attributable to differences in rates of abstinence, as there was no effect of condition on the percentage of participants who did not drink during the semester (21.2% in the peer-oriented condition and 19.5% in the individual-oriented condition),  $z = 0.25, p > .50$ . Thus, it appears that the peer-oriented condition reduced alcohol consumption relative to the individual-oriented condition among students who actually drank alcohol.

The analysis also revealed a marginally significant gender difference,  $F(1, 137) = 3.02, p < .10$ . Male students drank more than did female students across both conditions.

*Mechanism: A Change in the Level of Drinking Prescribed by the Norm?*

We next sought to determine the mechanism underlying the condition difference in drinking. We first considered the possibility that students in the peer-oriented condition drank less because they used the information on peer (dis)comfort to construct a new, more conservative norm. In this case,

Table 2

*Ratings of Own Comfort and the Average Student's Comfort With Alcohol Drinking*

	September		Follow-up	
	Self	Average student	Self	Average student
<b>Women</b>				
<i>M</i>	6.76	7.63	7.08	7.54
<i>SD</i>	2.55	1.68	2.15	1.54
<b>Men</b>				
<i>M</i>	7.15	7.87	7.05	7.12
<i>SD</i>	2.80	1.51	2.77	1.66

at the follow-up assessment, students in the peer-oriented condition should rate the average student as less comfortable with campus drinking practices than do students in the individual-oriented condition, and than they themselves did before participating in the discussion sessions. Moreover, this condition difference in average-student comfort ratings should account for the difference in drinking behavior. As a first step in testing this hypothesis, we examined the patterns of own and average-student comfort ratings in the prediscussion and follow-up questionnaires. These data were analyzed using a  $2 \times 2 \times 2 \times 2$  (Student Gender  $\times$  Condition  $\times$  Target: Self or Average Student  $\times$  Time) ANOVA, with gender and condition as between-subjects factors, and target and time as within-subjects factors. The analysis revealed a significant main effect of target,  $F(1, 137) = 6.54, p < .05$ , which was qualified by an interaction of target with time,  $F(1, 137) = 8.73, p < .01$ . Incoming students showed evidence of pluralistic ignorance, as manifested in a discrepancy between their own comfort with drinking habits and their perceptions of the average student's comfort (in September,  $M_s = 6.98$  for own comfort and 7.76 for average student's comfort); this discrepancy was reduced by the end of the semester (at the follow-up,  $M_s = 7.06$  for own comfort and 7.31 for average student's comfort). There was no evidence that the reduction in pluralistic ignorance varied by condition, as the Target  $\times$  Condition, Time  $\times$  Condition, and Target  $\times$  Time  $\times$  Condition interactions were all nonsignificant (all  $F$ s  $< 1$ ). Thus, students' own comfort and their perceptions of the average student's comfort with alcohol did converge over time, but this convergence did not depend on their being exposed to the concept of pluralistic ignorance.

However, the reduction in pluralistic ignorance did vary by gender. Means for the two comfort questions are shown in Table 2, calculated separately for male and female students at the initial and follow-up assessments. The analysis revealed a significant Time  $\times$  Gender interaction,  $F(1, 137) = 4.60, p < .05$ , which reflected a greater change in comfort ratings by male students than by female students. As the means in Table 2 indicate, this differential change occurred primarily in perceptions of the average student. For male students, a simple effects analysis revealed a main effect of time,  $F(1, 137) = 6.26, p < .02$ , and an interaction of time with target,  $F(1, 137) = 7.32, p < .01$ , indicating that the initial discrepancy between own and average-student comfort with drinking was significantly reduced at the follow-up assessment. For female students, a simple effects analysis revealed only a main effect of target,  $F(1, 137) = 4.50, p < .05$  (for the Target  $\times$  Time interaction,  $F[1, 137] = 2.18, p > .10$ ), reflecting the persistence of pluralistic ignorance over time.

We wish to highlight two aspects of these results. First, the absence of any significant effect of condition on the pattern of comfort ratings suggests that the behavioral effects of educating students about pluralistic ignorance did not result from a reconstruction of the drinking norm. Although students in the peer-oriented condition did show a reduction in the level of comfort attributed to the average student, so did students in the individual-oriented condition. Therefore, this reduction cannot account for the condition difference in drinking. Second, consistent with Prentice and Miller (1993), male students showed a greater tendency than female students to reduce the discrepancy between own and average-student comfort over time. But whereas Prentice and Miller's second-year students reduced pluralistic ignorance by shifting their own comfort in the direction of the average student's comfort, the first-year students in this study tended to do the reverse. We will consider possible reasons for this difference in the Discussion section.

#### *Mechanism: A Change in the Prescriptive Strength of the Norm?*

Next, we considered the possibility that the discussion of pluralistic ignorance in the peer-oriented condition reduced the level of perceived support for the norm and thus its prescriptive strength. We reasoned as follows: In a situation with strong, consensual social norms, individuals will be guided in their behavior both by what they believe those norms to prescribe and by how fearful they are of the negative evaluations of their peers. Individuals who are highly fearful of negative evaluation should show a stronger relation between their estimates of the norm and their behavior than

individuals who are less fearful. In a situation with weak social norms, there should be no relation between fear of negative evaluation and behavioral conformity. In the absence of strong, uniform support for the norms, one has no reason to fear social censure for violating them. Therefore, if educating students about pluralistic ignorance reduced the prescriptive strength of the drinking norm, we should find a difference across conditions in the relations among FNE estimates of the average student's comfort, and drinking behavior.<sup>9</sup>

To test these predictions, we conducted a regression analysis in which we predicted students' scores on the drinking index from condition (1 = peer oriented, 0 = individual oriented), FNE, and estimates of the average student's comfort with alcohol. We expected to find a three-way interaction of these variables: Students should drink in accordance with their perceptions of the norm to the extent that they are fearful of negative evaluation, but only if they are in the individual-oriented condition. Students in the peer-oriented condition, who were informed about pluralistic ignorance, should show no such pattern of results. In addition, we included own comfort level and gender (1 = males, 0 = females) in the analysis because of their strong associations with alcohol consumption. Thus, the final equation regressed drinking behavior on gender, own comfort, average-student comfort, condition, and FNE; the two-way interactions between average-student comfort and condition, average-student comfort and FNE, and condition and FNE; and the three-way interaction between condition, FNE, and average-student comfort. The regression was simultaneous, and all continuous variables were standardized before they were entered into the equation.<sup>10</sup> The overall regression equation accounted for 39% of the variance in reported drinking behavior and is shown in Table 3.

The results of this analysis yielded support for our proposed mechanism. In particular, there was a significant interaction between FNE and average-student comfort ( $\beta = 0.27$ ),  $t(129) = 2.12$ ,  $p < .05$ , which was qualified by the predicted three-way interaction with condition ( $\beta = -0.25$ ),  $t(129) = -1.98$ ,

<sup>9</sup>One potential concern about this use of FNE as an individual-differences variable is that the measure was collected after the condition manipulation. We decided not to include the FNE scale in the prediscussion questionnaire because we feared that it would prime social-evaluative concerns, and thus might inhibit students from being completely open and honest during the group discussions. Instead, we included the measure in the postdiscussion questionnaire. The major concern raised by this procedure is that the condition manipulation might have affected students' scores. Fortunately, the data provided no evidence of such an effect; a  $2 \times 2$  (Gender  $\times$  Condition) ANOVA showed the main effect of condition to be nonsignificant,  $F(1, 140) = 2.60$ ,  $p > .10$ .

<sup>10</sup>Standardizing has the effect of centering the variables, as recommended by Aiken and West (1991).

Table 3

*Regression Predicting Drinking Behavior*

Predictor	Standardized $\beta$
Gender	0.13
Own comfort	0.60**
Average-student comfort	-0.25*
Fear of negative evaluation	0.06
Condition	-0.17*
FNE $\times$ Average-Student Comfort	0.27*
Condition $\times$ Average-Student Comfort	-0.02
FNE $\times$ Condition	-0.08
FNE $\times$ Condition $\times$ Average-Student Comfort	-0.25*

Note. The peer-oriented conditions was coded as 1 and individual-oriented condition as 0; males were coded as 1 and females as 0.

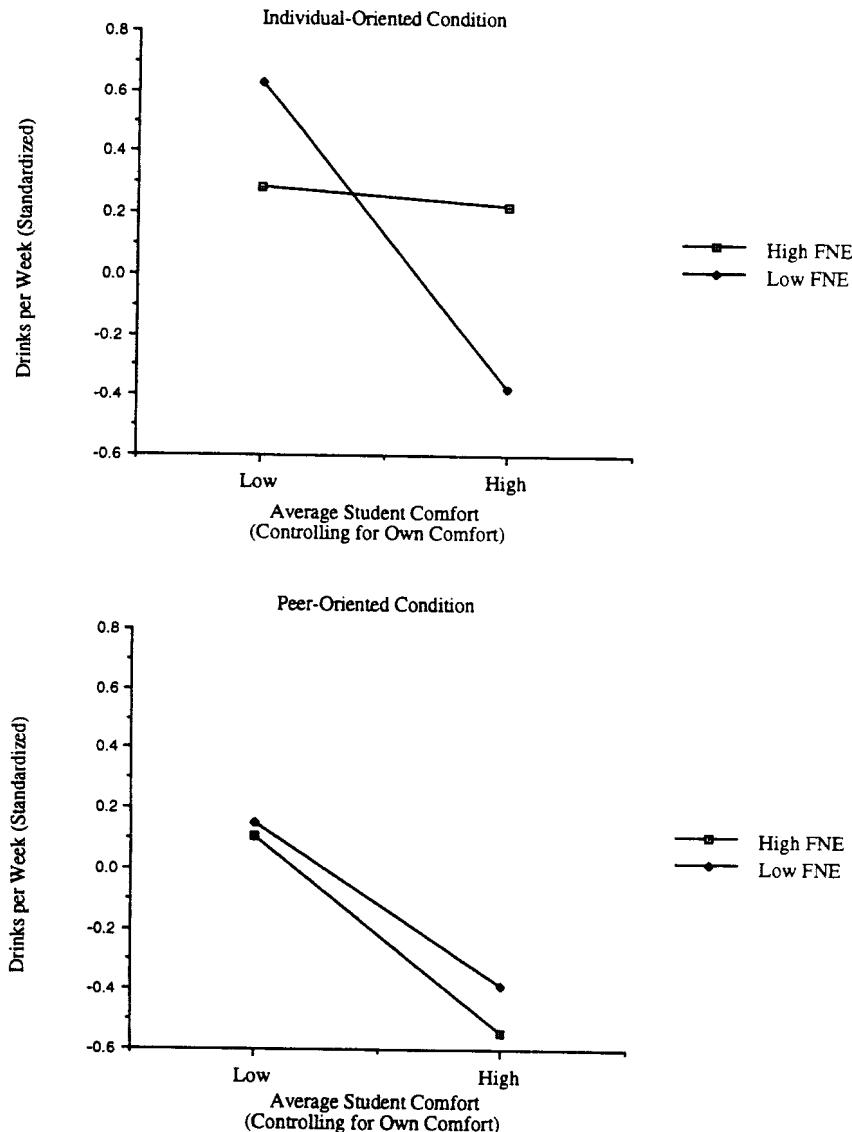
\* $p < .05$ . \*\* $p < .01$ .

$p < .05$ .<sup>11</sup> To determine the form of this three-way interaction, we used the regression equation to predict drinking index scores for a hypothetical student in each cell of the  $2 \times 2 \times 2$  matrix representing the crossing of the three interaction factors: average-student comfort (high and low), FNE (high and low), and intervention condition (individual oriented or peer oriented; Aiken & West, 1991). High and low values for average-student comfort and FNE were defined as 1 standard deviation above and 1 standard deviation below the mean.<sup>12</sup> The results are shown in Figure 1.

Two details of this procedure should be noted. First, because own comfort was included in the regression equation, average-student comfort is calibrated in relative terms. High average-student comfort means rating the average student as relatively comfortable, holding constant one's own rating of

<sup>11</sup>In order to investigate the possibility that these results were driven primarily by the non-drinking students, the regression was also carried out using only students who reported drinking in the past semester. The results for this subset of the data were identical to those reported for the full data set, although the significance of the findings was, of course, affected by the reduction in the sample size.

<sup>12</sup>Since FNE and average-student comfort were standardized, the values entered into the prediction equation were simply -1 for the low-score prediction and +1 for the high-score prediction. Drinking behavior was also standardized, which is why some of the predicted drinking scores are below 0.



*Figure 1.* Predicted level of drinking behavior for students 1 standard deviation above and below the mean on FNE and perceptions of average-student comfort by condition.

oneself; low average-student comfort means rating the average student as relatively uncomfortable, holding constant one's rating of oneself. This accounts for the inverse relation between average-student comfort and drinking. Second, because high and low scores on the continuous variables were defined in a conservative manner (i.e., as only 1 standard deviation above and below the mean), all predicted values are within 1 standard deviation of the mean for drinking behavior.

With these points in mind, inspection of Figure 1 reveals support for our proposed mechanism. In the individual-oriented condition, students low in FNE drank less, to the extent that they perceived the average student to be more comfortable than they were themselves. By contrast, students high in FNE did not show this pattern; they uniformly drank at an above-average level. In the peer-oriented condition, students low in FNE again drank less, to the extent that they perceived the average student to be more comfortable. But in this condition, students high in FNE showed the identical pattern: They also drank less as the self-other discrepancy increased.

These results support the hypothesis that the observed differences in drinking across conditions were due, at least in part, to differences in the prescriptive strength of the drinking norm. Students who were not informed about pluralistic ignorance showed strong evidence of social influences on their alcohol use: The extent to which their perceptions of the average student's comfort with drinking related to their own drinking behavior depended on how sensitive they were to social pressure. Students who were informed about pluralistic ignorance showed no such pattern: Their sensitivity to social pressure did not moderate the relation between perceptions of the average student and drinking behavior.

### *Discussion*

Investigations of alcohol use among college undergraduates have time and again cited the importance of social influence, or peer pressure, in promoting heavy drinking on campus. Although the consistency of this finding has been satisfying for researchers who were interested in explaining students' drinking behavior, it has been quite disconcerting for those who wished to change it. How can one change a behavior that has the force of social influence behind it? The present study sought to answer this question by taking advantage of a well-documented disjunction between students' private attitudes about excessive alcohol consumption and their estimates of the attitudes of their peers. Specifically, we exposed some students to evidence suggesting that their beliefs about alcohol use on campus were characterized by pluralistic ignorance. These students reported drinking less 4 to

6 months later, relative to a comparable control group. Given the modest success of most programs designed to reduce drinking among college students (Perkins & Berkowitz, 1986), the fact that a 1-hr discussion, held during the first week of the semester, could produce this effect is quite impressive.

#### *Reducing Social Influence by Exposing Pluralistic Ignorance*

We were able to gain some insight into how educating students about pluralistic ignorance changed the social dynamics of alcohol use by examining the relations among their estimates of the average student's attitude toward drinking, their own drinking behavior, and their fear of negative evaluation. For students who had not learned about pluralistic ignorance but who instead had participated in an individual-oriented discussion, these relations reflected the workings of social influence: Those high in fear of negative evaluation drank more than did those low in fear of negative evaluation the more comfortable they perceived the average student to be with drinking on campus. For students who had participated in a peer-oriented discussion where they learned about pluralistic ignorance, this moderating effect of fear of negative evaluation on the relation between peer opinion and behavior was eliminated. We interpret these results as evidence that educating students about pluralistic ignorance reduced the prescriptive strength of the norm.<sup>13</sup> Students who learned that their peers were no more comfortable with alcohol than they were did not behave as if they were under normative pressure.

From a more general perspective, these results illustrate the utility of a social influence model for understanding students' alcohol use. Our analysis of drinking on campus shares much in common with earlier models of social influence processes and, in particular, with Crandall's (1988) model of the acquisition of binge eating within college sororities. Like Crandall, we begin with the assumption that a student's drinking behavior is a function of both the social pressures present in the campus environment and his or her vulnerability to those pressures. When injunctive norms are strong, as they typically are regarding alcohol use, students who are vulnerable will be influenced. In

<sup>13</sup>Of course, the pattern of results is equally consistent with the claim that something about the individual-oriented condition heightened concern with drinking. Without a no-treatment control condition, we cannot evaluate the validity of this claim empirically. However, our own and others' previous research has provided considerable evidence for the presence of strong injunctive norms governing alcohol use—evidence that is quite consistent with the results of the individual-oriented condition. Therefore, we believe that it is reasonable to interpret the results of this study as reflecting the effects of a reduction of social-evaluative concern in the peer-oriented condition.

this study, we assessed students' vulnerability with the Fear of Negative Evaluation Scale (Leary, 1983; Watson & Friend, 1969). Although this scale has rarely been used in studies of social influence, it appears ideally suited for identifying individuals who are likely to be susceptible to social pressures (Leary, 1983). And indeed, the moderating effects of fear of negative evaluation found in this study lend credence to this claim.

When we educated students about pluralistic ignorance, the social pressures associated with alcohol use were presumably reduced. What does a social influence model predict about drinking behavior under these conditions? It simply predicts that students will no longer be driven by fear of negative evaluation to drink. No doubt some students who are knowledgeable about pluralistic ignorance will still consume excessive amounts of alcohol, but this behavior will not be motivated by a desire to gain the approval (or to avoid the censure) of their peers.

One remaining question that we were unable to address in the present study is how the drinking patterns of students in the individual-oriented and peer-oriented conditions differed. Although we know that educating students about pluralistic ignorance led them to drink less than students who had not been exposed to it, we do not know how this difference in drinking was manifested in their day-to-day behavior. It is possible, for example, that students in the peer-oriented condition were less likely to binge drink (i.e., drink five or more drinks in a row), drank slightly less alcohol at each party, or attended fewer events each week at which alcohol was available, relative to students in the individual-oriented condition. A more precise understanding of how educating students about pluralistic ignorance changes their patterns of drinking might provide further insight into the ways in which social pressures influence alcohol use.

#### *Representations of Peer Opinion*

The present research has some important implications for our understanding of how individuals represent the opinions of their peers. In this regard, two findings deserve closer analysis. First, why did male students in both conditions estimate the average student to be less comfortable with alcohol at the end of the semester than at the beginning? And second, given that there was no apparent difference in the way students in the two conditions represented peer opinion, why did those representations relate so differently to their drinking behavior?

Consider first the change by male students in their estimates of the average student's attitude over the course of the semester. It is interesting to compare the results of this study to those of Prentice and Miller (1993). Both

studies showed a reduction in the discrepancy between own and average-student comfort over time for male but not for female students. However, the two studies differed in the form that that reduction took: Prentice and Miller's subjects moved their own attitudes in the direction of the average student's, whereas our subjects moved the average student's attitude in the direction of their own. What accounts for this difference? We assume that the psychological processes underlying discrepancy reduction were similar in the two cases. That is, we assume that students in both studies were motivated by a desire to reduce the discomfort of finding themselves at odds with their group. Moreover, we assume that students' choice of how to reduce the discrepancy followed a least-effort principle analogous to that proposed by cognitive consistency theorists (Abelson, 1968). Thus, we are left with the task of explaining why it was easier for our subjects to change their estimates of the average student's attitude, whereas it was easier for Prentice and Miller's subjects to change their own attitudes.

We offer two speculative lines of reasoning to account for this difference. First, it is possible that the first-year students who participated in our study were much less certain of their estimates of peer opinion than were Prentice and Miller's (1993) second-year students. Because they had just arrived on campus, our subjects' estimates were necessarily based on very little direct experience. What they did know was probably gleaned from orientation week, recruitment visits, and especially stories from alumni parents and friends about Princeton in the pre-coeducation days, all of which would exaggerate the already pro-alcohol sentiment on campus. Thus, their revision of their estimates over time may simply have reflected a more realistic assessment of peer opinion, based on a semester's worth of experience. Alternatively, it is possible that there was more evidence for a change in students' sentiments about drinking during our study than during Prentice and Miller's earlier investigation. Several years of concerted efforts by the university to raise consciousness about the dangers of alcohol use may have finally been paying off. Thus, our subjects may have found it easier to construct a case for a change in peer opinion than did students several years earlier.

Whatever the reason for the difference between the two studies, their general patterns of results are quite similar. Both studies show clear differences in the ways male and female students respond to pluralistic ignorance: Men resolved the discrepancy, and women retained it over time. Like Prentice and Miller (1993), we suspect that the resolution achieved by male students was only temporary. Numerous demonstrations of pluralistic ignorance on this campus and others (e.g., Perkins & Berkowitz, 1986), with older as well as younger students, suggest that it is not so easily resolved. Nevertheless, the

gender difference in response to perceived deviance is clearly a real phenomenon that warrants investigation (see Prentice & Miller, 1993, for a more thorough discussion of the literature relevant to gender differences in response to peer pressure).

A second finding that deserves further analysis is the absence of a condition difference in estimates of the average student's attitude at the time of the follow-up assessment. On the face of it, this result would seem to suggest that students in both conditions held similar representations of how their peers felt about alcohol use on campus. But if this were the case, why did peer opinion matter so much more to one group than to the other?

We again offer two speculative lines of reasoning to account for this pattern of results. First, it may be that students in the two conditions did hold similar representations of peer opinion by the time of the follow-up assessment, but that the processes through which they acquired these representations differed in ways that impacted on their drinking behavior. Students in the peer-oriented condition learned very early on that other students were not as comfortable with campus drinking practices as they thought. When they saw their peers looking relaxed with, and even amused by, excessive alcohol consumption, they knew enough to discount their perceptions. They knew that public acquiescence did not necessarily signal private acceptance. Thus, from the outset, these students probably experienced little social pressure to conform to local drinking practices. By contrast, students in the individual-oriented condition arrived at their representations of peer opinion on their own. The change in their perceptions of the average student's comfort almost certainly occurred more gradually, over the course of their first semester on campus. It is likely that these students experienced considerable social pressure to adopt campus drinking practices during their first few weeks at the university, and only later came to realize that their peers' private sentiments were not as pro-alcohol as they had thought. This difference in the early experiences of students in the two groups could account for why the norm had more prescriptive power for those in the individual-oriented condition.

A second possibility is that students in the two conditions did not hold similar representations of peer opinion, even though they rated the average student's opinion the same. Their representations may have differed instead in their variability. Through the discussion of their own and others' opinions about drinking, students in the peer-oriented condition learned not only that their peers were not as comfortable with alcohol as they had thought, but also that different people feel differently. The information on pluralistic ignorance, combined with the sharing of views within the group, served to dispel the illusion of universality (Allport, 1924) that gives peer opinion its prescriptive force. Students in the individual-oriented condition had no evidence to counter

this illusion. They almost certainly represented the distribution of opinions as clustered much more tightly around the position of the average student.

This explanation serves as a reminder that pluralistic ignorance is manifested in not just one, but two errors in the estimation of peer opinion (Miller & McFarland, 1991). Earlier research highlighted the importance of the self-other discrepancy (Prentice & Miller, 1993). The implication was that victims of pluralistic ignorance err primarily in where they locate the central tendency of the group. But the present study suggests that their more consequential error may be the underestimation of the variability of the group. Students experience pressure to drink and feelings of alienation not because they believe that they are in the bottom half of the distribution of comfort with drinking, but because they believe that they are outliers, that they are deviant in their level of discomfort. Once they appreciate that there is no consensus of opinion on drinking, their position relative to the average student's becomes inconsequential.

### *Concluding Remarks*

The present investigation occupies a curious place in a discipline that marks the distinction between basic and applied research. It is, in fact, a little of both: It seeks to advance our understanding of basic psychological processes by examining how they operate in a particular setting. The processes explored in this study are those that underlie social influence—specifically, how individuals represent the opinions of their peers, how those representations are affected by consensus information, and how they ultimately influence behavior. We have shown that behavioral norms depend for their prescriptive power on the perception that they have private support, and that individuals overestimate the uniformity of that support, even when they themselves feel otherwise. We have also shown that revealing that support for the norm is illusory does not lead to a revision of what the norm prescribes, but simply reduces its power to induce conformity. We contend that none of these findings is restricted to the issue of alcohol use on campus; it simply serves as an excellent vehicle to illustrate them.

Of course, from an applied perspective, alcohol use is of interest in its own right. The findings of this research suggest that educating students about pluralistic ignorance may be one component of an effective intervention strategy for reducing drinking on college campuses.<sup>14</sup> Although previous

<sup>14</sup>Note that we are in no way claiming that the alleviation of pluralistic ignorance serves as a magic-bullet solution to the problem of excessive drinking among college students. For an intervention strategy to be maximally effective, it should include multiple approaches, and be sustained over time.

alcohol-intervention programs have recognized the importance of social influence, most have attempted to combat it by strengthening the resolve of the individual student. Our results suggest that it may be more effective to weaken the prescriptive power of the norm (see also Hansen & Graham, 1991). This strategy does not eliminate alcohol consumption altogether, but it frees students to act in accordance with their own, typically more conservative attitudes. Indeed, we believe that this approach may have widespread applicability. Most of the deleterious behaviors that put young people at risk (e.g., smoking, drinking, binge eating, unprotected sexual activity) are driven, at least in part, by peer pressure. Revealing to adolescents and young adults that many of their peers share their concerns about these activities may prove to be a very powerful message.

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## Appendix

### *Discussion Questions Used in the Individual-Oriented and Peer-Oriented Conditions*

(Note: The video that students saw before the discussions included a party scene and a drinking-game scene. The discussions were structured around these typical college drinking situations.)

#### *Individual-Oriented Condition*

##### Alcohol use at parties:

Why do people drink at parties?

What are some of the positive results of drinking at a party? What are some of the negative results of drinking at a party? Do you think that males and females have similar concerns in party situations?

Why might people decide not to drink at a party? Do you think it is possible to have a good time socially without drinking? How are things different if you do not drink?

How does your drinking behavior affect how other people see you? How do you see yourself?

##### Drinking games:

Why do drinking games develop? Have you already experienced them?

What are the negative effects of drinking games? Physical effects? Social effects?

What would happen if you refused to play a drinking game? If you criticized a drinking game? On what grounds might you refuse to take part in and/or criticize a drinking game? What do you think other students would say if you refused to participate?

##### Effects of alcohol use on relationships:

How does alcohol affect your ability to meet friends and potential dates?

What are the long-term effects that drinking may have on your social and dating relationships?

#### *Peer-Oriented Condition*

(Note: As a prelude to the discussion, the facilitators told students about the results of our earlier research demonstrating pluralistic ignorance regarding alcohol use on campus. They began the discussions by asking students to speculate on the reasons why students hold erroneous beliefs about the opinions of their peers.)

**2180 SCHROEDER AND PRENTICE**

Alcohol use at parties:

How might party situations lead one to believe that everybody is comfortable with heavy drinking?

Do you think that there is an advantage to drinking or appearing that you are drinking in party situations? Other situations? Do you think that these considerations are the same for males and females?

Do you think that it is possible to have a good time socially without drinking? How are things different if you do not drink?

Drinking games:

Given the research we discussed earlier, why would people take part in a drinking game?

What would happen if you refused to play a drinking game? If you criticized a drinking game? On what grounds might you refuse to take part in and/or criticize a drinking game? What do you think other students would say if you refused to participate? Suppose that some of them agreed with you. Do you think that they would support you? Why or why not? What factors do you think would make them more or less likely to support your decision not to participate? Have you ever been in this kind of situation?