

A GENERAL FRAMEWORK FOR MODIFYING HEALTH-RELEVANT
BEHAVIOR:
REDUCING UNDERGRADUATE BINGE DRINKING BY APPEALING TO
COMMITMENT AND RECIPROCITY

by

AMY E. CONNER

B.A., Augustana College, 1997
M.S., University of Oklahoma, 1999

AN ABSTRACT OF A DISSERTATION

Submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Psychology
College of Arts and Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2005

ABSTRACT

Binge drinking is a serious health problem among American college students (Wechsler, Lee, Kuo, & Lee, 2000a). One technique that may reduce binge drinking is compliance. Cialdini (2001) defined *compliance* as taking an action because it has been requested and described sequential request tactics, including the commitment/consistency-based foot-in-the-door (FITD) tactic, and the reciprocity-based door-in-the-face (DITF) tactic. Cialdini claimed that these tactics yield *automatic* compliance.

The present research investigated Cialdini's automaticity assumption within the context of reducing binge drinking, by including a neutral or weak message along with the compliance request (consistent with Brannon & Brock, 2001). The main hypothesis was that compliance is *not* automatic, as demonstrated by differential compliance consistent with message strength.

Parallel experiments investigated compliance with requests to reduce one's drinking behavior (Experiment 1, $N=129$) or communicate about responsible drinking (Experiment 2, $N=122$). Participants were randomly assigned to one of six conditions in each experiment. Consistent with the purpose of each experiment, participants indicated whether they would comply with initial requests consistent with FITD and DITF methodology, or were not asked to comply with an initial request (control); read either a *neutral* or *weak* message about the importance of moderate alcohol consumption; then responded to the target request (dependent variable) by reporting the likelihood that they would not drink excessively for one week (Experiment 1) or would discuss responsible drinking with someone (Experiment 2). Participants in both experiments completed

demographic and alcohol consumption information and a social desirability measure (Strahan & Gerbasi, 1972).

Data were submitted to 2(Strength) \times 3(Appeal) \times 2(Gender) ANCOVAs (drinks per occasion and social desirability were covariates). Experiment 1 revealed a significant Strength \times Appeal interaction, with the DITF and FITD appeals eliciting lower compliance rates than the control appeal when accompanied by a weak persuasive message, thereby refuting Cialdini's automaticity assumption. A significant main effect for appeal in Experiment 2 (DITF yielded lower compliance than FITD or control appeal) did not support Cialdini's (2001) claim.

Correlates of drinking behavior among college students are discussed, as are implications of the present research for compliance theory and reducing binge drinking on American college campuses.

A GENERAL FRAMEWORK FOR MODIFYING HEALTH-RELEVANT
BEHAVIOR:
REDUCING UNDERGRADUATE BINGE DRINKING BY APPEALING TO
COMMITMENT AND RECIPROCITY

by

AMY E. CONNER

B.A., Augustana College, 1997
M.S., University of Oklahoma, 1999

A DISSERTATION

Submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Psychology
College of Arts and Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2005

Approved by:

Major Professor
Laura A. Brannon

ABSTRACT

Binge drinking is a serious health problem among American college students (Wechsler, Lee, Kuo, & Lee, 2000a). One technique that may reduce binge drinking is compliance. Cialdini (2001) defined *compliance* as taking an action because it has been requested and described sequential request tactics, including the commitment/consistency-based foot-in-the-door (FITD) tactic, and the reciprocity-based door-in-the-face (DITF) tactic. Cialdini claimed that these tactics yield *automatic* compliance.

The present research investigated Cialdini's automaticity assumption within the context of reducing binge drinking, by including a neutral or weak message along with the compliance request (consistent with Brannon & Brock, 2001). The main hypothesis was that compliance is *not* automatic, as demonstrated by differential compliance consistent with message strength.

Parallel experiments investigated compliance with requests to reduce one's drinking behavior (Experiment 1, $N=129$) or communicate about responsible drinking (Experiment 2, $N=122$). Participants were randomly assigned to one of six conditions in each experiment. Consistent with the purpose of each experiment, participants indicated whether they would comply with initial requests consistent with FITD and DITF methodology, or were not asked to comply with an initial request (control); read either a *neutral* or *weak* message about the importance of moderate alcohol consumption; then responded to the target request (dependent variable) by reporting the likelihood that they would not drink excessively for one week (Experiment 1) or would discuss responsible drinking with someone (Experiment 2). Participants in both experiments completed

demographic and alcohol consumption information and a social desirability measure (Strahan & Gerbasi, 1972).

Data were submitted to 2(Strength) \times 3(Appeal) \times 2(Gender) ANCOVAs (drinks per occasion and social desirability were covariates). Experiment 1 revealed a significant Strength \times Appeal interaction, with the DITF and FITD appeals eliciting lower compliance rates than the control appeal when accompanied by a weak persuasive message, thereby refuting Cialdini's automaticity assumption. A significant main effect for appeal in Experiment 2 (DITF yielded lower compliance than FITD or control appeal) did not support Cialdini's (2001) claim.

Correlates of drinking behavior among college students are discussed, as are implications of the present research for compliance theory and reducing binge drinking on American college campuses.

TABLE OF CONTENTS

List of Figures	v
List of Tables	vi
Acknowledgements	viii
Introduction	1
Binge Drinking Defined	1
The Consequences of Binge Drinking	1
Why Students Binge Drink and Interventions to Reduce Binge Drinking	3
The Role of The College Environment	4
Living On- Versus Off-Campus	5
College Student Groups Promoting Binge Drinking Behavior	6
College Athletic Events	8
Drinking as a College Ritual	9
Interventions to Reduce Binge Drinking on College Campuses	9
Social Marketing	11
The Relevance of Compliance Theory to Reducing Binge Drinking	12
Compliance Theory	15
The Six Principles of Compliance	16
Compliance Issues Relevant to the Present Research	18
The Foot-in-the-Door Procedure	19
Origins of the Foot-in-the-Door Technique	19
Theoretical Bases of the Foot-in-the-Door Effect	21
Practical Applications of the Foot-in-the-Door Effect	23
Factors that Enhance and Diminish the Foot-in-the-Door Effect	26
The Door-in-the-Face Procedure	30
Origins of the Door-in-the-Face Procedure	30
Theoretical Bases of the Door-in-the-Face Procedure	34
Practical Applications of the Door-in-the-Face Effect	38
Factors that Enhance and Diminish the Door-in-the-Face Effect	41
Studies Investigating Both Sequential Request Compliance Techniques	43
Prior Test of “Mindless” Compliance with Requests	45

Outstanding Issues in Understanding Compliance Theory	47
Automatic Versus Thoughtful Compliance	47
Compliance with Requests to <i>Not Do</i> Something versus <i>Do</i> Something	49
Overview of Research	50
Experiment 1	50
Experiment 2	51
Predictions	51
Method	51
Pretest	51
Results of Pretest: Selection of Experiment 1 Appeal and Target Items	53
Experiment 1 Method	54
Participants	54
Correlates of Drinking Behavior for Experiment 1 Participants	55
Overview of Correlation Information	55
Correlations Between Drinking Variables for Experiment 1 Participants	56
Correlations Between Background and Drinking Variables	56
Parental Drinking Behavior	56
Religious Activities	57
Correlations Between Demographic and Drinking Variables	57
Gender	57
Year in School	57
Age	58
Correlations Between Group Membership and Drinking Behavior	58
Fraternity or Sorority Membership	58
Involvement in Athletics	58
Experiment 1 Manipulation: Materials and Procedure	59
Experiment 1 Results	62
Mail-in Measure	65
Electronic Mail Responses	65
Experiment 1 Discussion	66
Experiment 2 Method	68

Results of Pretest: Selection of Experiment 2 Appeal and Target Items	68
Participants	70
Correlates of Drinking Behavior for Experiment 2 Participants	71
Overview of Correlation Information	71
Correlations Between Drinking Variables for Experiment 2 Participants	71
Correlations Between Background and Drinking Variables	72
Parental Drinking Behavior	72
Religious Activities	72
Correlations Between Demographic and Drinking Variables	72
Gender	73
Year in School	73
Age	73
Correlations Between Group Membership and Drinking Behavior	73
Fraternity or Sorority Membership	73
Involvement in Athletics	73
Experiment 2 Manipulation: Materials and Procedure	74
Experiment 2 Results	75
Mail-In Measure	77
Electronic Mail Responses	77
Experiment 2 Discussion	78
Correlates of Drinking Behavior in General	81
Basic Demographic Information	82
Overview of Correlation Information	82
Correlations Between Drinking Variables	83
Correlations Between Background and Drinking Variables	83
Parental Drinking Behavior	83
Religious Activities	84
Correlations Between Demographic and Drinking Variables	84
Gender	84
Year in School	84
Age	85
Correlations Between Group Membership and Drinking Behavior	85

Fraternity or Sorority Membership	85
Involvement in Athletics	86
General Discussion	86
Findings Associated with Primary Purpose	87
Implications of Findings Regarding the Primary Purpose	91
Importance of Proper Calibration of Sequential Request Appeals	92
Correlates of Binge Drinking Behavior	94
Correlates with Drinking Behavior	94
Active Versus Passive Compliance	96
Future Directions	97
References	101
Tables	113
Figure	141
Appendices	142

LIST OF FIGURES

<i>Figure 1.</i> Mean likelihood of not drinking to excess as a function of message strength and appeal type: Experiment 1.	141
---	-----

LIST OF TABLES

<i>Table 1.</i> Experiment 1 Pretest Items Regarding Responsible Alcohol Consumption: Mean Likelihood and Standard Deviation for Each Item	113
<i>Table 2.</i> Demographic Variables: Experiment 1 Participants	117
<i>Table 3.</i> Correlation Matrix: Demographic Variables for Experiment 1 Participants	119
<i>Table 4.</i> Mean Likelihood of Not Drinking to Excess, Standard Error, and Cell Size as a Function of Message Strength and Appeal Type: Experiment 1	121
<i>Table 5.</i> ANCOVA Source Table for Likelihood of Not Drinking to Excess: Experiment 1	122
<i>Table 6.</i> Number of Mail-In Questionnaires Returned and Percentage of Respondents Agreeing to Comply with Request to Not Drink to Excess as a Function of Message Strength and Appeal Type: Experiment 1	123
<i>Table 7.</i> Number of Electronic Mail Responses Received, and Percentage of Respondents Who Felt They Did Not Drink Excessively, as a Function of Message Strength and Appeal Type: Experiment 1	124
<i>Table 8.</i> Experiment 2 Pretest Items Regarding Communicating Responsible Alcohol Consumption Message: Mean Likelihood and Standard Deviation for Each Item	125
<i>Table 9.</i> Demographic Variables: Experiment 2 Participants	129
<i>Table 10.</i> Correlation Matrix: Demographic Variables for Experiment 2 Participants	131
<i>Table 11.</i> Mean Likelihood of Talking to Someone About the Dangers of Excessive Alcohol Consumption, Standard Error, and Cell Size as a Function of Message Strength and Appeal Type: Experiment 2	133
<i>Table 12.</i> ANCOVA Source Table for Likelihood of Talking to Someone About the Dangers of Excessive Alcohol Consumption: Experiment 2	134
<i>Table 13.</i> Number of Mail-In Questionnaires Returned and Percentage of Respondents Agreeing to Comply with Request to Talk to Someone About the Dangers of Excessive Alcohol Consumption: Experiment 2	135

<i>Table 14.</i> Number of Electronic Mail Responses Received, and Percentage of Respondents Who Talked to Someone About the Dangers of Excessive Alcohol Consumption, as a Function of Message Strength and Appeal Type: Experiment 2	136
<i>Table 15.</i> Demographic Variables for All Potential Participants (Including Non-Drinkers) for Experiments 1 and 2 Combined	137
<i>Table 16.</i> Correlation Matrix: Demographic Variables for All Potential Participants (Including Non-Drinkers) for Experiments 1 and 2 Combined	139

ACKNOWLEDGEMENTS

I would like to thank my advisor and friend, Dr. Laura A. Brannon, for her support and guidance relating to this research and my graduate school career. I would also like to thank Dr. Ronald G. Downey and Dr. Leon Rappoport for their suggestions and mentorship through this process. Finally, I would like to thank Dr. Todd Donovan for his feedback and time, and Dr. LouAnn Culley for serving as the outside chair of my dissertation committee.

I would also like to thank my mother, Christine Fus, for always believing in me and loving me unconditionally, and stepfather, Leonard Fus, for motivating me by always asking when I was going to be done with “college.” My sister Jill Borst, brother Chris McCabe, and best friend Elizabeth Loveall have always shown me the kind of support necessary for anyone to survive graduate school.

Finally, I would like to thank the newest addition to my life, my husband Christopher, for his love, patience, and encouragement through this first year of marriage.

Binge Drinking Defined

Alcohol abuse is a serious health problem in the United States, resulting in over 100,000 deaths each year (see Wood, Vinson, & Sher, 2001, for a review). One particular form of alcohol abuse, heavy episodic/binge drinking, is an especially alarming problem among American college students. Binge drinking is commonly operationalized as drinking five or more alcoholic beverages in a row for men, and four or more drinks in a row for women (because women metabolize alcohol differently than men) on at least one occasion in the previous two weeks (Wechsler, Lee, Kuo, & Lee, 2000a). Based on this operationalization, 44% of American college students have engaged in binge drinking behavior, and 23% of American college students are considered frequent binge drinkers (i.e., they binge drink more than once per week). Only 19% of college students abstain from the use of alcohol (Wechsler et al., 2000a; also see Vicary & Karshin, 2002, for a review).

The Consequences of Binge Drinking

Considering the extent to which American college students engage in binge drinking behavior, it is important to understand the consequences of this behavior. General consumption of alcohol beyond moderate levels is considered harmful to health. Some health detriments directly associated with alcohol consumption include an increased susceptibility to illness and decreased rates of the absorption of nutrients by the body (Vicary & Karshin, 2002; also see Wood et al., 2001, for a review). Beyond these negative health effects, alcohol becomes even more detrimental to general well-being when consumed in large quantities, as is the case with binge drinking. Binge drinking among college students leads to a variety of potentially serious problems.

Students who binge drink are more likely than those who do not binge drink to engage in a variety of dangerous behaviors, including driving after drinking and engaging in irresponsible and unplanned sexual activity (Wechsler et al., 2000a). Clearly, a person who engages in such behaviors can face many very negative consequences including fatal automobile accidents, unintended pregnancy, and exposure to sexually transmitted diseases (STDs), including acquired immunodeficiency syndrome (AIDS; Vicary & Karshin, 2002). Additionally, binge drinkers are more likely to need medical attention as a result of overdosing on alcohol, and to be injured than non-binge drinkers (Wechsler et al, 2000a).

While binge drinking does not always lead to such dire consequences as those discussed above, there are a variety of other negative consequences that can affect well-being. For example, binge drinking students are more likely than non binge-drinking students to report getting in trouble with police, arguing with friends, forgetting behaviors they engaged in while drinking, and missing classes and falling behind in schoolwork (Wechsler et al. 2000a). While some of these problems seem trivial compared to others associated with binge drinking, consider that these behaviors can be life-altering; for example, college students may fail to meet their educational goals as a result of consuming alcohol (Cummings, 1997). Perhaps compounding these problems is the fact that many students deny that alcohol has a harmful effect on their lives even while experiencing these problems (Tryon, 1986).

Unfortunately, even students who do not binge drink are affected by students who do. According to Wechsler et al. (2000a), many college students report having been affected by “secondhand effects” of binge drinking. Specifically, many non-binge

drinking and abstaining students report that they have been insulted, been involved in physical fights, have had personal property damaged, have had sleep and study time interrupted, and have received sexual advances from their binge-drinking peers. And clearly society at large is at risk when binge drinking students drive while intoxicated.

Perhaps binge drinking on college campuses continues to be a problem because students do not clearly understand the definition of binge drinking. For example, Wechsler and Kuo (2000) found that only 13% of students correctly identified the extent to which peers binge drink, and 47% *underestimated* the extent to which students participated in the behavior. (Although considering that researchers continue to debate the appropriate definition and label for binge drinking, perhaps it is unfair to expect students to have a clear understanding of the definition; e.g., Carey, 2001; DeJong, 2001; Lange & Voas, 2001; Perkins, DeJong, & Linkenbach, 2001; Wechsler & Nelson, 2001). However, even without understanding the technical definition of binge drinking, it would seem that most students would be able to determine that excessive drinking has a negative influence on their lives; however, this is not the case (Tryon, 1986).

Why Students Binge Drink and Interventions to Reduce Binge Drinking

Researchers have investigated the factors that affect the likelihood that college students binge drink. Some researchers have identified factors associated with decreases in binge drinking behavior. Students who do *not* drink large amounts of alcohol report a strong religious affiliation, most likely due to the value codes promoted by many religious institutions (Haemmerlie, Montgomery, & Cowell, 1999). Further, even though the trend to binge drink has remained relatively constant over the past decade, there has

been a *decrease* in binge drinking behavior among college students living in college dormitories (Wechsler et al., 2000a; Wechsler, Lee, Nelson, & Lee, 2001a). Perhaps this decrease is due to personal factors, in that students who are already committed to living a binge-free life style choose to live in college dormitories with restrictions on drinking behaviors (Wechsler et al., 2001), or perhaps because off-campus students are simply not subjected to major administrative efforts to reduce college binge drinking, as are on-campus students (Wechsler et al., 2000a).

Not surprisingly, more research has investigated the factors that *increase* the likelihood that students will binge drink. Some research has investigated individual differences in general and binge alcohol consumption. Briefly, these include a diagnosis of Attention Deficit Hyperactivity Disorder, being the child of an alcoholic, and personality traits such as high sensation seeking, extraversion, and sometimes neuroticism (see Baer, 2002; Vicary & Karshin, 2002, for reviews). However, the bulk of the research on factors increasing binge drinking behavior has been on aspects of the college environment.

The Role of The College Environment

College students engage in binge drinking behavior more than individuals who are the same age but do not attend college (Bachman, O'Malley, & Johnston, 1984). Although there are several possible explanations for this finding, it is likely that the college environment plays a large part in this discrepancy, especially environments described as "wet" by Weitzman, Nelson, and Wechsler (2003): "Wet environments included friendship networks and affiliations within which binge drinking is common and endorsed, social, residential, and market surroundings in which drinking is prevalent and

alcohol easy to access and cheap” (p. 33).

Several notable factors associated with the college environment that affect binge drinking behavior have been the focus of recent research. These include location of residence (on- versus off-campus), access to campus groups that generally promote binge alcohol consumption, including college Greek organizations (social fraternities and sororities) and athletic groups, easy access to college sporting events (which promote binge alcohol consumption), and the idea of drinking behavior as a college ritual.

Living on-versus off-campus. One major factor affecting the likelihood that students will binge drink is where they live while attending college. While regional differences exist (e.g., American college students living near the Mexican border are more likely to binge drink than students living in other areas of the country; Clapp, Voas, & Lange, 2001; Presley, Meilman, & Leichter, 2002), differences exist based on where students live on each campus. In particular, although binge drinking rates have remained constant over the past decade, one change was that students living on-campus have reported decreased levels of binge drinking behavior (as already discussed); but on the other side of this statistic is that binge drinking rates have increased among students living off-campus. As suggested by Wechsler et al. (2000a), this statistic may represent college efforts to reduce binge drinking among some students (e.g., those living on-campus) that are not applied to the entire college community (e.g., students living off-campus). Another explanation provided by Vicary and Karshin (2002) is that perhaps students who do not wish to reduce their binge drinking behavior while living on-campus simply decide to move off-campus where they will not be subjected to rules against this behavior. In either case, interventions to reduce binge drinking should target not only

students living on-campus, but all college students who may be prone to this behavior. Further, Weitzman et al. (2003) recommend that colleges should provide students with opportunities to live in alcohol-free housing to minimize the impact of wet environments on binge drinking behavior.

College student groups promoting binge drinking behavior. Another major factor associated with college life that influences college student binge drinking is the existence of groups promoting such behavior. There are two groups in particular that have been investigated with respect to binge drinking: Greek groups and athletic groups (See Presley et al., 2002, for a review).

Greek membership in social fraternities and sororities is regularly associated with increases in binge drinking. In fact, Greek students regularly report drinking more than college students who are not members of Greek groups (e.g., Wechsler, Kuh, & Davenport, 1996). Perhaps this is because the culture of Greek life suggests that binge drinking is appropriate; this culture is propagated through stories concerning drunken behavior at Greek parties that are shared among group members (Workman, 2001) and by the behavior of Greek leaders, who drink more than typical members of Greek groups (Cashin, Presley, & Meilman, 1998).

Besides Greek membership, membership on college athletic teams has been associated with increased binge drinking despite the notion that athletic participation is related to a variety of health benefits. Like Greek organizations, athletic teams are social groups and as such, athletes are prone to binge drinking. For example, Nelson and Wechsler (2001) found that male and female college athletes (students who engage in at least one hour of athletic activities per day) binge drink more often than non-athletes and

are more likely to be harmed by this behavior.

Because members of Greek and athletic groups are known to be at risk for binge drinking, several interventions have targeted these groups. For example, administrators at most colleges prohibit keg deliveries to Greek houses (Wechsler, Kelley, & Weitzman, 2000b). Further, Moscato et al. (2001) used fear appeals to convince Greek students to reduce their alcohol consumption. A fear appeal is a persuasive message that arouses fear in the message recipient by stating the possible negative ramifications of some behavior, then suggests realistic ways to reduce the threat associated with the behavior. After delivering fear appeals to reduce alcohol consumption to Greek students, Moscato et al. (2001) found significant reductions in alcohol consumption. This suggests that interventions to reduce alcohol consumption among Greek students can be beneficial.

On the other hand, college athletes are frequently exposed to information about the negative effects of binge drinking, and possess unique motivations to remain healthy as compared to typical college students (e.g., poor health resulting from excessive alcohol consumption can hurt athletic performance). According to Nelson and Wechsler (2001), “Given the high rate of binge drinking among athletes, it appears that educational efforts highlighting the risks of alcohol are not a sufficient strategy to reduce the rate of binge drinking” (p. 46). However, the authors suggested that targeting the unique motivations (and how binge drinking specifically relates to achieving these motivations) of athletes to avoid binge drinking may prove to be a more successful educational strategy.

College athletic events. In addition to the finding that college student athletes are more likely to drink than are non-athletes, another aspect of the college environment that promotes binge drinking behavior is merely being a college sports *fan*. Nelson and Wechsler (2003) found that colleges emphasizing athletics report higher levels of binge drinking among students than do colleges placing less of an emphasis on athletics. Further, college students who consider attending sports events an important social activity were more like to binge drink, and to consider being drunk as the ultimate goal of drinking alcohol, as compared to students who do not consider attending sporting events an important social activity.

It is important to consider college sports fans in carrying out interventions to reduce binge drinking at American colleges (Nelson & Wechsler, 2003). One form of such an intervention that has been carried out at the University of Colorado is simply to ban the sales of alcohol at college sporting events. Bormann and Stone (2001) investigated the effects of this ban on the number of negative incidents experienced by college football fans (such as being arrested or assaulted during the game). Although fans were not happy with the ban, the college noted decreases in negative incidents during football games after the ban was instituted. The authors reported that binge drinking rates overall did not drop at the university, and there is no reason to suspect that sports fans did not “load up” on alcohol before entering the stadium or that they did not try to sneak in alcohol. In sum, the ban on alcohol sales at college sports stadiums is clearly not a panacea for the problem of binge-drinking behavior. However, it is clear that game days were safer for University of Colorado sports fans as a result of the ban, so interventions such as these represent a step toward correcting the problem of binge drinking among

college sports fans.

Drinking as a college ritual. Besides the factors discussed above, there are a variety of other reasons college students binge drink. Many of these are consistent with the idea that college students perceive drinking as a sort of college ritual. For example, Treise, Wolburg, and Otnes (1999) interviewed college students to learn why they binge drink. They found the process of binge drinking closely mirrors ritualistic behavior, and that drinking provides a variety of “gifts” to those who engage in this behavior. Treise et al. (1999) identified alcohol as the main artifact of the drinking ritual, and identified three “gifts” associated with this ritual. These gifts were order (e.g., students arrange their class schedules around when they planned to consume alcohol); community (e.g., students often drink in groups and perceive the consumption of alcohol as bringing them closer together); and transformation (e.g., drinking helps students forget about their problems and can make them feel like someone else). In line with the idea of binge drinking as a ritual is the idea that many students engage in drinking games. The rules of these games encourage binge drinking by stating that the person who “loses” must drink a certain amount of alcohol. Students primarily play drinking games to have fun/celebrate and to feel relaxed/disinhibited (Johnson, Hamilton, & Sheets, 1999). In order to reduce binge drinking, Treise et al. (1999) provided examples of public service announcements (PSAs) targeting each of the “gifts” associated with the drinking ritual they identified. However, they had not tested the effectiveness of these in reducing binge drinking.

Interventions to Reduce Binge Drinking on College Campuses

This paper has addressed several of the major reasons college students binge drink, and in some cases, what has been done to curb binge drinking based on those

reasons. To summarize these findings, college administrators are aware of the issue and continue to pass rules to prevent students from binge drinking (Wechsler et al., 2000a). In fact, Wechsler, Seibring, Liu, and Ahl (2004) found that *all* colleges included in a recent study (representing 68% of all American four-year colleges) had officially acted in some way to reduce the binge drinking problem among their students.

The fact that colleges are acting to reduce binge drinking behavior is evident in part from the finding that on-campus students are less likely to binge drink than are off-campus students, ostensibly because on-campus students are subject to college rules concerning drinking while off-campus students are not. Further, an administrator-imposed ban on alcohol sales at a college stadium reduced drinking-related incidents at college football games (Bormann & Stone, 2001); although this has not directly addressed the problem of binge drinking. Wechsler, Lee, Gledhill-Hoyt, and Nelson (2001b) reported that students attending colleges completely banning alcohol use were 30% less likely to binge drink, despite the fact that students at “ban” schools were no less likely to binge drink than students at “non-ban” schools at entry. All in all, administrative efforts to reduce binge drinking seem promising, but binge drinking continues at schools with strong regulations against alcohol consumption, and administrations cannot control the behavior of every student on every occasion.

Attempts to educate groups known to be at increased risk for binge drinking behavior have yielded mixed results. For example, fear appeals stressing the consequences of binge drinking have resulted in decreased drinking behavior among Greek students (Moscatto et al., 2001). On the other hand, extensive educational efforts aimed at college athletes have not been successful; Nelson and Wechsler (2001)

suggested carefully targeting the athletes' motivations during educational attempts to increase their success. In fact, at least one personalized education-based intervention has been shown to reduce binge drinking in some college students (Murphy et al., 2001), although many universities may not have the resources available to personalize education in this manner.

Social marketing. A final type of intervention briefly mentioned in the above discussion is the use of public service announcements (PSAs) to convince college students to drink responsibly. More broadly, the use of marketing techniques to effect social change is known as social marketing. Messages to change drinking behavior are among the most common PSAs produced (Treise et al., 1999). While these messages have increased awareness about alcohol-related problems, they have done little to change behavior (Jacobs, 1989). Perhaps these attempts have failed to change behavior because they must compete with advertising produced by alcohol companies with very large advertising budgets (Saffer, 2002). Or perhaps they have failed because they address a general audience (DeJong & Atkin, 1995) rather than target those who are most at-risk.

Several researchers have suggested possible theoretical frameworks for future research within the social marketing realm, specific to the binge drinking problem among college students (Black & Smith, 1994; DeJong, 2002; Norman, Bennett, & Lewis, 1998; Treise et al., 1999). However, the most widely implemented social marketing campaign currently in use at universities to reduce binge drinking is the social norms approach. The social norms approach is based on the finding that students frequently overestimate the amount that their peers drink (Perkins, 2002; Perkins, 2003; Perkins & Berkowitz, 1986). Correcting this misperception should result in lower drinking rates because "The idea that

many other students drink excessively may cause students to feel both justified and pressured to consume more alcohol than they would if they believed instead that their peers drank more moderately” (Gomberg, Kessel Schneider, & DeJong, 2001, p. 376). In short, the universities that employ this approach survey students to obtain reports of actual drinking behavior, then report these statistics to university students using resources such as the college newspaper, radio station, and student union publicity. The message sent to students is that their peers drink, but not nearly as much as they think.

While some preliminary data suggested that social norms campaigns are successful at reducing college student binge drinking behavior (Glider, Midyett, Mills-Novoa, Johannessen, & Collins, 2001; also see Perkins, 2002; & Perkins, 2003; for reviews), more recent research suggests that these campaigns, as currently implemented, are not successful in reducing the binge drinking problem (Wechsler, Nelson, Lee, Seibring, Lewis, & Keeling, 2003), especially among groups of college students with cultural norms prescribing increased drinking behavior (e.g., athletes, Thombs & Hamilton, 2002; and fraternities, Trockel, Williams, & Rice, 2003). Further, Wechsler and Nelson (2001) raised the important point that “This approach may ignore the fact that existing norms about college student drinking are unhealthy. Normative behavior may indeed be pathological” (p. 290).

The Relevance of Compliance Theory to Reducing Binge Drinking

Despite all of the interventions that have been implemented to reduce binge drinking, this behavior remains a major problem on college campuses (Wechsler et al., 2000a). The interventions that *have* elicited behavioral change are time-consuming, and the reduction in binge drinking is small relative to the effort put into the intervention.

Perhaps these interventions have not been as successful as anticipated because the focus was not directly on behavioral change; rather, behavior change was first mediated by attitude or cognitive change. For example, with the social norms approach and with social marketing in general, college students must attend to the message in the first place and learn the message content (e.g., in the social norms approach, students are expected to learn that their peers do not drink as much as they think). Then, if this step is successful, it is hoped that the actual goal is met--a reduction in binge drinking. The same can be said for the failed efforts to decrease binge drinking among college athletes by educating them about the consequences of this behavior. Administrative bans on alcohol consumption are an example of attempts to directly change behavior, however, college students can only be expected to comply with these bans to the extent that they believe they can be “caught” breaking the rules.

In contrast to *persuasion* (an attempt to change behavior by first changing attitudes), *compliance* is a simpler process that can be defined as taking an action because it has been requested. To clarify this distinction, consider a salesperson attempting to sell a product. To this salesperson, working with a potential customer to create a positive attitude about a product (i.e., persuasion) is a waste of time if the customer’s positive attitude does not ultimately result in a sale. A more efficient route is to bypass the step of attitude change, and simply ask the potential customer for a particular behavior—to buy the product (i.e., compliance).

Although the goal of compliance theory is behavioral change, there is no reason to suspect that attitude or cognitive change does not occur along with the behavioral change. Attitude change has a distinct benefit. If done properly, attitude change can be enduring

and affect behavioral decisions across a variety of occasions (Petty & Cacioppo, 1996).

Cognitive dissonance theory (Festinger, 1957, 1964) serves as a precedent for the idea that attitude or cognitive change can follow behavioral change. For example, in the classic dissonance paradigm, experimental participants told another person that the boring experimental task they endured was exciting; they lied and this created internal tension (i.e., their negative attitude toward the task and their external behavior--saying they enjoyed the task--did not match). However, some participants were paid \$20 to lie, while others were paid only \$1. Later, the participants were asked to honestly rate the task; those who were paid \$20 rated it as less interesting than those who were paid \$1. The common interpretation of this finding is that the participants who were paid \$20 were able to attribute the inconsistency in their attitude and behavior to the large sum of money they received so they had no reason to change their attitude. On the other hand, the participants who were paid only \$1 had no external force to help them resolve the inconsistency. Because they could not change their behavior--they had already professed the task as exciting--they resolved the dissonance by changing their attitude (Festinger & Carlsmith, 1959).

To make this discussion relevant to the present paper, an intervention to reduce binge drinking that is based on compliance theory may correct the problems of earlier interventions. A compliance-driven intervention can be implemented efficiently and has the direct goal of behavior change; specifically, a reduction in binge drinking behavior. Further, when behavior change is the result of the application of compliance theory, it is the *individual* who decides to change his or her behavior rather than some external force, such as a college administration. Consistent with the idea that attitude change is enduring,

behavior change is internalized and possibly more likely to last over time and across situations when the individual decides to personally reduce his or her alcohol consumption. Further, compliance theory increases the likelihood of behavior change compared to applied persuasion theory because it is not necessary to change a person's attitudes prior to changing the person's behavior. However, there are some additional benefits to changing someone's attitude, such as enduring behavior change across situations. Based on findings from the cognitive dissonance literature, it is possible to observe both behavior and attitude change even when behavior change is the ultimate goal of an intervention.

Compliance Theory

Cialdini (2001) discussed the compliance process in great detail. After spending time undercover as a compliance professional (i.e., someone whose livelihood depends on gaining compliance from others, such as a salesperson), he identified hundreds of compliance-gaining techniques, then grouped them into six basic principles. Each of these principles takes advantage of our natural, usually adaptive, tendencies to trust certain types of information when deciding whether to comply with a request (e.g., it is adaptive to trust a friend, so salespeople take steps to seem friendly so that you trust them implicitly). Before continuing, it is important to note that Cialdini discusses these principles as though people mindlessly comply with requests when faced with these tactics in what he terms "click-whirr" responding: "*Click* and the appropriate tape is activated; *whirr* and out rolls the standard sequence of behaviors" (p. 3). That is, the click is the use of the compliance tactic on the consumer, and the whirr is the mindless, automatic compliance to the request on the part of the consumer, because responding in

that way is usually beneficial (also see Cialdini, 1995; Cialdini & Trost, 1998).

The six principles of compliance. The first compliance principle is *reciprocation*. The reciprocation rule is “one should be more willing to comply with a request from someone who has previously provided a favor or concession” (Cialdini, 1995, p. 260). One example of how this rule is commonly employed is the unsolicited gift. Compliance professionals sometimes offer a free gift to someone and then make it nearly impossible for the person to refuse the gift. After sharing the gift, the professional makes a request of the person, who typically feels he or she must return the favor by complying with the person’s request. According to Cialdini, this principle works by taking advantage of people’s tendency to feel uncomfortable having unpaid debts, so they feel they should pay back any favors or gifts they receive in kind.

The second compliance principle is *social validation/social proof*. The social validation rule is “one should be more willing to comply with a request for behavior if it is consistent with what similar others are thinking or doing” (Cialdini, 1995, p. 263). Bartenders apply this rule by placing cash in their tip jars themselves. This is intended to make customers believe other bar patrons have tipped them, and that tipping must be the appropriate behavior in bars. This principle takes advantage of two basic laws of human nature: 1) People want to feel that they fit in with others, and 2) It is difficult to determine the appropriate behavior in some situations, so people look to the behavior of others when deciding how to behave.

The third compliance principle is *commitment/consistency*. The commitment/consistency rule is “after committing oneself to a position, one should be more willing to comply with requests for behaviors that are consistent with that position”

(Cialdini, 1995, p. 264). One application of this rule occurs when someone representing a particular cause asks people to sign a petition for the cause, then some time later follows up with a request for a monetary donation for the same cause. People are more likely to donate money if they first signed the petition, because not donating money to a cause they previously supported makes them appear inconsistent. This principle plays on the human tendency to want to appear consistent to others because inconsistency results in unfavorable impressions.

The fourth compliance principle is *friendship/liking*. The friendship/liking rule is “one should be more willing to comply with the requests of friends or other liked individuals” (Cialdini, 1995, p. 267). The Tupperware Corporation has perfected the application of this compliance principle. Tupperware party attendees understand that their friend (the party host) receives a portion of the profits from the merchandise sold at the party, so they feel obligated to buy more Tupperware at the party than they ordinarily would. Additionally, compliance professionals frequently act friendly (e.g., give compliments) in order to establish something resembling a “liking” relationship with their targets. This principle takes advantage of the fact that people want to do nice things for people they like.

The fifth compliance principle is *scarcity*. The scarcity rule is “one should try to secure those opportunities that are scarce or dwindling” (Cialdini, 1995, p. 271). This principle is frequently employed in the form of the deadline technique, as in “This opportunity is available only for a limited time!” The reasons this technique is so powerful are 1) people assume that as something becomes rare, it becomes more valuable and 2) people react against infringements on their freedom. When people believe they

will not be free to purchase some product in the future, they want the product even more (Brehm, 1966).

The sixth and final compliance principle is *authority*. The authority rule is “One should be more willing to follow the suggestions of someone who is a legitimate authority” (Cialdini, 1995, p. 273). This principle is so powerful that it works even when someone only *appears* to have authority, as when an actor dressed in a lab coat touts a medical product after stating “I’m not a doctor but I play one on T.V.” This principle plays on the fact that people learn to trust authority figures such as parents and teachers when they are young, and trusting these authorities is generally advantageous.

Taken together, these six principles can greatly increase behavioral compliance with requests as compared to when the same requests are made without the aid of these principles (Cialdini, 2001). Considering that reducing binge drinking behavior among college students is the unfulfilled goal of many social marketing campaigns, the application of compliance theory (with its immediate goal of behavioral change) to the domain of reducing binge drinking behavior among college students is logical. Further, an intervention based on these techniques may have the added benefit of enduring attitude change, as demonstrated by cognitive dissonance theory (Festinger, 1957, 1964; Festinger & Carlsmith, 1959).

Compliance Issues Relevant to the Present Research

Because there are six major principles of compliance, and each principle underlies a number of compliance tactics, it is necessary to limit the present investigation to two of these tactics. Therefore, the present research focused on two sequential request compliance-gaining tactics: foot-in-the-door (which falls under the

commitment/consistency principle) and door-in-the-face (which falls under the reciprocity principle). As will be discussed in more detail, the idea behind the sequential request tactics is that the response to an initial request increases the likelihood of compliance with the second, target request.

The Foot-In-The-Door Procedure

Origins of the foot-in-the-door technique. Freedman and Fraser (1966) introduced the foot-in-the door (FITD) procedure. In the FITD paradigm, participants are first asked to agree to a small request; typically the request is so small that almost everyone agrees to it. The second step in the FITD procedure is to ask participants to agree to a second, larger request. This request is actually the target request, and it is usually related in some way to the first. The FITD procedure is so named because “Like the proverbial salesperson who sticks a foot in the open door, getting the participant to agree with the easy request paves the way for agreement with the real request” (Burger, 1999, p. 303).

Freedman and Fraser’s (1966, Study 1) classic investigation provides an ideal illustration of the FITD procedure. First, the researchers called housewives to ask if they would agree to answer some questions about the products they used in their home. Days later, they asked the same housewives if they would agree to allow a group of researchers to come into their home for two hours to investigate these products. The FITD procedure was quite effective at gaining compliance: 52.8% of the FITD participants agreed to the target request, compared to only 22.2% of the control participants (who were not exposed to the initial request).

Freedman and Fraser (1966, Study 1) extended their investigation to rule out extraneous variables that could explain the FITD effect. First, they determined that it is important to allow participants to actually perform the initial request. Compliance rates

dropped to 33.3% when participants were merely asked if they would agree to the first request, but were not allowed to do what they agreed to do. Further, the researchers ruled out familiarity as a causal explanation by contacting participants but not making an initial request of them. In this condition, compliance with the target request was only 27.8%. The authors reported that compliance rates in these conditions were not significantly different from compliance rates in the FITD condition (the familiarity difference was marginal), however, the FITD effect is clearly enhanced when participants perform the initial request.

In a second study, Freedman and Fraser (1966, Study 2) investigated the extent to which the FITD effect was driven by the similarity of the two requests. They varied the initial task (sign a petition versus post a small sign) and the initial issue (promote safe driving versus promote a beautiful California); however the target request for all participants was the same: to place a large, unattractive “Keep California Beautiful” sign in their front yard. Different experimenters made the first and second request in all conditions. When the first and second task and issue were similar, 76% of the participants agreed to the target request. Compliance rates were between 47% and 48% for the other three conditions, and only 16.7% for control participants who were only asked to agree to the target request. In summary, compliance was greatest when the task and issue were similar, however, compliance rates were enhanced even when these were not similar, as long as the initial request had been made. Freedman and Fraser (1966) provided the following explanation for their findings:

Once he has agreed to a request, his attitude may change. He may become, in his own eyes, the kind of person who does this sort of thing, who agrees to requests made by strangers, who takes action on things he believes in, who cooperates with good causes. The change in attitude could be toward any

aspect of the situation or toward the whole business of saying “yes” (p. 201).

Based on this explanation, it is easy to see why Cialdini (1995, 2001) considers FITD to be a commitment/consistency-based compliance tactic. In short, after performing the first request, participants feel it would be inconsistent with how they *now* view themselves to say no to performing the second request. However, the particular mechanism responsible for creating this apparent need for consistency became a question for empirical debate. Two theories in particular have been cited as underlying the FITD effect: self-perception theory and consistency theory.

Theoretical bases of the foot-in-the-door effect. Self-perception theory (Bem, 1972) was originally cited as an explanation for the FITD effect. According to self-perception theory, people come to know their attitude toward an object only after they behaved in a particular way toward that object. Based on this explanation, when Freedman and Fraser’s (1966) participants were asked to allow the researchers into their home, they considered their attitude toward people researching their household products. Based on their prior agreement to answer questions about these products, they inferred a positive attitude; this inferred attitude drove their decision to agree to the second request. Several researchers found empirical support for the self-perception explanation for the FITD effect. For example, Snyder and Cunningham (1975) demonstrated that consistent with FITD, participants who agreed to the initial request were more likely than control participants to agree to the target request. However, participants who did *not* agree to an initial request were less likely than control participants to agree to the target request. Basically, in both situations participants inferred their attitude from their previous behavior (agree or do not agree) and acted in accordance with this inferred attitude in

response to the target request. Self-perception theory is still considered one of the predominant explanations for the FITD effect (see Beaman, Cole, Preston, Klentz, & Steblay, 1983; Burger, 1999; Dillard, Hunter, & Burgoon, 1984; for reviews; but see Gorassini & Olson, 1995).

A second theory that has been used to explain the FITD phenomenon is *consistency theory*, which is very similar to cognitive dissonance theory (Festinger, 1957, 1964; Festinger & Carlsmith, 1959). Predictions derived from consistency theory do not clash with those derived from self-perception theory (Bem, 1972); consistency theory merely provides a different causal explanation for the FITD effect (Burger, 1999). According to the consistency theory explanation of the FITD effect, participants would risk appearing inconsistent to an experimenter if they agreed to help with an initial request (i.e., make a commitment to the “cause”) but then did not agree to help with a second request (i.e., they break the commitment they previously made to the “cause”; Cialdini, 2001). Therefore, in order to avoid the dissonance associated with this inconsistency, participants are driven to agree to the second request. Cialdini, Trost, and Newsom (1995) provided empirical support for the consistency theory explanation by demonstrating that some individuals have a strong dispositional preference for consistency (i.e., they are “bothered” when they seem inconsistent to others). Participants who are high in this preference are more likely to exhibit the FITD effect than those who are low in this preference, because they are more susceptible to feeling the inconsistency associated with not agreeing to both requests. Further, individuals from a collectivist culture were not as prone to the FITD effect as were individuals from an individualistic culture (Cialdini, Wosinka, Barrett, Butner, & Gornik-Durose, 1999). One interpretation

of this finding supports consistency theory; people from individualistic cultures consider it important to behave in a manner consistent with their own prior behaviors more than people from collectivist cultures, who believe it is important to behave in a manner consistent with how their peers behave. All in all, consistency theory serves as a nice explanation of the FITD effect.

Practical applications of the foot-in-the-door effect. Research on the FITD effect has shown that it can be useful in a variety of practical situations. As already discussed, people and companies that rely on the sales of products frequently use the FITD tactic to increase the likelihood of making sales. Cialdini (2001) discussed the use of testimonial contests by large companies as a particular application of the commitment processes driving the FITD effect. These contests require contestants to compose a short essay beginning with a phrase such as “I like brand X because...”. After writing about the reasons they like brand X, contestants have committed themselves to liking that brand, and feel that not purchasing that brand in the future would be inconsistent with this commitment. Interestingly, the companies sponsoring these contests do not usually require that contestants even purchase their product to enter the contest; they are happy to risk awarding prizes to people who are not customers if the result is that many of the contestants will agree to the *unspoken* target request: to become lifelong customers.

Besides sales applications, charitable organizations also can benefit from the use of this tactic (Pliner, Hart, Kohl, & Saari, 1974). For example, Schwarzwald, Bizman, and Raz (1983) approached a group of participants at their homes to request that they sign a petition in support of founding a recreational complex for mentally handicapped individuals (initial request). Two weeks after these people were contacted they, along

with a group of individuals who were not contacted with the initial request, were asked to donate money to the Association for the Rehabilitation of the Mentally Handicapped (target request). Participants who signed the petition donated significantly more money than participants who did not agree to an initial request.

Another practical application of the FITD technique is to increase the likelihood that people will become organ donors after they die. Organ donation rates fall short of the number of organs necessary to help all individuals with disordered organs, and this is largely due to individuals not pledging their organs before they die (e.g., Perkins, 1987). Carducci, Deuser, Bauer, Large, and Ramaekers (1989) investigated the FITD effect as a method to decrease this problem. They asked participants to complete a short questionnaire concerning aspects of organ donation as an initial request, followed by the target request to indicate their willingness to become organ donors. Consistent with other research on the FITD effect, participants who helped with the first request expressed a significantly higher likelihood of becoming organ donors than did participants who only responded to the target request (also see Girandola, 2002; but see Foss & Dempsey, 1979, for a failure to replicate the FITD effect with regard to blood donation).

A final application of the FITD effect, and the most relevant to the present research, is to changing health-related behaviors. Research in this domain is fundamentally different from research in the other discussed domains, because the person who is asked to agree to the requests is asked to comply for his or her own benefit, not for the benefit of the person or organization that is making the requests. However, considering the effectiveness of the FITD in other domains in gaining behavioral compliance, it is only logical to apply it to the domain of improving health. Research has

demonstrated the effectiveness of FITD in three health-relevant domains: reducing cigarette smoking, scheduling doctor appointments for health screenings, and reducing drinking and driving.

In one application of FITD to the health domain, Joule (1987) asked cigarette smokers to either complete a questionnaire (condition one), complete a test (condition two), or to stop smoking for two hours (condition three) as an initial request. The target request was to stop smoking for 18 hours. Compared to participants in a control condition (no initial request), participants in conditions two and three were more likely to verbally agree to give up smoking for the allotted time, and participants in condition three were more likely to behaviorally follow through on the verbal agreement (i.e., they did not smoke for 18 hours). Therefore, while Joule (1987) demonstrated that applying FITD to reducing smoking behavior was not a success in all conditions, this application reduced smoking behavior for some participants.

Another health behavior that has been enhanced through the application of the FITD tactic is scheduling doctor's appointments, specifically for exams to screen for breast cancer among women. Dolin and Booth-Butterfield (1995) approached women at a health fair and asked if they would accept a card demonstrating proper breast self-exam procedures (initial request). As the target request, the women were asked if they would like to schedule an appointment for a check-up with a gynecologist (target request). Compared with women not approached with the initial request, experimental participants were significantly more likely to agree to schedule the appointment.

Finally, FITD has been applied to reducing drinking and driving behavior. Like binge drinking behavior, drinking and driving is a difficult behavior to change despite

education attempts and other interventions. Taylor and Booth-Butterfield (1993) believed it was important to target individuals while they were at the most risk for drinking and driving, so they asked a bartender to approach bar patrons. The initial request made of participants in this investigation was to sign a petition against drinking and driving; participants were offered an informational brochure after signing the petition. The target request was to allow the bartender to call a taxi when drunk bar patrons attempted to leave the bar. Over the six weeks following the initial request, experimental and control participants (no initial request) were tracked and when appropriate, the target request was made. Consistent with previous FITD findings, the experimental participants were significantly more likely to comply with the request to call a taxi than were control participants. In fact, 58% of experimental participants agreed to the target request, compared to only 10% of control participants. This experiment in particular supports the notion of using FITD to change behavior relevant to alcohol consumption.

Factors that enhance and diminish the foot-in-the-door effect. Researchers have been investigating the FITD effect for decades. Consequently, a great deal of knowledge has accumulated about the factors that influence the effectiveness of this compliance tactic. Cialdini (2001) wrote that in order for commitment/consistency-based tactics to be effective at gaining compliance, commitments should be “active, public, effortful, and freely chosen” (p. 67). Additionally, Burger (1999) reviewed the FITD literature to determine when this particular effect is most and least likely to occur. First, consistent with *self-perception theory*, the FITD effect is more likely to occur when participants are *involved* with the initial request, actually *perform* the initial request, are *labeled* as helpful after helping with the initial request, and perhaps when the initial and target

requests are *similar*. These four factors are discussed in more detail below. They are consistent with the self-perception explanation of the FITD effect because these are more likely to lead to the self-perception change purported to cause the effect than are their alternatives (i.e., low involvement, not performing the initial request).

Participants who answer more questions as part of an initial request (i.e., to complete a questionnaire) are more likely to agree to the target request than participants initially answering fewer questions, because such an *involving* situation makes the initial request more accessible to participants when the second request is made. So, when participants ask themselves if they are “the kind of person who does this sort of thing” they are more likely to believe they are if they were more involved with the initial request. Similarly, participants should be allowed to *perform* the initial request. Those who are not allowed to perform the initial request are ultimately not very involved with the initial request, so self-perception change is less likely to occur. A third, simple manipulation that enhances the FITD effect is to *label* participants as helpful after they help with the initial request. This label affects the attribution process, such that participants are more likely to come to view themselves as helpful when they attribute their helpfulness to themselves, rather than to some aspect of the situation (but see Guadagno, Asher, Demaine, & Cialdini, 2001, regarding making initial helpfulness salient to individuals who are low in preference for consistency). Consistent with the self-perception change explanation, Dillard et al. (1984) found that requests made on behalf of non-profit/pro-social organizations yield more compliance than do requests directly benefiting the requester. In short, the self-perception that one is helping a meaningful cause increases the likelihood that the person will agree to help with the target request.

Alternately, external rewards (such as money) offered to participants for helping with the initial requests *decreases* the likelihood that they will help with the target request, because they believe they helped only because they were paid to help (Burger, 1999).

A final factor under the self-perception explanation of the FITD effect that has been investigated is the *similarity* of the initial and target requests. Only two studies have directly investigated whether the similarity of the two requests affects the FITD effect (e.g., Freedman & Fraser, 1966, Study 2), and the results are inconclusive. However, on a theoretical level, it seems that the similarity of the requests would enhance the FITD effect based on the self-perception explanation.

Finally, one factor (besides external rewards) under the self-perception explanation has been found to *decrease* the likelihood of the FITD effect: *size* of the initial request. If participants refuse to help with the initial request because it is too large, then they are also less likely to help with the target request (because in this situation they see themselves as “the kind of person who *does not do* these sorts of things”; e.g., Snyder & Cunningham, 1975). However, to be included in the meta-analysis, Burger (1999) required that researchers allowed at least an hour to pass between the initial and target request; otherwise the situation would more closely resemble the door-in-the-face procedure. The door-in-the face procedure is discussed in more detail below as a compliance tactic driven by participants feeling they owe something to the requester and agreeing to help with the (easier to perform) target request, because they just refused to help with the first request (Burger, 1999).

In addition to discussing self-perception theory-driven factors influencing the FITD effect, Burger (1999) identified a variety of other factors that do not fall under

explanations suggested by self-perception theory. One factor that has been shown to *enhance* the effect is to tell participants that *others* have also helped with the initial request (e.g., DeJong, 1981). Apparently telling participants that the cause they are being asked to help is supported by many others suggests that it is worthy of their help as well, which carries over to their decision to help with the target request. Interestingly, providing this information could be argued as the application of an additional compliance tactic: validation/social proof (Cialdini, 1995, 2001).

Finally, Burger (1999) discussed a variety of factors with no known effect on FITD. Although the FITD effect is present even when a large amount of time passes between requests (e.g., two weeks, as in Freedman & Fraser, 1966), Burger (1999) reported finding a lack of significant effects with regard to the amount of *time* that passes between requests (also see Dillard et al., 1984). Further, he reported that there were no significant differences in the effectiveness of FITD with regard to whether the *same person* or *different people* made the first and second requests. However, he cautioned that the interaction of these variables should be considered. When the same person immediately makes the second request, Burger (1999) found it difficult to determine whether the FITD effect is diminished (due to participants feeling that they have already done enough for the requester by *just* helping with the first request; e.g., Harari, Mohr, & Hosey, 1980), or enhanced.

Further complicating this issue, Burger (1999) discussed the overwhelmingly successful *continued questions* tactic, which is said to engage feelings of commitment on the part of the participant. In short, this tactic requires that the same person make the initial and target requests of the participant. Typically, the initial request is to answer a

few questions. After asking these questions, the requester immediately (so that there is not a perceived break between questions) asks if the participant would be willing to answer more related questions (target request). Overall, the combined research suggests that the FITD tactic yields more compliance than control conditions when the same person immediately makes the second request. However, the strongest FITD effects emerged when researchers allowed some time to pass (at least two days) between requests, when different people made both requests, or when different people made the requests separated by time (Burger, 1999).

In sum, the FITD effect has been well-researched and successfully applied to gaining compliance with requests. While several factors have been identified that reduce the effect, Burger (1999) reported that the effect is real and replicable. Besides FITD, another sequential-request procedure widely discussed as a compliance-gaining tactic is the door-in-the-face procedure, described in detail below.

The Door-in-the-Face Procedure

Origins of the door-in-the-face procedure. The door-in-the-face (DITF) procedure was introduced by Cialdini et al. (1975) who asked “What would be the result of making an *extreme* first request which is sure to be *rejected* and then asking for a more *moderate* second favor (the one which was desired from the outset)?” (p. 206). The DITF procedure (also referred to as “reciprocal concessions” or “rejection-then-retreat”; Cialdini, 2001) is so named because the proverbial door-to-door salesperson could expect to have a door slammed in his or her face after making the extreme first request. In contrast to the FITD procedure, the DITF procedure works by causing participants to refuse to help with the initial request; however, as in FITD, the anticipated end result is to

gain participants' compliance with the second request.

Cialdini et al. (1975) conducted three experiments to establish DITF as a compliance-gaining tactic. In the first experiment, researchers approached students on a college campus and made an extreme request: Would they agree to volunteer as counselors at a youth detention facility for two hours a week for two years? Not a single participant agreed to the initial request. Following this rejection, the experimenters stated "Well, we also have another program you might be interested in then" (p. 208) then made the smaller target request: they asked whether the participants would be willing to volunteer a couple of hours to chaperone the juvenile delinquents on a single trip to the zoo. There were two additional conditions in this experiment besides the experimental condition. In an *exposure control* condition, participants were told about both programs (the two year counseling program and the two hour chaperoning program) and asked if they would be interested in helping with either program (i.e., participants did not have the opportunity to first refuse to help with the first request because both requests were presented at the same time). Finally, participants in the *small request only control* condition were only asked to help with the target request. The results supported the efficacy of the DITF procedure in gaining compliance: 50% of those in the experimental condition agreed to the target request, compared to 25% in the exposure control condition and 16.7% in the small request only control condition. Planned contrasts showed a significant difference between the experimental and control conditions, but no difference between the two control conditions. Cialdini et al. (1975) concluded that the process of starting with the extreme request *then* moving to the smaller request was essential in order for the DITF tactic to be effective.

In the second experiment, Cialdini et al. (1975) replicated the procedure of the first experiment, but tested the assumption that targets agree to the second request after refusing to help with the first because they believe that the requester has made a concession to them (by following the extreme request with an easier-to-accomplish request). The experimental and small request only conditions in this experiment were the same as in the first, except that participants were asked to escort low-income children instead of juvenile delinquents to the zoo as the target request. This change held for all conditions.

To investigate the concession assumption, the experimenters included a *two requester control* condition instead of the exposure control condition. In this condition, one experimenter approached participants with the extreme request; however, a second experimenter made the smaller, target request by stating that he “couldn’t help overhearing you say that you would not be able to be a counselor to juvenile delinquents for two years...but maybe you can help me” (p. 210). The experimenter went on to explain that he was in the same volunteer organization as the first experimenter but they worked with separate programs, then asked if participants would agree to help with the zoo trip. Consistent with Cialdini et al.’s (1975) assumption that the perception that a requester has made a concession to the target person that should be repaid, 55.5% of participants agreed to help with the target request when the same person made both requests, compared to only 10.5% of participants when two people made the two requests. Although not a significant difference, more participants (31.5%) in the small request only control condition agreed to help with the target request than did participants in the two requester control condition.

In Cialdini et al.'s (1975) third experiment investigating DITF, the experimenters aimed to demonstrate that participants did not merely agree to the target request out of fatigue (i.e., they were tired of dealing with the persistent requester) or out of fear of seeming completely uncooperative. Rather, they wished to demonstrate that the effect is due to the reciprocity norm, that is, people should feel obligated to return favors they receive from others. Thus, when someone makes a request that is refused, then makes a second, less extreme request, this move to a less extreme request should be perceived as a concession, or favor, on the part of the requester. In return, the person who is asked to agree to the requests should agree to help with the second request, as this person did not help with the first request. In order to rule out factors other than reciprocity, the experimenters made two requests of participants in the extreme then moderate request experimental condition (first, to counsel delinquents for two years, then to chaperone delinquents on a two-hour trip to the zoo). However, this experiment also included a control condition in which both the initial and target requests were equally extreme. In this control condition, participants were first asked if they would agree to chaperone delinquents on a two-hour trip to a museum, then if they would agree to chaperone delinquents on a two-hour trip to the zoo. Finally, a single request control condition was included as in the other experiments. The experimenters hypothesized that if DITF were due to factors other than reciprocity, participants in the equally extreme request condition would agree to the target request as frequently as participants in the experimental condition. However, this was not the case, as a marginally significant difference emerged between the experimental and control conditions: 54.1% of the participants in the experimental condition complied with the target request, compared with 33.3% of

participants in the both the equally extreme and single request control conditions.

In summary, Cialdini et al. (1975) established the existence of a DITF effect (Experiment 1), demonstrated that mere exposure to a request does not explain this effect (Experiment 2), and that the effect can be attributed to a reciprocity norm (Experiment 3). This last finding is the reason DITF is placed under the general reciprocation rule of compliance: “One should be more willing to comply with a request from someone who has previously provided a favor or concession” (Cialdini, 1995, p. 260). Following from this, the specific rule underlying DITF is “You should make concessions to those who make concessions to you” (Cialdini et al., 1975, p. 206). Despite the early conclusion that DITF is due largely to the sense that one should pay back favors they receive, this conclusion has been debated as discussed in the next section.

Theoretical bases of the door-in-the-face procedure. Several social psychological theories have been used to account for the DITF effect. As already discussed above, DITF is commonly described in terms of a reciprocity norm: people do not want to be perceived as ungrateful for favors they receive, so they reciprocate favors. In the case of DITF, the favor offered by the requester is a concession: a retreat from the original extreme request. The target of the request feels a sense of obligation (due to reciprocity norms) to return this concession with a concession: compliance with the second request (Cialdini, 2001; Cialdini et al., 1975).

Perceptual contrast may also explain DITF (In fact, Cialdini, 2001, suggests that perceptual contrast *and* reciprocal concessions explain DITF). The perceptual contrast principle states that a judgment is made in the context of a judgment made previously. For example, if a person lifts a heavy object then lifts a lighter target object, the person

will judge the second object as lighter than if the person lifted the *same* target object after first lifting a lighter object. Cialdini (2001) described this principle in terms of compliance with clothing store salespeople, who commonly try to sell big-ticket items such as expensive suits, before attempting to sell smaller items such as ties, belts, and dress shirts. This is because after a customer decides to spend a lot of money on a suit, the customer will perceive the amount he is spending on the accessories as small (and this amount *is* small compared to the amount of the suit). On the other hand, if the customer were not first exposed to the price of the suit he may completely refuse to buy the accessories because of their expense, or at least opt for lower-priced accessories. This perceptual contrast principle also applies to compliance with other requests, such as DITF requests. If a person makes an extreme request that is denied followed by a moderate request, the second moderate request simply *seems* more reasonable than if it had been presented in isolation, with no prior request to compare it with. Consequently, more individuals comply with target requests following extreme requests than requests made with no such frame of reference; an effect consistently demonstrated in Cialdini et al.'s (1975) experiments. It is worth noting that bargaining/negotiation has been suggested as an alternative framework explaining DITF consistent with the reciprocal concessions explanation of the effect (Cialdini, 2001; Cialdini et al., 1975).

In contrast to the reciprocal concessions/bargaining explanation of DITF, other researchers have suggested that the effect is driven by *self-presentation* concerns; that is, people comply with requests because they do not want to be perceived as unhelpful. Pendleton and Batson (1979) first proposed the self-presentation explanation for DITF. They first made a large request designed to be declined (to volunteer with a court

program for either one or 10 hours a week for at least six months) then asked participants to comply with the target request (to complete a questionnaire, which contained questions about why they agreed to complete the questionnaire). Participants who responded to the questionnaire indicated that they agreed to complete the questionnaire because they did not wish to be perceived negatively after refusing to help with the initial request; in other words, they expressed self-presentation concerns. Interestingly, participants who refused to volunteer for 10 hours per week expressed less concern for appearing unhelpful than did participants who refused to volunteer for one hour per week; apparently those asked to volunteer 10 hours per week felt more external justification for refusing to help with the initial request than did those who were asked to volunteer for only one hour per week. In short, as the perceived level of external justification for refusing to help increased, self-presentation concerns decreased. Millar (2002) recently re-affirmed the self-presentation concern explanation of the DITF effect. He hypothesized that participants would express self-presentation concerns when a friend made two requests using the DITF paradigm but not a single request. On the other hand, participants approached by strangers would not express differential self-presentation concerns on the basis of refusing DITF versus single requests, because people are more concerned about what their friends think of them than about what strangers think. Millar's (2002) hypothesis was confirmed; when a friend made the DITF requests, participants indicated that they complied with the target request because they did not wish to be perceived as unhelpful by their friend (by refusing to help with two requests); however they did not express such concerns when they refused to help with a single request. On the other hand, when participants refused to help a stranger with a single versus two (DITF) requests, they

indicated no difference in self-presentation concerns.

In line with the self-presentation explanation of the DITF effect, Tusing and Dillard (2000) suggested that the effect is driven more by a sense of *social responsibility* than by an obligation to return favors that have been previously extended. They suggest that people help with DITF requests not because of a perceptual contrast effect, but because they believe that the requester deserves their help. In their research, participants rated several DITF manipulations in terms of whether targets who complied with the target request seemed to do so more as a result of bargaining (as Cialdini, 2001 would suggest), or from a sense of social responsibility (i.e., they complied because they wished to help a worthy cause). Participants rated compliance resulting from DITF manipulations as more relevant to helping than bargaining processes.

O'Keefe and Figge (1997) and O'Keefe and Hale (1998) proposed *guilt* as a third possible basis for the DITF effect. They argued that as the DITF effect is strongest when two requests are made by the same person, when the requests are not too far apart temporally, and when the requests benefit volunteer and non-profit groups rather than the interests of the requester (see Dillard et al., 1984, for a review), it is possible that guilt drives the effect. They argued that declining a requester's first appeal for a socially worthy cause makes the target of the request feel too guilty to *not* comply with a second request that follows shortly after the initial request. Consequently, individuals agree to the target request. Although O'Keefe and colleagues did not directly test this hypothesis by conducting their own investigation, reviews of previous studies supported the hypothesis that guilt drives the DITF effect.

Practical applications of the door-in-the-face effect. Whatever psychological processes underlie the DITF effect, this tactic has been used to increase compliance with requests in several applied domains. For example, Cialdini (2001) described how door-to-door salespeople used the tactic to obtain leads for sales. When salespeople are unable to make a sale with a particular customer (the initial request is declined), they ask the customer if he or she would at least be willing to provide the names of some people who might be interested in the product (the second request). Then, when the salespeople approach these referred people, they can inform these potential customers that they were referred by the first customer, thereby increasing the likelihood for a sale by providing the name of a friend. Further, Cialdini (2001) argued that politicians use DITF frequently, as DITF is essentially a negotiation procedure. In fact, he argued that President Richard Nixon's Watergate debacle came about through DITF-like bargaining. While the choice to spend \$250,000 to break into and bug the Democratic National Committee's office in the Watergate Hotel was an objectively bad decision on the part of Nixon's Committee to Re-Elect the President, it seemed quite reasonable in the context of several previous proposals made to the committee by Nixon's aid G. Gordon Liddy. Liddy's first proposal to the committee called for a budget of \$1,000,000 and involved a series of outrageous actions (above and beyond breaking into the Watergate). When the committee declined this proposal, Liddy submitted a second proposal calling for a \$500,000 budget, which the committee again refused. Finally, when Liddy made the \$250,000 proposal, the committee recognized that he had made significant concessions and agreed. After all, the \$250,000 proposal was certainly reasonable in comparison to Liddy's initial million dollar proposal. Had Liddy originally proposed the \$250,000 plan, it is quite possible that

the committee would have rejected the plan; however, it was not the first proposal and the plan was implemented.

Despite the commercial uses for DITF and the notorious outcome of Watergate, this tactic has also been applied to bring about positive social change. For example, Cialdini and Ascani (1976) demonstrated that the DITF tactic could be used to increase blood donations. In their experimental condition, Cialdini and Ascani (1976) preceded a target request to donate blood in a particular blood drive with a request to become a long-time blood donor, requiring a commitment to give blood once every two months for three years; a request to which no participant complied. They found that participants were more likely to agree to give blood if they were first asked to become long-term donors compared to control participants, who were only approached with the target request. Further, among participants who gave blood, those who were approached with the DITF request were more likely than control participants to agree to give blood on another occasion.

Another application of DITF that has been investigated is increasing donations made to nonprofit organizations. In particular, Schwarzwald, Raz, and Zvibel (1979) asked participants to donate money (in predetermined amounts) to a rehabilitation institute for mentally handicapped individuals after first asking participants if they would donate either a moderately large versus an unreasonably large amount of money (as judged by a separate group of participants). In general, as the amount of the initial request increased, donation size increased. However, when participants were first asked to donate an unreasonably large amount of money, there was a decrease in the amount of money donated (compared to control participants). More recently, Abrahams and Bell (1994)

and Bell, Abrahams, Clark, and Schlatter (1996) investigated the effect of DITF on donations pledged to an AIDS charity. In both investigations, the researchers first requested that participants agree to volunteer between 10 and 30 hours of time each week to coordinate a walk-a-thon to raise money for the AIDS organization. After participants did not agree to this request, the experimenters asked if they would be willing to sponsor someone who was participating in the walk-a-thon by donating money. Although Bell et al. (1996) found no overall DITF effect (because they included several manipulations to determine the limits of DITF), Abrahams and Bell (1994) demonstrated that experimental participants were more likely to comply with the target request, and also agreed to donate significantly more money on average, than control participants who were not first asked to coordinate the walk-a-thon.

Finally, the DITF procedure has been applied to improving compliance rates with health requests. Although researchers have investigated DITF with respect to issues relating to health such as those discussed above (AIDS charities, blood donations, etc.), Millar (2001) stated that his investigation was the first to apply the DITF tactic to improving compliance with requests designed to benefit the health of *recipients* of the request. In this investigation, experimental participants were first asked to keep track of their diet for one month. When participants refused to comply with this request, they were asked the target request: to keep track of their diet for only four days (the only request made of control participants). Besides invoking the DITF manipulation, Millar (2001) also manipulated whom he told participants would most benefit from compliance with the target request: the experimenter, the participant (because a diet record is a reminder to eat healthfully), or a separate organization that promoted health behaviors.

When participants were told that agreeing with the request would either benefit them personally or the health organization, DITF participants were significantly more likely to comply (verbally and behaviorally) with the target request than were control participants. On the other hand, control participants were more likely to comply with the target request when the experimenter was to benefit from the request. In short, these findings indicate that DITF can be applied successfully to changing individuals' health behaviors, particularly when they perceive that they personally benefit from agreeing to the target request.

Factors that enhance and diminish the door-in-the-face effect. Based on the findings discussed above, it is clear that some factors enhance the DITF effect while others diminish its effectiveness. In summarizing the findings from the theoretical frameworks proposed to account for DITF (reciprocal concessions, self-presentation, and guilt), this tactic is most likely to be effective in gaining compliance when the two requests are made without too much time between them, and when they are made by the same person (Dillard et al., 1984; O'Keefe & Figge, 1997). Further, DITF is more likely to yield compliance when requests are made on behalf of assistance organizations (i.e., when the request is made on behalf of a "good cause") or will benefit the target of the request, rather than on behalf of a researcher (e.g., for general research purposes) or business organizations (Millar, 2001; Millar, 2002; O'Keefe & Figge, 1997).

An additional manipulation that enhances DITF effects (at least slightly) is what Fointiat (2000) referred to as the "foot-in-the-mouth" manipulation. In short, he found that simply asking participants how they feel prior to making any requests increased the likelihood of compliance with the target request. In short, after participants have

responded that they “feel fine” in response to the first query, they feel that not agreeing to the target request (especially after refusing to help with the first request) is inconsistent with the behavior of someone who feels fine. Based on this explanation, “foot-in-the-mouth” is very similar to FITD, as both can be explained by consistency theory. However, no request is made of participants, who perceive it as no more than a friendly question.

Just as research on FITD revealed factors that diminish its effectiveness as a compliance-gaining tactic, several factors have been shown to diminish the effectiveness of DITF as well. As discussed above, the DITF tactic is less likely to yield compliance when the requests are made by different requestors, are too far apart in time, or if they are made on behalf of a business rather than a charity organization. Besides these findings, research has demonstrated that while it is important that the initial DITF request be large enough to be refused, it is important that it is not too large. Two explanations for this finding have been proposed. First, Pendleton and Batson (1979) suggested that if the initial request is too large, then participants feel justified in refusing to help with the target request. On the other hand, if the initial request is moderate in size, then participants do not have such external justification in refusing to help with the target request after refusing to help with the initial request. Consequently, they are more likely to comply with the target request. Second, Schwarzwald et al. (1979) explained this finding in terms of behavioral customs. In short, behavioral norms exist about what is an appropriate amount of money to request (or more generally, about what sorts of requests are reasonable versus unreasonable). Violating these norms sets up the possibility of a “boomerang effect,” or causing someone to behave in a direction that is opposite of the

desired behavior. In short, it is important for researchers to make initial DITF requests that will be turned down, but that will not completely turn off targets of the requests. While it is clear that the FITD and DITF independently increase compliance rates with target requests, several researchers have included both techniques in their investigations. Representative research is discussed below.

Studies Investigating Both Sequential Request Compliance Techniques

Both the FITD and the DITF techniques involve making two requests, the first being a set-up for gaining compliance with the second. Although each tactic sets up compliance with the target request in a unique, even opposite way, researchers have investigated the effect of these techniques concurrently. In fact, several of the studies discussed above (to advance an argument about the effectiveness of a particular technique) actually investigated both techniques. For example, the Harari et al. (1980) study discussed in the section concerning factors enhancing and diminishing the FITD effect, also included a DITF condition. In fact, this investigation revealed that DITF yielded more compliance with the target request than did the control condition, which in turn yielded more compliance with the target request (to obtain faculty help with student projects) than the FITD condition. Additionally, Cialdini and Ascani (1976) included an FITD condition in their investigation of the effectiveness of gaining compliance with requests to donate blood; as in Harari et al. (1980), DITF was more effective at gaining compliance with the target request than was FITD.

Based on basic research findings demonstrating that FITD and DITF are each uniquely successful at increasing compliance with target requests, several researchers have investigated both tactics simultaneously in applied contexts. For example, Wang,

Brownstein, and Katzev (1989) investigated the effectiveness of FITD, DITF, and the low-ball procedure in increasing donations to charity by randomly selecting individuals to approach with each of these tactics. [The low-ball procedure is a compliance gaining-tactic in which targets first commit to performing some behavior. Only after this commitment is obtained, however, is an additional, often troublesome aspect of the commitment made known. Interestingly, individuals typically follow through on their original commitment even after the troublesome aspect is made known. In the classic demonstration of the low-ball technique, Cialdini, Cacioppo, Bassett, and Miller (1978) asked students to participate in an experiment. After they agreed, the experimenters informed them that the experiment was at seven in the morning; still, no participants who originally agreed to participate backed out of the experiment. In fact, 56% agreed to participate in the early morning experiment in the low-ball condition, compared to only 24% of those who were told from the beginning that the experiment was early in the morning.] Wang et al. (1989) demonstrated that in general, DITF was the most effective tactic, followed by the low-ball procedure, and finally the FITD procedure, which yielded lower compliance rates than did the single-request control condition. (Also see Burger, 1986; and Fointiat, 2000; for investigations comparing DITF to compliance-gaining tactics other than FITD).

Cantrill (1991) investigated both sequential request compliance techniques with regard to improving compliance with requests to volunteer time to a variety of health-related causes (e.g., seeking organ donations, helping the elderly). He found that both techniques increased compliance with the target requests in comparison to control conditions. In summary, some studies simultaneously investigated the efficacy of more

than one compliance-gaining tactic. Although not every investigation demonstrated that both FITD and DITF were effective, most demonstrated that at least one of the tactics was successful at gaining compliance (but see Martens, Kelly, & Diskin, 1996).

In addition to reviews investigating the separate effects of FITD and DITF tactics on compliance (e.g., Burger, 1999; O’Keefe & Hale, 1998), several meta-analytic reviews have investigated both sequential-request tactics (e.g., Dillard, 1991; Dillard et al., 1984). Dillard et al. (1984) reported that taken together, FITD and DITF manipulations increase compliance by 20% compared to control requests. Overall, FITD and DITF are effective at increasing the likelihood of gaining compliance with target requests, particularly if researchers employing these tactics are careful to take into account the various moderating factors known to affect the efficacy of each tactic.

Prior Test of “Mindless” Compliance with Requests

In discussing the compliance principles, Cialdini (2001) stated that “Each principle is examined as to its ability to produce a distinct kind of *automatic, mindless* compliance from people, that is, a willingness to say yes *without thinking first*” (p. x; italics added). That is, when a compliance professional uses one of the tactics (click), the target of the compliance tactic has little choice but to comply (whirr). One major consequence of Cialdini’s (2001) “mindless” compliance argument is that when trying to get someone to comply with a request, it would not hurt to include one of the tactics in the compliance-gaining attempt.

Cialdini’s (2001) assumption of automatic compliance has rarely been tested. However, one investigation refuted the automatic compliance theory with regard to scarcity (another compliance principle; Brannon & Brock, 2001). In an applied consumer

context, Brannon and Brock (2001) presented an opportunity to purchase a product to restaurant customers but manipulated the amount of time customers would have to take advantage of the opportunity (i.e., high versus low scarcity). To test the automatic compliance assumption, Brannon and Brock (2001) also included either a *strong* or *weak* argument for purchasing the product to investigate the extent to which participants were considering the merits of the offer, because according to Petty, Fleming, and White (1999) “If a variable enhances the extent of thinking then one should see a greater polarization of attitudes in response to strong and weak arguments when the variable is present than when it is absent” (p. 20).

According to Brannon and Brock (2001), if participants were *not* differentiating between the strong and weak arguments because of high scarcity, then they would purchase the product regardless of the quality of the argument to purchase it (due to “brain-clouding arousal” Cialdini, 2001, p. 228). On the other hand, if participants were differentiating between the strong and weak arguments in the high scarcity condition, then they would differentiate in terms of their purchasing behavior: weak argument participants would not purchase the product; strong argument participants would purchase the product.

In fact, Brannon and Brock (2001) found that participants in the high-scarcity conditions differentiated between the strong versus weak conditions more than did low-scarcity participants. High scarcity increased message scrutiny, refuting Cialdini’s (2001) hypothesis of automatic responding. The consequence of Brannon and Brock’s (2001) findings is that Cialdini’s idea that it would not hurt to include any compliance tactic in a compliance-gaining attempt is inaccurate. Sometimes compliance tactics increase the

scrutiny of accompanying messages, so that weak messages seem *less* compelling than they would in the absence of the compliance variable, leading to a boomerang effect—a rejection of the offer. On the other hand, with increased scrutiny a strong message can seem even more compelling, leading to more enduring attitude change that can affect behavior across a variety of situations (Petty, 1995; Petty & Cacioppo, 1996; Petty & Wegener, 1998; Petty & Wegener, 1999).

Outstanding Issues in Understanding Compliance Theory

Automatic Versus Thoughtful Compliance

A major purpose of the present research was to investigate the issue of automatic compliance with requests, focusing specifically on compliance with the sequential request tactics of foot-in-the-door (FITD) and door-in-the-face (DITF).

Commitment/consistency (FITD) and reciprocity (DITF) have not been as widely researched as other compliance principles; especially with regard to *why* they work in gaining compliance. In fact, Dolin and Booth-Butterfield (1995) wrote that “We still do not have *any data* that explain why FITD works” (p. 64; italics added). Further, various reviewers of the sequential-request tactics have concluded that it is difficult to predict when they will and will not work. For example, Burger (1999) wrote that “Questions remain about the effectiveness of of the FITD procedure, the conditions under which it will be found, and how to explain successful demonstrations of the effect” (p. 304).

Similarly, O’Keefe and Hale (1998) concluded that “There is substantial variability in DITF effects, even under optimal conditions” (p. 27).

Perhaps this variability can be attributed to Cialdini’s as yet untested assumption that compliance with the second (target) request occurs mindlessly following a response

to the initial request in the FITD and DITF paradigms. Past research on other compliance techniques (specifically scarcity, also assumed by Cialdini to automatically elicit behavior change) has revealed that compliance is *not always* automatic; and that including the tactics can sometimes *hurt* compliance rates (Brannon & Brock, 2001). While the theoretical bases of FITD and DITF somewhat explain why the sequential-request procedures sometimes work and occasionally do not work, they do not account for all of this variability.

Cialdini's theory of *automatic* compliance to sequential-request techniques may be accurate in some situations, but there may be some situations in which the use of these tactics elicit *increased* thought leading to differential responding to target requests. Given that it is reasonable to assume that FITD and DITF may, in some instances, result in thoughtful processes, it was important to empirically test Cialdini's automaticity assumption. For example, one explanation of the FITD has been in terms of consistency theory (which suggests thoughtful responding; Festinger, 1957, 1964; Festinger & Carlsmith, 1959). Additionally, the fact that FITD effects are particularly strong when commitments are active, effortful, and freely chosen (Cialdini, 2001), conditions that would appear to maximize thoughtful decisions, also suggests that FITD may be driven by thoughtful processes.

With respect to the DITF effect, the seemingly thoughtful, or at least not mindless, processes of guilt and social responsibility (e.g., Dillard et al., 1984; O'Keefe & Figge, 1997; O'Keefe & Hale, 1998) have been proposed as explanations. Further, the research demonstrating that excessive first requests can actually *decrease* the effectiveness of DITF (Pendleton & Batson, 1979; Schwarzwald et al., 1979) suggests

that there are instances in which DITF causes increased scrutiny of target requests.

In summary, differential responding from thoughtful, enhanced scrutiny in regard to compliance-gaining tactics (as discussed by Brannon & Brock, 2001) may explain inconsistencies in the sequential-request literature, because this literature has (perhaps inaccurately) assumed that compliance with the sequential-request techniques is mindless and automatic (Cialdini, 2001). However, even if Cialdini (2001) is correct in assuming FITD and DITF are thoughtless processes, the present research will still make a contribution to the applied domain of reducing binge drinking behavior among college students.

Compliance with Requests to Not Do Something versus Do Something

An additional unresolved issue in the compliance literature investigated in the present research was whether participants would be more likely to comply with requests to refrain from doing something (passive compliance), versus requests to do something (active compliance). Cialdini (2001) reviewed research on the distinction between obtaining active versus passive commitments for behavioral compliance (e.g., join a committee by a) signing your name to a form—active commitment, or b) not signing your name when signing indicates you do not want to join a committee—passive commitment) and found that active commitments are more likely to yield behavioral compliance. As will be discussed in more detail, Experiment 1 involved gaining compliance with a request to behave in a passive manner (to not drink to excess), while Experiment 2 involved gaining compliance with a request to behave in an active manner (to talk to someone else about not drinking to excess).

Overview of Research

The present research investigated the nature of compliance with commitment- (FITD) and reciprocity- (DITF) based requests. Specifically, the research investigated whether compliance with target requests within the sequential request paradigm is automatic, and whether participants are more likely to agree to not do something (passive compliance), or to do something (active compliance). This investigation was within the context of reducing binge drinking among college students. Two experiments were conducted to investigate these questions.

Experiment 1

The purpose of Experiment 1 was to investigate compliance with requests to not do something that is harmful (passive compliance)—to not drink irresponsibly. In a between-subjects design, Experiment 1 participants were informed that a research group (“Responsible Alcohol Consumption Team” or “ReACT”) was requesting their help. Depending on which condition participants were in, they were asked to help with the initial request (FITD-most participants were expected to agree, DITF-most participants were not expected to agree, or control-no initial request made). Manipulating the initial request set the stage for testing the effectiveness of compliance theory. Next, to test Cialdini’s (2001) automatic compliance assumption, participants read either a strong or weak message about the dangers of excessive alcohol consumption (see Brannon & Brock, 2001). Finally, all participants in all conditions were asked to comply with the target request, to not drink irresponsibly (as determined by the self-reported likelihood of not drinking irresponsibly; consistent with Carducci et al., 1989).

Experiment 2

The purpose of Experiment 2 was to investigate compliance with requests to do something (active compliance) that may help to reduce the likelihood that individuals will engage in unsafe drinking behaviors-to communicate with someone about the dangers of excessive drinking. Experiment 2 completely mirrored Experiment 1 in terms of research design.

Predictions

It was predicted that in both experiments, the use of sequential-request tactics would increase compliance with target requests to not drink excessively (passive compliance, Experiment 1) or to discuss the dangers of excessive drinking with another person (active compliance, Experiment 2) compared to control group compliance (no initial request; target request only), as determined by likelihood of compliance rates with the target request in both experiments. However, it was also predicted that compliance with the target request would vary as a function of message strength. That is, FITD and DITF participants should comply differentially with the target request as a function of message strength, thereby refuting Cialdini's (2001) hypothesis of automatic, unidirectional responding to FITD- and DITF-based requests.

Method

Pretest

Prior to conducting Experiments 1 and 2, participants rated either the strong ($N=26$) or weak ($N=27$) argument in terms of strength (along a 7-point scale, where 1=extremely weak, 7=extremely strong) and persuasiveness (along a 7-point scale, where 1=not at all persuasive and 7=extremely persuasive) in a between-participants design

(Refer to Appendix A for the strong message rating instrument and Appendix B for the weak message rating instrument). The strong message described serious consequences of binge drinking in a factual manner. For example, it included statistics regarding the number of deaths among college-aged students from alcohol-related injuries, and urged students to drink responsibly when they drink (see Appendix A).

In contrast, the weak message discussed consequences of binge drinking in a very opinion-based way. The reasons provided for not binge drinking in the weak message were not as compelling as those in the strong message (beer does not taste good, drinking can make you smell bad). Rather than asking students to moderate their drinking behavior, students reading the weak message were urged to look for alternatives to drinking alcohol, such as studying (see Appendix B). Both messages were 267 words in length.

The average strength rating of the strong message ($M=5.12$; $SD=1.11$) was significantly higher than the average strength rating of the weak message ($M=3.63$; $SD=1.60$), [$t(51)=3.92$, $p<.0001$]. The average persuasiveness rating of the strong message ($M=3.88$; $SD=1.24$) was significantly higher than the average persuasiveness rating of the weak message ($M=2.85$; $SD=1.41$), [$t(51)=2.83$, $p<.01$]. Although the persuasiveness rating of the strong message was slightly below the midpoint of the rating scale, the strong message was deemed sufficiently strong because the strength rating was above the midpoint. This decision, which may have been shortsighted and possibly caused a problem with the results of the experiments (as will be discussed), was motivated by the fact that strength ratings are more standard measures of message strength than persuasiveness ratings, and that the strong message was rated significantly

higher than the weak message both in terms of strength and persuasiveness.

In order to determine the best items for the FITD, DITF, and target items for Experiments 1 and 2, participants rated how likely they were to perform a variety of tasks. The tasks participants rated involved the likelihood of curbing their own drinking (as in Experiment 1) or communicating the importance of curbing drinking behavior to others (as in Experiment 2). In total, participants rated 44 items along a 7-point scale, where 1=extremely unlikely and 7=extremely likely. To reduce rater fatigue, two separate groups of participants rated 22 items each. Although each participant rated only half the items, all participants rated some items relevant to both experiments. Refer to Appendixes C and D for each set of items.

Results of pretest: Selection of Experiment 1 appeal and target items. Refer to Table 1 for the average likelihood ratings for items considered for inclusion in Experiment 1 (arranged in order of lowest average likelihood rating, to highest average likelihood rating, of performing each task). In selecting the most appropriate items for inclusion in Experiment 1, it seemed logical that pretest items with a relatively high likelihood rating would serve well as FITD initial items (most people would agree). On the other hand, items with a relatively low likelihood rating would serve well as DITF initial items (most people would not agree), and items rated in the middle of the rating scale would serve well as target items.

For Experiment 1, the selected FITD item (not drinking for one night in the next week) received a mean likelihood rating of 5.35 ($N=62$, $SD=2.08$). This rating is ideal for an initial FITD request item because it is above the midpoint of the 1-7 rating scale, which suggests that people would tend to perform that behavior. The selected DITF item

(not drinking at all in the next month, with name being published in the school newspaper) received a mean rating of 3.58 ($N=62$, $SD=2.46$). This rating is ideal for an initial DITF request item because it is below the midpoint of the 1-7 rating scale, which suggests that people would *not* tend to perform that behavior. Finally, the target item for Experiment 1 (not drinking excessively for one week, where the interpretation of “drinking excessively” was left open to personal interpretation, and the person’s name would not be published in the school newspaper as someone who agreed to this request) received a mean likelihood rating of 4.89 ($N=61$, $SD=1.87$).

Experiment 1 Method

Participants in Experiment 1 were asked to reduce their drinking behavior, so only undergraduate participants who reported that they consume alcohol at least occasionally were included in the analysis ($N=160$). Consistent with the methods employed by sequential request researchers, the data of participants who *did not* agree to help with the first request in the FITD manipulation ($N=4$), and participants who *did* agree to help with the first request in the DITF manipulation ($N=15$) were not included in the analysis, resulting in a final sample of 141 participants.

Participants

Experiment 1 participants were recruited from introductory and upper-level psychology and marketing classes, and received credit for participating. Experiment 1 participants ($N=141$) completed a demographic questionnaire (Appendix E) on which they reported how frequently they drink in an average two-week period ($M=4.06$ times, $SD=2.45$), the number of drinks they consume per occasion ($M=6.25$ drinks, $SD=3.61$), the number of drinks they consider a reasonable amount to consume per drinking

occasion ($M=6.44$ drinks, $SD=3.52$), the number of drinks their mother ($M=3.63$, $SD=10.15$) and father ($M=7.18$, $SD=13.15$) consume in an average two-week period, the number of religious activities they attend per two-week period ($M=1.35$, $SD=1.41$) and their age ($M=20.40$ years, $SD=1.87$). Also see Table 2 for means, standard deviations, and number of respondents per item.

In addition, Experiment 1 participants reported their gender (55.3% were female, 44.7% were male), ethnicity (93.5% were White, 0.7% were Black, 1.4% were Hispanic, and 4.3% reported other ethnicities), and year in school (39.7% were freshmen, 17.0% were sophomores, 14.9% were juniors, and 28.4% were seniors). All (100.0%) participants indicated that English was their native language. Finally, 42.6% of participants indicated they were involved in a fraternity or sorority, and 42.6% indicated they were involved in athletics. Also see Table 2 for frequency information.

Correlates of Drinking Behavior for Experiment 1 Participants

In order to gain a general understanding of the factors that are associated with binge drinking behavior among undergraduate students who reported engaging in drinking behavior, selected responses to the demographic questions in Appendix E were correlated. These correlations are described below.

Overview of Correlation Information

Refer to Table 3 for pairwise correlations between 11 drinking and demographic variables for Experiment 1 participants: 1) The number of drinking occasions participants attend per two-week period, 2) The number of alcoholic beverages participants consume per drinking occasion, 3) The number of alcoholic drinks participants personally consider a reasonable amount to consume when drinking, 4) The average number of alcoholic

beverages participants' mothers consume per two-week period, 5) The average number of alcoholic beverages participants' fathers consume per two-week period, 6) The average number of religious activities participants attend per two-week period, 7) Gender (1=Male, 2=Female), 8) Year in school (1=Freshman, 2=Sophomore, 3=Junior, and 4=Senior), 9) Age, 10) Involvement in a fraternity or sorority (1=Involved, 2=Not Involved), and 11) Involvement in athletics (1=Involved, 2=Not Involved). A number of interesting correlations emerged among these variables, which are summarized below.

Correlations between Drinking Variables for Experiment 1 Participants

The number of times participants consume alcohol per two-week period was related to the amount of alcohol consumed when drinking alcohol ($r=.56, p<.01$). That is, students who drink frequently also consume more alcohol on average when they drink than those who drink alcohol less frequently. Additionally, the number of drinks that students consider a reasonable amount to consume each time they drink was related to how frequently they drink ($r=.51, p<.01$) and how many alcoholic beverages they consume each time they drink ($r=.73, p<.01$).

Correlations between Background and Drinking Variables

Parental drinking behavior. To understand factors that may predispose individuals to drink in college, student drinking behavior was correlated with their parents' drinking behavior. A significant correlation emerged between the number of times students drink per two-week period and the number of alcoholic beverages their mothers consume per two week period ($r=.18, p<.05$), but not between student drinking frequency and the number of alcoholic beverages their fathers consume per two-week period ($r=.04, ns$). Similarly, the number of drinks students consume each time they drink

was related to the number of drinks their mothers consume per two-week period ($r=.24$, $p<.01$) but not with the number of drinks their fathers consume ($r= -.03$, ns).

Religious activities. As would be expected, both the frequency of drinking occasions students attend, and the amount of alcohol they consume each time they drink, were negatively related to the number of religious activities students attend ($rs= -.20$, $p<.05$, and $-.28$, $p<.01$, respectively). That is, students who are more actively involved in religion are less likely to consume as much alcohol as non-involved students.

Correlations between Demographic and Drinking Variables

Next, drinking behavior was correlated with gender, year in school, and age.

Gender. Recall that 44.7% of Experiment 1 participants were male, and 55.3% were female. Male college students reported drinking more frequently per two-week period ($M=4.94$, $SD=2.53$) than female college students [$M=3.35$, $SD=2.15$; $r= -.32$, $p<.01$]. Similarly, male college students reported consuming more alcohol on average when they drink ($M=8.29$, $SD=3.86$) than female college students [$M=4.60$, $SD=2.36$; $r= -.51$, $p<.01$].

Year in school. Recall that 39.7% of Experiment 1 participants were freshmen, 17.0% were sophomores, 14.9% were juniors, and 28.4% were seniors. Year in school was correlated with frequency of drinking behavior and amount of alcohol consumed per drinking occasion. The frequency of drinking behavior was not related to year in school ($r= -.01$, ns), nor were the number of drinks consumed per occasion and year in school ($r= -.14$, ns) in this sample. However, the latter correlation was in the expected direction, suggesting that upper class college students demonstrate more moderate drinking behavior than their lower class peers.

Age. Finally, a pattern of results similar to that found with respect to year in school emerged with respect to age. Age was not related to the frequency of drinking alcohol ($r = .04, ns$), age ($r = -.12, ns$), and number of drinks consumed per occasion ($r = -.12, ns$). However, the latter correlation was in the expected direction, suggesting that older college students consume fewer alcoholic beverages than younger college students when they drink.

Correlations between Group Membership and Drinking Behavior

Membership in a fraternity or sorority and participation in athletics were correlated with frequency of alcohol consumption and number of alcoholic drinks consumed per occasion.

Fraternity or sorority membership. Recall that 42.6% of Experiment 1 participants were involved in a fraternity or sorority. The relationship between membership in a fraternity or sorority and the frequency of alcohol consumption ($r = -.16, ns$) was not significant, nor was the relationship between membership in these groups and the number of beverages consumed per occasion ($r = -.10, ns$). However, these correlations were in the expected direction, suggesting that fraternity and sorority members drink more alcohol than non-members.

Involvement in athletics. Recall that 42.6% of the Experiment 1 sample was involved in athletics. The correlation between involvement in athletics and frequency of drinking alcohol was not significant ($r = -.14, ns$). However, there was a significant correlation between athletics involvement and the number of alcoholic beverages consumed per occasion. Athletes drink more than non-athletes ($r = -.31, p < .01$; athlete $M = 7.54$ drinks, $SD = 4.30$ versus non-athlete $M = 5.29$, $SD = 2.65$).

Experiment 1 Manipulation: Materials and Procedure

To set the stage for the Experiment 1 manipulation, the experimenter read a script describing the experiment (Appendix F). Students were told that they would be asked to help a new responsible drinking promotion group become established on campus, and that their choice to help the group was completely voluntary. Next, participants were told that they would complete surveys about their feelings and drinking behaviors so the group could distribute accurate information to students on campus.

After describing the tasks in the experiment, the researcher distributed a packet of materials to participants (participants were randomly assigned to conditions). In all conditions, the packet participants received contained a cover sheet describing the responsible drinking group, called Responsible Alcohol Consumption Team, or ReACT. The group was described as containing researchers and students who realize that many students consider drinking an important part of college life, and one that would like to see students drink more responsibly when they drink (see Appendix G).

For the participants in the sequential-request conditions, the second page of the packet asked for compliance with an initial request. The initial request for FITD participants was to not drink alcohol for one night in the next week and to sign their name for the purpose of showing the Student Governing Association in order to obtain funding for ReACT (see Appendix H).

The initial request for DITF participants was to agree to not drink alcohol *at all* for an entire month and to sign their name for the purpose of it being published in an ad in the school newspaper (see Appendix I). Finally, consistent with standard sequential-request research procedures, control participants were not asked to comply with an initial

request.

After participants were asked to comply with the initial request (or not in the control condition), they read the strong (see Appendix A) or weak (see Appendix B) message about the dangers of excessive drinking, as an example of the sort of information the group plans to distribute on the students' campus.

Participants in all conditions were then asked to comply with the target request, to not drink excessive amounts of alcohol for one week. The main dependent variable was the response to the question "What is the likelihood that you would not drink to excess for one week?" Participants were also asked if it would be okay to contact them via e-mail in the future in order to learn if they did not drink excessively, in exchange for their name being entered in a drawing to win \$100 if they responded to this e-mail inquiry. See Appendix J, which includes a description of responsible drinking and an explanation of the target request on the first page, followed by the actual target request on the second page, and the request for contact information in order to gather follow-up information on the third page.

Participants completed demographic and alcohol consumption questions (described above; Appendix E) in order to allow researchers to gain an understanding of the sample and learn about correlations between demographic variables and drinking behavior. Next, participants completed a short version of the Marlowe-Crowne Social Desirability Scale. Appendix K presents the 10-item version of the scale, the M-C 2(10), used in the present research (Strahan & Gerbasi, 1972).

The Marlowe-Crowne Social Desirability Scale measures the tendency of some research participants to present themselves in a favorable, socially desirable manner. The

tendency to appear socially desirable can affect the responses provided by research participants when asked to report their behavior, to the extent that respondents may provide inaccurate responses. For this reason, the Marlowe-Crowne scale is frequently included in questionnaire research and used as a covariate to control for the extent to which participants generally manage the impression others have of them (Paulhus, 1991).

Research has shown that the “[social desirability] tendency will vary according to situational demands and transient motives and that variation may obscure the validity of the respondent’s self-reports” (Paulhus, 1991, pp. 21-22). Therefore, one could expect the social desirability variable to influence responses in multiple, unpredictable ways. For example, respondents in the present research who are high in social desirability (HSD) might overestimate their true intention to curb their drinking behavior. They could provide a higher than accurate likelihood estimate in response to the question “What is the likelihood that you would not drink to excess for one week?” to satisfy their motive to please the experimenter. In other words, HSD respondents might think “I know the researchers would like for me to drink responsibly, so I will tell them what they want to hear--that I will drink less than I actually intend to, just to please them.”

On the other hand, HSD respondents might exercise a form of impression management in which they respond so that they do not appear to be easily influenced. It was possible that HSD participants in the present research would under-report their true intention to curb their drinking behavior. For example, they could provide a lower than accurate likelihood estimate in response to the question “What is the likelihood that you would not drink to excess for one week?” to satisfy their motive to appear to be resistant to persuasion (Eagly & Chaiken, 1993; Paulhus, 1991).

Such impression management (Tetlock & Manstead, 1985; Leary & Kowalski, 1990) and reactance (Brehm, 1966) effects suggest that sometimes people will report not being influenced by a message because they exhibit “strategic and therefore more temporary shifts designed to manage an impression of being free or independent” (Eagly & Chaiken, 1993, p. 571).

Finally, to obtain behavioral feedback on the effectiveness of the various conditions, participants were asked to remove the final page of the questionnaire, complete the questions on it, and mail this page back to the experimenters. Filler questions on this page were included to lend credibility to ReACT and its goals (for example, participants were asked if they would like additional information about the dangers of alcohol consumption). Additionally, participants were asked to indicate whether they intended to not drink excessive amounts of alcohol for one week (see Appendix L). After completing the packet of experimental materials, participants were debriefed about the purposes of the experiment.

One week after participating in the experiment, participants who agreed to be contacted again via electronic mail to answer questions about their compliance were re-contacted. Participants were sent an e-message including questions about their alcohol consumption (see Appendix M for the e-mail questionnaire).

Experiment 1 Results

The dependent variable in Experiment 1 was the estimated likelihood of not drinking to excess for one week. Data from twelve participants are not included in the analysis due to incomplete responses, so the reported results are based on 129 participants. Refer to Figure 1 for the mean likelihood of following through on the target

request as a function of condition (note that all means reported are adjusted for the covariates, average number of drinks per occasion and social desirability), and to Table 4 for adjusted means, standard errors, and cell size information.

The data were submitted to a 2(Strength: Strong/Weak) \times 3(Appeal: DITF/FITD/Control) \times 2(Gender: Male/Female) Analysis of Covariance (ANCOVA) with number of drinks per occasion and level of social desirability as covariates. The drinks per occasion covariate was included because a person's general tendency to drink a certain amount of alcohol could influence that person's willingness to agree to drink responsibly (consistent with the dependent variable for this experiment, to not drink to excess for one week). Additionally, the social desirability covariate was included because a person's level of social desirability has been shown to affect how likely a person will respond honestly when self-reporting attitudes and behaviors, although the way in which it affects responses can be difficult to predict (Paulhus, 1991)¹.

Refer to Table 5 for a complete ANCOVA Source Table for Experiment 1 Effects. There was a significant main effect for Message Strength, with the strong message yielding significantly higher likelihood ratings ($M=81.23\%$, $SE=3.42$) than the weak message ($M=72.11\%$, $SE=3.00$), [$F(1,115)=3.97$, $p<.05$, $\eta^2=.03$].

The significant main effect was qualified by a significant Strength \times Appeal interaction, $F(2, 115)=3.00$, $p=.05$, $\eta^2=.05$]. Planned comparisons were carried out to investigate this significant interaction. Consistent with the elaboration hypothesis, the DITF appeal accompanied by the weak message yielded significantly lower likelihood

¹ The patterns of significance were almost identical with or without the social desirability covariate.

ratings ($M=66.91\%$, $SE=5.75$) of following through on the target request than the control appeal (no initial request) accompanied by the weak message ($M=82.22\%$, $SE=4.99$), [$F(1, 115)=4.12$, $p=.04$, $\eta^2=.09$]. Additionally, the FITD appeal accompanied by the weak message yielded significantly lower likelihood ratings of following through on the target request ($M=67.22\%$, $SE=4.81$) than the control appeal (no initial request) combined with the weak message ($M=82.22\%$, $SE=4.99$), [$F(1,115)=4.62$, $p=.03$, $\eta^2=.09$].

Further, planned comparisons were carried out to investigate the effects of argument strength within appeal. Within the DITF appeal, the strong message yielded marginally higher likelihood ratings ($M=83.75\%$, $SE=7.14$) of following through on the target request than the weak message ($M=66.91\%$, $SE=5.75$), [$F(1,115)=3.31$, $p=.07$, $\eta^2=.09$]. Within the FITD appeal, the strong message yielded significantly higher likelihood ratings ($M=83.34\%$, $SE=5.44$) of following through on the target request than the weak message ($M=67.22\%$, $SE=4.81$), [$F(1,115)=4.93$, $p=.03$, $\eta^2=.10$]. However, within the control conditions (no initial request), there was no significant difference between the likelihood ratings for the strong message ($M=76.60\%$, $SE=4.94$) and the weak message (82.22% , $SE=4.99$), [$F(1,115)= 0.64$, ns , $\eta^2=.00$].

In addition to the significant Strength \times Appeal interaction, there was a marginally significant interaction between Message Strength and Gender, [$F(1,115)=3.62$, $p=.06$, $\eta^2=.03$]. Among the men in the Experiment 1 sample, the strong message yielded higher likelihood ratings ($M=87.23\%$, $SE=5.78$) than the weak message ($M=69.48\%$, $SE=4.61$), [$F(1,115)=6.20$, $p=.01$, $\eta^2=.11$]. One possible explanation for this finding is that men are more at risk for binge drinking behavior than women, so they attended more closely to the strong message. No other Experiment 1 effects were

significant.

Mail-In Measure

Twenty Experiment 1 participants returned the mail-in measure that was part of the original questionnaire packet, for a return rate of 10.8%. Overall, the majority (80.0%) of the 20 participants indicated that they intended to not drink excessive amounts of alcohol for one week (the dependent variable of interest to Experiment 1).

Refer to Table 6 for the number of questionnaires returned, and the percentage of respondents who returned the questionnaire who intended to comply with the target request, as a function of message strength and appeal type. A nominal logistic regression analysis on the percentage of respondents who intended to comply with the target request, by condition, revealed no significant interactions or main effects. However, it should be noted that with such a small response rate it is difficult to draw definitive conclusions based on the present findings.

Electronic Mail Responses

In completing the questionnaire, participants were asked if they could be contacted via e-mail to answer additional questions in the future. Seventy-six participants (53.9%) agreed to future contact. All participants who agreed to be contacted in the future were contacted, and 25 participants responded to the request for information sent to them one week later (32.9% of those contacted). Overall, the majority (80.0%) of these 25 participants responded that they did not drink excessively in the past week (the dependent variable of interest for Experiment 1).

Recall that all participants who agreed to be contacted via e-mail after participating in the experiment were contacted one week after their participation in

exchange for the opportunity to be entered in a drawing to win \$100. Refer to Table 7 for the number of electronic mail replies received in response to this follow-up e-mail contact, and the percentage of participants who responded to the message who felt they did not drink excessively in the past week (and therefore followed through on the target request), as a function of message strength and appeal type. A nominal logistic regression analysis on the percentage of respondents who reported complying with the target request, by condition, revealed no significant interactions or main effects. Given the low response rate, it is difficult to draw definitive conclusions based on these results.

Experiment 1 Discussion

The results for Experiment 1 revealed a significant interaction between Message Strength and Appeal Type. It was expected that the DITF and FITD appeals, accompanied by strong arguments, would elicit the highest compliance rates of all conditions in Experiment 1, if the FITD and DITF appeals led to increased processing (compared to no appeal) and as long as the accompanying message was strong. However, while the strong message was rated relatively high by pretest participants in terms of strength (5.12 along a 1-7 rating scale), it was rated below the neutral point in terms of persuasiveness (3.88 along a 1-7 rating scale). In hindsight, the results of the pretest experiment suggest that the strong argument was in fact not extremely compelling.

The compliance rates were not affected by the use of compliance appeals in the strong argument conditions. However, both the DITF and FITD appeals elicited significantly lower compliance rates when accompanied by a weak persuasive message (which was rated low in terms of strength and persuasiveness by pretest participants).

These results support the increased processing explanation of compliance theory,

as the strong/neutral argument did not elicit higher compliance rates when it accompanied the compliance appeals, as compared to the control appeal condition. In fact, as the strong/neutral message may have really been more appropriately identified as being neutral, the results may have supported Cialdini's (2001) automatic compliance assumption if higher compliance rates *were* achieved under the strong/neutral message, compliance appeal conditions as compared to the strong/neutral message, control appeal condition.

In other words, it is likely that the FITD and DITF conditions did not increase compliance when paired with the strong/neutral argument as compared to the control condition, because the respondents were elaborating on a neutral message. If Cialdini's (2001) automatic compliance assumption were accurate, then compliance should have been higher under the FITD and DITF conditions than in the control condition, regardless of whether the strong/neutral message was actually strong, or only neutral.

Further, the weak argument (which was in fact weak, based on a 3.63 strength rating and 2.85 persuasiveness rating, along 1-7 rating scales) elicited lower compliance rates when it accompanied the DITF and FITD compliance appeals, as compared to the control appeal condition. This suggests that participants were more carefully scrutinizing the message content when deciding the likelihood of complying with the request to not drink excessively in the compliance appeal conditions than in the control (no initial appeal) condition. This supports the increased processing explanation of compliance theory, rather than the automatic compliance assumption. The implication of this finding is that there are situations in which using the DITF and FITD compliance appeals can harm compliance rates. FITD and DITF should not necessarily be used whenever one

would like to gain compliance with a request, but only when the appeals contain strong or neutral arguments (because weak arguments might boomerang).

Finally, it should be noted that in many previous experiments on the sequential request compliance tactics, the requests were made in personal face-to-face interactions (see Burger, 1999; Cialdini, 2001, for reviews), while the present experiment involved making requests on paper to a large audience. Perhaps the impact of the manipulations in the present experiment would have been stronger if the requests were made face-to-face, however, the present findings are notable considering that requests were not made in this manner.

Experiment 2 Method

Results of Pretest: Selection of Experiment 2 Appeal and Target Items

Refer to Table 8 for the average likelihood ratings for items considered for inclusion in Experiment 2. As described in terms of selecting items for use in Experiment 1, Experiment 2 pretest items with a relatively high likelihood rating were selected because it was assumed these would serve well as FITD initial items (most people would agree). On the other hand, items with a relatively low likelihood rating would serve well as DITF initial items (most people would not agree), and items rated in the middle of the rating scale would serve well as target items. In order to maximize on this logic, some items were combined or modified between the pretest data collection and the data collection for Experiment 2.

For Experiment 2, the selected FITD item (distributing one informational sheet about ReACT and its goals) received a mean likelihood rating of 5.16 ($N=61$, $SD=1.67$), above the midpoint of the 1-7 rating scale. The selected DITF item (paying \$3.00 for a

pin that says 'I drink responsibly' and wearing it when I drink socially and when I am on the KSU campus) was drawn from two pretest items, which received mean likelihood ratings of 2.84 (for wearing the pin when drinking socially; $N=61$; $SD=1.98$) and 3.51 (for wearing the pin when on campus; $N=61$ $SD=2.09$), below the midpoint of the 1-7 rating scale. Finally, the selected target item (discussing the dangers of excessive alcohol consumption with one person) was drawn from two pretest items, which received mean likelihood ratings of 4.39 ($N=61$, $SD=1.75$, for agreeing to talk to one friend while out drinking) and 4.63 ($N=62$; $SD=2.19$, for agreeing to talk to one friend anytime).

The target request made of participants in the second experiment was to agree to communicate with one person about the dangers associated with excessive alcohol consumption. While asking participants to talk to another person about the dangers of binge drinking did not mean that the participants would personally adopt responsible drinking behaviors, there were several reasons to believe this approach would be successful. By gaining participants' compliance with the target request to communicate the responsible drinking message, the investigation attempted to take advantage of the fact that compliance theory calls for a specific behavior (if participants agree to communicate, they can do so without changing their personal attitude about binge drinking). However, by talking to another person about drinking responsibly, the potential existed for the participants to not only change the other person's drinking behavior, but also their own attitudes (which predict behavior across situations), because communication in this manner should prompt individuals to generate their own unique arguments in support of responsible drinking (see Petty & Cacioppo, 1996, for a review).

As in the first experiment, Experiment 2 participants were undergraduate college

students who reported drinking at least occasionally ($N=153$). Consistent with the methods employed by sequential request researchers, the data of participants who *did not* agree to help with the first request in the FITD manipulation ($N=13$), and participants who *did* agree to help with the first request in the DITF manipulation ($N=8$) were not included in the analysis, resulting in a final sample of 132 participants.

Participants

Experiment 2 participants were recruited from introductory and upper-level psychology and marketing classes, and received credit for participating. Experiment 2 participants ($N=132$) completed a demographic questionnaire (Appendix E) on which they reported how frequently they drink in an average two-week period ($M=3.54$ times, $SD=2.04$), the number of drinks they consume per occasion ($M=5.88$ drinks, $SD=3.87$), the number of drinks they consider a reasonable amount to consume per drinking occasion ($M=5.94$ drinks, $SD=2.72$), the number of drinks their mother ($M=2.80$, $SD=6.60$) and father ($M=9.52$, $SD=18.51$) consume in an average two-week period, the number of religious activities they attend per two-week period ($M=1.23$, $SD=1.39$) and their age ($M=20.64$ years, $SD=1.91$). Also see Table 9 for means, standard deviations, and number of respondents per item.

In addition, Experiment 2 participants reported their gender (56.1% were female, 43.9% were male), ethnicity (86.9% were White, 3.1% were Black, 6.9% were Hispanic, and 3.1% reported other ethnicities), and year in school (33.3% were freshmen, 15.9% were sophomores, 15.2% were juniors, and 35.6% were seniors). Most (99.2%) participants indicated that English was their native language. Finally, 29.5% of the participants indicated they were involved in a fraternity or sorority, and 33.3% indicated

they were involved in athletics. Also see Table 9 for frequency information.

Correlates of Drinking Behavior for Experiment 2 Participants

In order to gain a general understanding of the factors that are associated with binge drinking behavior among undergraduate students who reported engaging in drinking behavior, selected responses to the demographic questions in Appendix E were correlated. These correlations are described below.

Overview of Correlation Information

Refer to Table 10 for pairwise correlations between 11 drinking and demographic variables for Experiment 2 participants: 1) The number of drinking occasions participants attend per two-week period, 2) The number of alcoholic beverages participants consume per drinking occasion, 3) The number of alcoholic drinks participants personally consider a reasonable amount to consume when drinking, 4) The average number of alcoholic beverages participants' mothers consume per two-week period, 5) The average number of alcoholic beverages participants' fathers consume per two-week period, 6) The average number of religious activities participants attend per two-week period, 7) Gender (1=Male, 2=Female), 8) Year in school (1=Freshman, 2=Sophomore, 3=Junior, and 4=Senior), 9) Age, 10) Involvement in a fraternity or sorority (1=Involved, 2=Not Involved), and 11) Involvement in athletics (1=Involved, 2=Not Involved). A number of interesting correlations emerged among these variables, which are summarized below.

Correlations between Drinking Variables for Experiment 2 Participants

First, frequency of alcohol consumption correlated with amount of alcohol consumed when drinking alcohol ($r=.43, p< .01$). That is, students who drink frequently also consume more alcohol on average when they drink than those who drink alcohol less

frequently. Also, as would be expected, the number of drinks that students consider a reasonable amount to consume each time they drink correlated with how frequently they drink ($r=.44, p<.01$) and how many alcoholic beverages they consume on average when they drink ($r=.49, p<.01$).

Correlations between Background and Drinking Variables

Parental drinking behavior. To understand factors that may predispose individuals to drink in college, student drinking behavior was correlated with their parents' drinking behavior. Significant correlations emerged between the number of times students drink per two-week period, and the number of alcoholic beverages their mothers ($r=.24, p<.05$) and fathers ($r=.26, p<.01$) consume per two week period. However, no significant correlations emerged between the number of drinks students consume each time they drink and the number of drinks their mothers ($r=.19, ns$) and fathers ($r=.07, ns$) consume per two-week period.

Religious activities. The number of religious activities students attend was not related to the amount of alcohol they consume each time they drink ($r= -.17, ns$). However, the number of alcoholic beverages consumed per occasion was negatively correlated with the number of religious activities students attend ($r= -.20, p<.05$), suggesting that students who are more actively involved in religion are less likely to consume as much alcohol as non-involved students.

Correlations between Demographic and Drinking Variables

Next, drinking behavior was correlated with gender, year in school, and age.

Gender. Recall that 43.9% of Experiment 2 participants were male, and 56.1% were female. Gender was not related to frequency of drinking alcohol ($r = -.08$, *ns*) nor amount of alcohol consumed when drinking ($r = -.15$, *ns*).

Year in school. Recall that 33.3% of Experiment 2 participants were freshmen, 15.9% sophomores, 15.2% juniors, and 35.6% were seniors. Year in school was not related to the number of times students drink alcohol per two week period ($r = .08$, *ns*) nor the number of drinks consumed per occasion ($r = .01$, *ns*).

Age. A pattern of results similar to that found with respect to year in school emerged with respect to age. There was no relationship between age and frequency of drinking alcohol ($r = -.04$, *ns*), nor between age and number of drinks consumed per occasion ($r = -.09$, *ns*).

Correlations between Group Membership and Drinking Behavior

Membership in a fraternity or sorority and participation in athletics were correlated with frequency of alcohol consumption and number of alcoholic drinks consumed per occasion.

Fraternity or sorority membership. Recall that 29.5% of Experiment 2 participants were involved in a fraternity or sorority. There was no relationship between membership in a fraternity or sorority and the frequency of alcohol consumption ($r = -.12$, *ns*) nor between membership in these groups and the number of beverages consumed per occasion ($r = .00$, *ns*).

Involvement in athletics. Recall that 33.3% of the Experiment 2 participants were involved in athletics. There was no relationship between participation in athletic activities and frequency of drinking alcohol ($r = -.09$, *ns*). Additionally, there was no significant

relationship between participation in athletics and the number of alcoholic beverages consumed per occasion ($r=.02$, *ns*).

Experiment 2 Manipulation: Materials and Procedure

The procedure of Experiment 2 followed the procedure of Experiment 1. The only major difference between the two experiments was the nature of the requests made of participants. In this experiment, the initial FITD request was for participants to distribute one informational sheet about ReACT and to sign their name (see Appendix N). The initial DITF request was for participants to agree to pay \$3.00 for a pin that says “I drink responsibly” when out drinking socially or on the KSU campus (see Appendix O). After being presented with the initial request or just the group information (control), participants in Experiment 2 read the same strong versus weak messages as those presented in Experiment 1 (see Appendix A and Appendix B).

Participants in all conditions were then asked to comply with the target request, to talk to one other person about the dangers of excessive drinking. The main Experiment 2 dependent variable was the response to the question “What is the likelihood that you would agree to talk to one person about the dangers of excessive alcohol consumption?” Participants were also asked if it would be okay to contact them via e-mail in the future to learn if they talked to someone the dangers of excessive drinking, in exchange for their name being entered in a drawing to win \$100 if they responded to this e-mail inquiry. See Appendix P, which includes a description of responsible drinking and an explanation of the target request on the first page, followed by the actual target request on the second page, and the request for contact information in order to gather follow-up information on the third page.

Participants also completed the same demographic and alcohol consumption questions (Appendix E) and measure of socially desirable responding (Strahan & Gerbasi, 1972; Appendix K) as those completed by Experiment 1 participants.

Finally, to obtain behavioral feedback on the effectiveness of the various conditions, participants were asked to remove the final page of the questionnaire, complete the questions on it, and mail this page back to the experimenters. Filler questions on this page were included to lend credibility to ReACT and its goals, and participants were asked to indicate whether they intended to discuss the dangers of excessive alcohol consumption with another person (see Appendix L). After completing the packet of experimental materials, participants were debriefed about the purposes of the experiment.

One week after participating in the experiment, participants who agreed to be contacted again via electronic mail to answer questions about their compliance were re-contacted. Participants were sent an e-message including a question about whether they discussed responsible alcohol consumption with someone (see Appendix M for the e-mail questionnaire).

Experiment 2 Results

The dependent variable in Experiment 2 was the estimated likelihood of talking to one person about the dangers of excessive alcohol consumption. Data from ten participants are not included in the analysis due to incomplete responses, so the reported results are based on 122 participants. Refer to Table 11 for adjusted means, standard errors, and cell size information.

The data were submitted to a 2(Strength: Strong/Weak) \times 3(Appeal:

DITF/FITD/Control) \times 2(Gender: Male/Female) Analysis of Covariance (ANCOVA) with number of drinks per occasion and level of social desirability as covariates. The drinks per occasion covariate was included because a person's general tendency to drink a certain amount (a large amount, or very little) could influence that person's willingness to talk to other people about responsible drinking (consistent with the dependent variable for this experiment, to talk to one person about the dangers of excessive alcohol consumption). Additionally, as in Experiment 1, the social desirability covariate was included because a person's level of social desirability has been shown to affect how likely a person will respond honestly when self-reporting attitudes and behaviors, although the way in which it affects responses can be difficult to predict (Paulhus, 1991)².

Refer to Table 12 for a complete ANCOVA Source Table for Experiment 2 Effects. No interactions in the analysis were significant, however, there was a main effect for appeal, [$F(2, 108)=3.73, p=.03, \eta^2=.07$]. Post-hoc pairwise comparisons with Bonferroni's adjustment revealed that the mean likelihood of talking to someone about the dangers of excessive alcohol consumption was significantly higher within the control appeal condition (no initial request; $M=74.48\%, SE=4.42$) than within the DITF appeal condition ($M=57.52\%, SE=5.00; p=.04$). The average likelihood of talking to someone about the dangers of excessive alcohol consumption within the FITD appeal condition ($M=72.62\%, SE=4.47$) was marginally significantly higher than within the DITF appeal condition ($M=57.52\%, SE=5.00; p=.08$). No other Experiment 2 main effects or interactions were significant.

² The patterns of significance were almost identical with or without the social desirability covariate.

Mail-In Measure

Fourteen Experiment 2 participants returned the mail-in measure that was part of the original questionnaire packet, for a return rate of 7.1%. Overall, the majority (71.4%) of the 14 participants indicated that they intended to discuss the dangers of excessive alcohol consumption with one person (the dependent variable of interest in Experiment 2). Refer to Table 13 for the number of questionnaires returned, and the percentage of respondents who returned the questionnaire who intended to comply with the target request, as a function of message strength and appeal type.

A nominal logistic regression analysis on the percentage of respondents who intended to comply with the target request, by condition, revealed no significant interactions or main effects. However, it should be noted that with such a small response rate it is difficult to draw definitive conclusions based on the present findings.

Electronic Mail Responses

In completing the questionnaire, participants were asked if they could be contacted via e-mail to answer additional questions in the future. Forty-five participants (34.1%) agreed to future contact. All participants who agreed to be contacted in the future were contacted, and 15 participants responded to the request for information sent one week after participating in the experiment (33.3% of those contacted). Overall, the majority (66.7%) of these 15 participants responded that they talked to someone about the dangers of excessive drinking (the dependent variable of interest for Experiment 2).

Recall that all participants who agreed to be contacted via e-mail after participating in the experiment were contacted one week after their participation, in exchange for the opportunity to be entered in a drawing to win \$100. Refer to Table 14

for the number of electronic mail replies received in response to this follow-up e-mail contact, and the percentage of participants who responded to the message who talked to someone about the dangers of excessive alcohol consumption (and therefore followed through on the target request), as a function of message strength and appeal type. A nominal logistic regression analysis on the percentage of respondents who reported complying with the target request, by condition, revealed no significant interactions or main effects. However, with such a small response rate it is difficult to draw definitive conclusions based on the present findings.

Experiment 2 Discussion

The Experiment 2 Results did not reveal the expected interaction between Message Strength and Appeal Type, but there was a significant main effect for Appeal, with the control (no initial appeal) condition, eliciting significantly higher estimates of the likelihood of talking to someone about the dangers of excessive alcohol consumption than the DITF appeal. As in Experiment 1, it was expected that the DITF and FITD appeals accompanied by strong arguments would elicit the highest compliance rates of all conditions in Experiment 2 if the FITD and DITF appeals led to increased processing (compared to no appeal), and as long as the accompanying message was strong.

However, the same strong/neutral and weak messages that were used in Experiment 1 were also used in Experiment 2. As previously discussed, the strong/neutral message was rated relatively high by pretest participants in terms of strength (5.12 along a 1-7 scale), but below the neutral point in terms of persuasiveness (3.88 along a 1-7 scale). Again, the results of the pretest experiment suggest that the strong/neutral argument was in fact not extremely compelling, and would more appropriately be labeled

neutral. However, it is worth noting that there was a complete failure of the argument strength manipulation in Experiment 2 (while there was a significant main effect for message strength using the same messages in Experiment 1). This suggests that perhaps something unusual was occurring with respect to the Experiment 2 data.

Other methodological issues related to the DITF and FITD initial requests may explain the failure to achieve the expected significant interaction in Experiment 2. In Experiment 1, the initial requests made of participants (not drinking for one night in a week in the FITD condition, not drinking at all for one month in the DITF condition) were merely *quantitatively* different from the target request (to not drink excessively for one week). On the other hand, in Experiment 2, the nature of the initial requests made of participants (handing out an informational sheet in the FITD condition, wearing a pin to communicate personal responsible drinking behavior in the DITF condition) may have been *qualitatively* different from the target request, to talk to someone about the dangers of excessive alcohol consumption.

As discussed previously, very few studies have investigated whether the similarity of the initial and target requests affects compliance to the target request, and those that have been conducted have yielded inconclusive results. However, initial research by Freedman and Fraser (1966) suggested that similar requests (posting a small sign, then a large sign) boost compliance rates over dissimilar requests (signing a petition then posting a large sign). Consistent with Freedman and Fraser's (1966) findings, perhaps the initial and target requests made of participants in the present experiment were not similar enough to elicit the expected higher levels of compliance to the target request under the strong message conditions.

Next, it is possible that the DITF initial request was too strong. In Experiment 1, the pretest likelihood rating for the DITF request was 3.58, just below the midpoint of the 1-7 rating scale. However the Experiment 2 DITF pretest likelihood rating was 2.84, well below the midpoint of the 1-7 rating scale. Prior to conducting Experiment 2, this low likelihood rating seemed ideal for the DITF item (as it was low, but could have been lower based on the lower limit of the rating scale). However, in hindsight, it is possible that this was too extreme for an initial request, and that including the DITF item led to a lower likelihood of compliance than if no such extreme initial request had been made. Past research suggests that when extreme initial requests are made, recipients of the requests may dismiss the requestor as being too demanding, and reject all subsequent requests (Pendelton & Batson, 1979; Schwarzwald et al., 1979). The extremity of the Experiment 2 DITF request may also account for the Experiment 2 significant main effect for Appeal Type in an unexpected direction, where the DITF appeal resulted in significantly lower compliance than when no initial request was made (control condition) and when the FITD appeal was used, regardless of message strength.

Another possible issue with the Experiment 2 manipulation is that it was intended that asking someone to distribute one handout (FITD initial request) would be perceived as less taxing on an individual than talking to someone (target request). This sequencing of requests (easy to complete, harder to complete) is an important component of effective FITD manipulations (e.g., Snyder & Cunningham, 1975). However, this easy-then-hard sequencing may not have been accomplished in the present experiment. The pretest likelihood ratings for the FITD item (5.16) and the target item (the combination of talking to one person when drinking, 4.39; and talking to one person anytime, 4.63) suggested

that participants were receiving the appropriate sequencing of requests for FITD manipulations. However, the decision to combine pretest items to create the final Experiment 2 target request, although very similar in content and in pretest rating average, may have made it so that the FITD request and final target request were in fact on the same level in terms of difficulty to complete. That is, participants may not have viewed the target request to be more difficult to complete than the FITD request.

Finally, the various methodological issues that may have affected the Experiment 2 findings underscore the importance of properly calibrating FITD and DITF appeals to ensure that they work. Cialdini's (2001) assumption that impulsively using these appeals, without first calibrating them, will always be effective (i.e., elicit greater compliance than if they had not been used) is naïve.

Correlates of Drinking Behavior in General

The participants from Experiments 1 and 2 were selected because they reported consuming alcohol at least occasionally. These participants were drawn from a larger pool of participants, some of whom reported they did not drink alcohol. Therefore, because binge drinking is a problem on college campuses, the responses of the large number of potential participants in Experiments 1 and 2 (including non-drinkers) were pooled and correlated in order to gain a general understanding of the factors that are associated with the amount of alcohol consumed in general. Refer to Appendix E for the demographic questionnaire completed by all potential participants in both experiments. This questionnaire includes questions on personal and parental drinking behavior, age, gender, year in school, and involvement in religious activities, fraternities or sororities, and athletics.

Basic Demographic Information

Experiment 1 and 2 participants were recruited from introductory and upper-level psychology and marketing classes, and received credit for participating. Experiment 1 and 2 participants ($N=552$) reported how frequently they drink in an average two-week period ($M=3.72$ times, $SD=2.45$), the number of drinks they consume per occasion ($M=5.91$ drinks, $SD=3.70$), the number of drinks they consider a reasonable amount to consume per drinking occasion ($M=6.00$ drinks, $SD=3.16$), the number of drinks their mother ($M=3.26$, $SD=8.55$) and father ($M=8.70$, $SD=20.73$) consume in an average two-week period, the number of religious activities they attend per two-week period ($M=1.62$, $SD=1.63$) and their age ($M=20.47$ years, $SD=2.10$). Also see Table 15 for means, standard deviations, and number of respondents per item.

In addition, participants reported their gender (57.0% were female, 43.0% were male), ethnicity (89.3% were White, 3.9% were Black, 3.7% were Hispanic, and 3.1% reported other ethnicities), and year in school (39.3% were freshmen, 17.2% were sophomores, 15.0% were juniors, 27.7% were seniors, and 0.7% were graduate students). Most (99.3%) participants indicated that English was their native language. Finally, 30.5% indicated they were involved in a fraternity or sorority, and 37.1% indicated they were involved in athletics. Also see Table 15 for frequency information.

Overview of Correlation Information

Refer to Table 16 for pairwise correlations between 11 drinking and demographic variables: 1) The number of drinking occasions participants attend per two-week period, 2) The number of alcoholic beverages participants consume per drinking occasion, 3) The number of alcoholic drinks participants personally consider a reasonable amount to

consume when drinking, 4) The average number of alcoholic beverages participants' mothers consume per two-week period, 5) The average number of alcoholic beverages participants' fathers consume per two-week period, 6) The average number of religious activities participants attend per two-week period, 7) Gender (1=Male, 2=Female), 8) Year in school (1=Freshman, 2=Sophomore, 3=Junior, 4=Senior, and 5=Graduate Student), 9) Age, 10) Involvement in a fraternity or sorority (1=Involved, 2=Not Involved), and 11) Involvement in athletics (1=Involved, 2=Not Involved). A number of interesting correlations emerged among these variables, which are summarized below.

Correlations between Drinking Variables

The number of times that students drink (frequency of alcohol consumption) was related to the amount of alcohol consumed when drinking alcohol ($r=.57, p<.01$). That is, students who drink frequently also consume more alcohol each time they drink than those who drink alcohol less frequently. Also, as would be expected, the number of drinks that students consider a reasonable amount to consume each time they drink correlated with how frequently they drink ($r=.53, p<.01$) and how many alcoholic beverages they consume each time they drink ($r=.68, p<.01$).

Correlations between Background and Drinking Variables

Parental drinking behavior. To understand factors that may predispose individuals to drink in college, student drinking behavior was correlated with their parents' drinking behavior. As expected, significant correlations emerged between the number of times students drink per two-week period, and the number of alcoholic beverages their mothers and fathers consume per two week period ($r_s=.26$ and $.15$, respectively, $p_s<.01$). Similarly, the number of drinks students consume each time they

drink correlated with the number of drinks their parents consume per two-week period ($r=.24, p<.01$ for mothers, $r=.11, p<.05$ for fathers).

Religious activities. The amount of alcohol that parents drink appears to influence the amount that their children drink. Similarly, another parental behavior that is likely to influence their children is participation in religious activities. Participation in religious activities is another background variable that was correlated with college student drinking behavior. As would be expected, both the frequency of drinking occasions students attend, and the amount of alcohol they consume each time they drink, negatively correlated with the number of religious activities students attend ($r_s = -.21$ and $-.22$, respectively; $p_s < .01$). Students who are more actively involved in religion are less likely to consume as much alcohol as non-involved students.

Correlations between Demographic and Drinking Variables

Next, drinking behavior was correlated with gender, year in school, and age.

Gender. Recall that 43.0% of participants were male, and 57.0% were female. Male college students drink more frequently per two-week period ($M=4.39, SD=2.69$) than female college students [$M=3.18, SD=2.10; r = -.25, p < .01$]. Similarly, male college students consume more alcohol on average when they drink ($M=7.50, SD=3.93$) than female college students [$M=4.63, SD=2.95; r = -.39, p < .01$].

Year in school. Recall that 39.3% of participants were freshmen, 17.2% were sophomores, 15.0% were juniors, and 27.7% were seniors. Year in school was correlated with frequency of drinking behavior, and amount of alcohol consumed per drinking occasion. The frequency of drinking behavior was not related to year in school ($r=.01, ns$). However, there was a significant negative correlation between the number of drinks

consumed per occasion and year in school ($r = -.10, p < .05$). Specifically, freshmen and sophomores tend to drink more alcohol when they drink than do juniors and seniors (Freshman $M = 6.13, SD = 3.65$; Sophomore $M = 6.56, SD = 3.30$; Junior $M = 5.79, SD = 4.90$; Senior $M = 5.36, SD = 3.20$). All in all, these results suggest that junior and senior college students engage in the same number of opportunities to drink alcohol as do freshmen and sophomore college students. However, when they consume alcohol, advanced college students demonstrate more moderate drinking behavior than their less advanced peers.

Age. Finally, a pattern of results similar to that found with respect to year in school emerged with respect to age. Age was not related to the frequency of drinking alcohol ($r = -.04, ns$). However, there was a negative correlation between age and number of drinks consumed per occasion ($r = -.15, p < .01$), suggesting that older college students consume fewer alcoholic beverages than younger college students when they drink.

Correlations between Group Membership and Drinking Behavior

Membership in a fraternity or sorority and participation in athletics were correlated with frequency of alcohol consumption and number of alcoholic drinks consumed per occasion.

Fraternity or sorority membership. Recall that 30.5% of Experiment 1 and 2 participants were members of fraternities or sororities. As expected, membership in a fraternity or sorority was related to both the frequency of alcohol consumption ($r = -.17, p < .01$) and to the number of alcoholic beverages consumed per occasion ($r = -.13, p < .01$). Students involved in fraternities and sororities reported drinking more frequently ($M = 4.31$ times per two week period, $SD = 2.20$) than those not in these groups ($M = 3.44,$

$SD=2.52$). Fraternity and sorority members also reported consuming more alcohol when they drink ($M=6.60$ drinks, $SD=3.37$) than non-members ($M=5.59$ drinks, $SD=3.81$).

Involvement in athletics. Recall that 37.1% of the sample was involved in athletics. Students involved in athletics drink more frequently than non-athletes ($r= -.10$, $p<.05$; athlete $M=4.01$ times per two-week period, $SD=2.37$; non-athlete $M=3.53$, $SD=2.49$). Athletes consume more alcohol when they drink than do non-athletes ($r= -.17$, $p<.01$; athlete $M=6.70$ drinks, $SD=3.83$, non-athlete $M=5.42$, $SD=3.53$).

General Discussion

The primary purpose of the present research was to investigate Cialdini's (2001) rarely investigated claim that "Each [compliance] principle is examined as to its ability to produce a distinct kind of *automatic, mindless* compliance from people, that is, a willingness to say yes *without thinking first*" (p. x; italics added). Although this claim has rarely been tested, Brannon and Brock (2001) demonstrated that compliance with requests invoking the scarcity tactic (one of the six tactics listed by Cialdini) was not automatic. Their research accomplished this by including a strong or weak persuasive message along with the request and showing that participants in the high-scarcity conditions differentiated between the strong versus weak conditions more than did low-scarcity participants. This pattern of results would not have occurred if compliance with requests involving scarce opportunities were automatic, because if this were the case, respondents should have complied with scarcity-based requests accompanied by strong messages and weak messages equally. Brannon and Brock's (2001) results suggest that Cialdini's automatic compliance assumption is inaccurate and possibly harmful in efforts to gain compliance with requests. Specifically, as the scarcity compliance tactic appears

to increase the scrutiny of accompanying messages, weak persuasive messages seem even less compelling than they would in the absence of the compliance variable. Further, with increased scrutiny a strong message can seem even more compelling, an important implication that is lost in Cialdini's (2001) automatic compliance assumption.

While past research investigated the issue of automatic compliance with scarcity-based compliance tactics, the present research investigated the nature of compliance with the sequential request tactics of foot-in-the-door (commitment/consistency) and door-in-the-face (reciprocity), which are not as well-understood as other compliance principles with regard to when and why they work (Burger, 1999; Dolin & Booth-Butterfield, 1995; O'Keefe & Hale, 1998). It is possible that the mechanisms underlying these tactics were not well-understood because researchers had not investigated Cialdini's (2001) assumption that compliance with the target request occurs automatically following a response to the initial request in the FITD and DITF paradigms.

With regard to the primary purpose of the present research, to investigate Cialdini's automatic compliance assumption with regard to the sequential-request tactics, it was predicted that compliance with the target request would vary as a function of message strength, based on prior research (Brannon & Brock, 2001). That is, FITD and DITF participants would comply differentially with the target request as a function of message strength, thereby refuting Cialdini's (2001) hypothesis of automatic, unidirectional responding to FITD- and DITF-based requests.

Findings Associated with Primary Purpose

The Experiment 1 results largely supported the hypothesis that compliance with DITF and FITD requests is not automatic and mindless, as demonstrated by a significant

interaction between message strength and type of compliance appeal. Further investigation of this interaction revealed that the use of DITF and FITD compliance appeals resulted in lower compliance rates (likelihood of not drinking excessively for one week) when they were accompanied by a weak persuasive message as compared to conditions that included no initial request.

However, the use of DITF and FITD appeals in Experiment 1 did not increase compliance rates when they were accompanied by what was originally considered to be a strong persuasive message. This finding was tempered by the hindsight realization that pretest participants rated the “strong” persuasive message as though it were, in actuality, neutral. In fact, if higher compliance rates were achieved when the DITF and FITD appeals accompanied this neutral persuasive message (as compared to the control appeal condition), that finding would have supported Cialdini’s (2001) automatic compliance assumption. If the claim that compliance is mindless were accurate, then compliance should have been higher under the FITD and DITF conditions than in the control appeal condition regardless of actual message strength, simply because the DITF and FITD appeals were included along with the message.

Given the realization that the “strong” message was in fact neutral and that compliance rates were not higher in response to including an initial DITF or FITD request along with this neutral message (as compared to the control appeal condition); and the fact that compliance rates were lower when a weak message accompanied the DITF or FITD appeal (as compared to the control appeal condition), it is reasonable to conclude that the Experiment 1 results support the increased processing explanation of compliance theory, and refute Cialdini’s (2001) automatic/mindless compliance

assumption.

It is worth noting that consistent with the finding that the sequential request tactics elicit compliance via a thoughtful process, the results of Experiment 1 also challenge the rather common self-perception explanation of the FITD effect. Self-perception theory states that individuals infer their attitudes from their behaviors (Bem, 1972). Applied to the FITD effect, the self-perception theory explanation states that after complying with a request to perform a behavior, individuals automatically infer that they are in favor of whatever cause benefited from their original compliance, and consequently, comply with the target request to benefit the same cause (Beaman et al., 1983; Burger, 1999; Dillard et al., 1984; Snyder & Cunningham, 1975). All in all, the self-perception explanation suggests that FITD is a mindless process, and this assumption (along with Cialdini's mindless compliance assumption) is directly called into question based on the present findings.

However, the Experiment 2 results did not reveal the expected interaction between message strength and type of compliance appeal. A variety of methodological issues may explain this result. First, Experiment 1 and Experiment 2 were conducted concurrently, and the same strong/neutral message was used in both experiments. The use of a neutral message instead of a strong message may have been especially problematic in Experiment 2, where the appeal manipulations may have been unsuccessful.

In describing problematic issues with regard to the Experiment 2 appeal manipulation, it is possible that the Experiment 2 DITF initial request was too strong. Past research suggests that request recipients may reject all subsequent requests following an extreme initial request, based on the belief that the requestor is too demanding

(Pendelton & Batson, 1979; Schwarzwald et al., 1979). A significant main effect for appeal in Experiment 2, where the DITF appeal resulted in significantly lower compliance rates compared to the control and FITD appeal conditions, supports this explanation.

Another possible issue with regard to Experiment 2 is that the FITD appeal manipulation may not have followed the proper FITD sequence of requests. An important component of effective FITD manipulations is that individuals who are asked to comply with requests first complete an easy task, and then are asked to complete a more difficult task (Snyder & Cunningham, 1975). In Experiment 2, it was expected that participants would perceive the task of distributing one handout (FITD initial request) as less taxing than talking to someone (target request). Pretest results suggested that the requests were made in the proper order, however, a decision to combine several pretest items following the pretest raises the possibility that the easy-then-hard sequencing required for proper FITD manipulations may not have been achieved.

Another issue that possibly influenced the Experiment 2 results is that the sequential requests made in the present research were made on paper to large groups of research participants simultaneously. This is in contrast to the methodology used in previous sequential request research, in which an experimenter would personally approach someone in a naturalistic setting and ask that person to comply with the requests (see Burger, 1999; Cialdini, 2001, for reviews). Therefore, it is possible that asking for behavioral compliance on paper did not have the same impact on participants as in previous experiments, where more personal appeals were made. (However, the fact that the same methodology was applied to Experiment 1, where there was a significant

effect, testifies to the potential strength of these compliance tactics).

In summary, the findings from Experiment 1 suggest that compliance is a thoughtful process; that is, compliance in response to the sequential request compliance-gaining tactics is not automatic. The Experiment 2 findings did not refute the Experiment 1 findings. In fact, the significant main effect for appeal that would be predicted by Cialdini's claim of automatic compliance was not in Cialdini's predicted direction (the DITF appeal yielded *lower* compliance rates than the control appeal).

Implications of Findings Regarding the Primary Purpose

In general, the findings with regard to the primary purpose of the present research suggest that Cialdini's (2001) statement that compliance to requests based on commitment/consistency- (FITD) and reciprocity- (DITF) based principles is mindless and automatic is inaccurate. These results are in line with previous research findings with regard to the automaticity of compliance with requests invoking scarcity (Brannon & Brock, 2001), another compliance tactic Cialdini (2001) claimed elicited automatic compliance.

A very important implication of the present research findings is that there are instances in which it can be harmful to use the FITD or the DITF compliance tactics in attempts to gain compliance with requests. In particular, it can be harmful to include an initial request as a strategy to gain compliance with a target request, unless the requestor is confident that he or she does not accompany the requests with a weak argument. When researchers or communicators include an initial request, it can increase scrutiny of an accompanying message, making it more likely that respondents will find flaws with the message and ultimately reject the target request than if no initial request had been made.

Therefore, an alternative to this negative scenario (one that would not be predicted based on Cialdini, 2001) would be to avoid using the FITD or DITF sequential request tactics when one does not have a compelling message, and just make the target request.

It is especially important to be aware of the possible negative consequences resulting from the inappropriate use of compliance tactics within the context of reducing dangerous binge drinking behavior on college campuses. For example, a social marketing campaign designed to reduce binge drinking behavior among college students based on Cialdini's (2001) automatic compliance assumption may cause many college students to reject the campaign's (weak) message, and ultimately do more harm than good when couched within sequential requests. In situations where the campaign cannot afford to adequately test its message and ensure that it is compelling, the present research suggests that the campaign should avoid the use of the FITD or DITF tactics, and to only make the target request.

Importance of proper calibration of sequential request appeals. In addition to ensuring that arguments included in any campaign using the sequential request compliance tactics are not weak in order to avoid the boomerang effect described above, the results of the present research suggest that it is important that the sequence of requests associated with the DITF or FITD tactic is properly calibrated.

To elaborate, it was originally hypothesized that if Cialdini (2001) were correct in his assumption that the use of compliance tactics such as DITF or FITD automatically elicited compliance with requests, then the present research would contribute to the literature by suggesting how campaigns to reduce binge drinking could be improved simply by including these tactics.

In Experiment 2 (where the predicted interaction between message strength and appeal type was not found) there was a significant main effect for appeal type. However, contrary to what was predicted based on Cialdini's (2001) research, the DITF and FITD appeals did not elicit higher compliance rates than did the control appeal. In fact, the FITD appeal performed as well as the control appeal, and the DITF appeal performed worse than the control appeal, in gaining compliance.

Based on these findings alone, it would seem that there are few benefits of including these appeals in efforts to gain compliance with requests to communicate about the importance of drinking moderately. However, this conclusion may be premature due to some possible methodological issues associated with the present research. In fact, the issues encountered here can be used to inform future research regarding the use of these tactics when attempting to gain compliance with requests.

For example, unlike in Experiment 1, the initial requests made of participants in Experiment 2 were more than *quantitatively* different from the target request; they were also *qualitatively* different from the target request. Although little research has been conducted to investigate whether the similarity of the initial and target requests affects the likelihood of compliance to the target request, Freedman and Fraser (1966) suggested that higher compliance rates are expected when initial requests are similar to each other than when they are dissimilar. Therefore, perhaps the initial and target requests made of participants in Experiment 2 were not similar enough to elicit compliance to the target request under the strong message conditions.

In addition, it is reasonable to assume (in hindsight) that the Experiment 2 DITF initial request was too extreme, and the extremity of this initial request essentially

resulted in participants dismissing the subsequent target request without fully considering it. This consequence occurred despite the fact that the initial and target items used in this manipulation were pre-tested. However, the pre-test instrument used in the present research only required participants to rate items in isolation, and not as a sequence of requests. The implication for future researchers is to pre-test *sequences* of requests to be used in investigations of the efficacy of sequential request tactics in gaining compliance.

Ideally, the results of future research using properly calibrated sequential requests will suggest that FITD and DITF can be effectively applied to gaining compliance with requests for undergraduate students to communicate about the importance of drinking alcohol moderately. If this is the case, then these tactics should be included as a part of social marketing campaigns targeting the reduction of binge drinking behavior on college campuses, but, consistent with the findings from Experiment 1, only when the requests are accompanied by a strong argument against binge drinking behavior.

Correlates of Binge Drinking Behavior

Another major purpose of the present research was to make a contribution to the domain of reducing the serious health threat of binge drinking among college students (Wechsler et al., 2000a). One way in which this purpose was accomplished was to investigate the correlates of drinking behavior among college students, and to communicate these results.

Correlates with Drinking Behavior

The correlations between drinking behavior and a variety of other variables were reported for drinkers who participated in Experiment 1 and Experiment 2 separately, and for all Experiment 1 and 2 participants (drinkers and non-drinkers). Interesting

correlations emerged from the sample containing the Experiment 1 and Experiment 2 drinkers and non-drinkers. Interesting correlations that were uncovered in the large sample were: 1) students who drink more frequently consume more alcohol when they drink; 2) the frequency and amount of student alcohol consumption is related to the amount of alcohol parents consume; 3) students who are more active in religion are less likely to drink as much alcohol as students who are less active in religion; 4) male college students drink more frequently and consume more alcohol per occasion than female college students; 5) more advanced college students (e.g., juniors and seniors) consume alcohol as frequently as less advanced college students (e.g., freshmen and sophomores); however, advanced college students consume less alcohol when they drink than do less advanced college students; 6) students involved in fraternities or sororities consume alcohol more frequently, and consume more alcohol per occasion, than students not involved in fraternities or sororities; and 7) athletes drink more frequently than non-athletes, and consume more alcohol when they drink. Note that some of these correlations were not significant in the Experiment 1 and Experiment 2 sub-samples.

Many of the correlations reported here support previous findings. For example, Haemmerlie et al. (1999) found similar results with respect to the correlation between religion and drinking behavior, while many researchers have demonstrated that sorority and fraternity members drink more than do non-members (Cashin et al., 1998; Presley et al., 2002; Wechsler et al., 1996; Workman, 2001), and that athletes drink more than non-athletes (Nelson & Wechsler, 2001). However, the present research contributes novel information by reporting correlates of drinking behavior that have not been investigated as frequently as these (such as parental alcohol consumption), and also affirms the need

for continued interventions to reduce binge drinking among particular groups of college students (Moscatto et al., 2001; Nelson & Wechsler, 2001; Wechsler et al., 2000b; Weitzman et al., 2003).

Active Versus Passive Compliance

A final purpose of the present research was to investigate whether participants would be more likely to comply with requests to refrain from doing something (passive compliance; as in Experiment 1, where participants were asked to not drink to excess); versus requests to do something (active compliance; as in Experiment 2, where participants were asked to talk to someone else about not drinking to excess). Little prior research investigated this distinction, however, some research suggested that participants would be more likely to comply when they made an active commitment (sign a name in support of a cause) versus a passive commitment (not signing a name when signing indicates a lack of support for a cause; Cialdini, 2001). While the distinction between active and passive compliance in past research was somewhat similar to the distinction made in the present research, it was not an identical distinction and was worthy of additional study.

Unfortunately, it is difficult to make a direct comparison between the results of Experiment 1 (passive compliance) versus Experiment 2 (active compliance), largely because the Experiment 1 and Experiment 2 findings were so disparate. The fact that there was a complete failure of the argument strength manipulation in Experiment 2 (while there was a significant main effect for message strength using the same messages in Experiment 1) suggests that the Experiment 2 results simply cannot be compared to the results of Experiment 1. Future research should investigate this distinction further,

especially within the domain of reducing binge drinking behavior among college students. It is important to investigate whether directly asking students to reduce their own drinking behavior, versus asking students to communicate to other students the importance of drinking moderately, or some combination of these will be most efficacious in targeting and reducing this health threat.

Future Directions

Additional research should be conducted to address limitations and to extend the findings associated with the present experiments. One limitation of the present research is that the persuasive message that was designed to be a strong argument against binge drinking was in fact only neutral in strength. Future research investigating the automaticity of compliance theory-based tactics should ensure that the strong message is truly strong. In addition to the theoretical implications associated with replicating and extending the present research by including a truly strong message, there are practical applications as well. Most importantly, if future research identifies a message containing very compelling arguments, and the use of tactics such as FITD or DITF increases the message recipients' scrutiny of this compelling message, then the potential exists for creating an effective anti-binge drinking social marketing campaign targeting college students.

An additional suggestion for future research would be to investigate the relative efficacy of various modes of message delivery. For example, it is important to determine whether it is more effective to ask students to serve as communicators of the moderate drinking message (as was requested in Experiment 2), or whether it is best for more organized campaigns or groups to communicate the responsible drinking message (as in

Experiment 1, in which the ReACT group asked students to drink responsibly for one week).

Another message delivery issue to consider in the future is to include several levels of requests before the target request is made. In the present, research experimental participants were asked to comply with only one request before they were asked to comply with the target request. However, past research has demonstrated that continually escalating requests (as in FITD) or de-escalating requests (as in DITF) leads to surprising compliance with dramatic requests. For example, the success of Stanley Milgram's (1963) obedience to authority demonstration, in which many participants seemingly shocked another person with as much force as a shock machine would allow, partly rested on escalating requests. It is likely that many participants would not have fully complied in that situation if they had not started "shocking" the other person with much smaller shocks that grew in intensity as the study progressed. If the same principle of making a long series of requests leading to one target request were applied to the domain of reducing the problem of undergraduate binge drinking, it would possibly lead to strong demonstrations of compliance (especially when these requests are made along with a strong rationale for compliance).

Further, it is important to investigate factors that enhance the compliance resulting from the use of the FITD and DITF tactics. For example, Freedman and Fraser (1966) noted that allowing request recipients to *perform* the initial FITD request increases the likelihood they will comply with the target request when it is made. The design of the present research did not allow participants to perform the initial request before they were asked to comply with the target request, so future research should investigate the extent

to which this factor enhances compliance rates with requests regarding the reduction of drinking behavior. Similarly, past research suggests that public commitments enhance the FITD effect (Cialdini, 2001). The requests made in the present research involved some level of public commitment, however, the level of publicity could have been higher. Therefore, future research should examine the level of public commitment that is most likely to enhance the FITD effect in this context. Finally, it is important to determine the extent to which the sequential request compliance tactics lose their impact when made on paper as compared to face-to-face interactions, which are more time-consuming and costly to implement.

The replications described above should be conducted first with regard to the FITD and DITF compliance tactics within the present context (reducing binge drinking behavior among undergraduate students), then within other contexts (e.g., general domain of health persuasion; consumer behavior). Additionally, future research should investigate whether other compliance tactics elicit automatic compliance with requests to reduce binge drinking behavior (consistent with Cialdini's more general claim), or whether compliance within this domain is actually a thoughtful process (contrary to Cialdini's claim).

As one example, a strong versus weak responsible drinking message can be conveyed in collaboration with the social validation/social proof compliance tactic (the idea that "one should be more willing to comply with a request for behavior if it is consistent with what similar others are thinking or doing," Cialdini, 1995, p. 263). In fact, this tactic is already used on some college campuses in the guise of the social norms approach. Recall that social norms campaigns report the amount of alcohol most students

on a college campus consume, in an attempt to correct many college students' overestimated perceptions of their peers' drinking behavior (Glider et al., 2001; Gomberg et al., 2001; Perkins, 2002; Perkins, 2003; and Perkins & Berkowitz, 1986). Considering recent research suggesting that these approaches are not successful in reducing binge drinking behavior (e.g., Weschler et al., 2003), empirical investigations into the social validation/social proof compliance tactic and the extent to which this tactic elicits thoughtful or thoughtless compliance, may improve the future implementation of such social marketing campaigns.

Finally, future research should investigate the extent to which the theoretical and practical implications of the present findings extend to other populations. However, considering that college students are especially vulnerable to the binge drinking problem (Bachman et al., 1984; Wechsler et al., 2000a), the research reported here provides an important first step in appropriately applying compliance theory to reducing binge drinking behavior among undergraduate students.

In conclusion, the present research suggests that the reciprocity (door in the face) and commitment/consistency (foot in the door) tactics do not automatically elicit compliance with requests. This finding suggests that the automatic/mindless assumption may not be valid for other compliance tactics, and that future research should investigate these tactics with regard to Cialdini's (2001) automaticity assumption. Knowing *how* these tactics work to gain compliance is important because this will help predict *when* they should be applied to gain compliance.

References

- Abrahams, M. F., & Bell, R. A. (1994). Encouraging charitable contributions: An examination of three models of door-in-the-face compliance. *Communication Research, 21*, 131-153.
- Bachman, J. G., O'Malley, P. M., & Johnston, L. D. (1984). Drug use among young adults: The impacts of role status and social environment. *Journal of Personality and Social Psychology, 47*, 629-645.
- Baer, J. S. (2002). Student factors: Understanding individual variation in college drinking. *Journal of Studies on Alcohol*(Suppl. 14), 40-53.
- Beaman, A. L., Cole, C. M., Preston, M., Klentz, B., & Steblay, N. M. (1983). Fifteen years of foot-in-the-door research: A meta-analysis. *Personality and Social Psychology Bulletin, 9*, 181-196.
- Bell, R. A., Abrahams, M. F., Clark, C. L., & Schlatter, C. (1996). The door-in-the-face compliance strategy: An individual differences analysis of two models in an AIDS fundraising context. *Communication Quarterly, 44*, 107-124.
- Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 1-62). New York: Academic.
- Black, D. R., & Smith, M. A. (1994). Reducing alcohol consumption among university students: Recruitment and program design strategies based on social marketing theory. *Health Education Research, 9*, 375-384.
- Bormann, C. A., & Stone, M. H. (2001). The effects of eliminating alcohol in a college stadium: The Folsom Field beer ban. *Journal of American College Health, 50*, 81-88.

- Brannon, L. A., & Brock, T. C. (2001). Limiting time for responding enhances behavior corresponding to the merits of compliance principles: Refutations of heuristic-cue theory in service and consumer settings. *Journal of Consumer Psychology, 10*, 135-146.
- Brehm, J. W. (1966). *A theory of psychological reactance*. New York: Academic Press.
- Burger, J. M. (1986). Increasing compliance by improving the deal: The that's-not-all technique. *Journal of Personality and Social Psychology, 51*, 277-283.
- Burger, J. M. (1999). The foot-in-the-door compliance procedure: A multiple-process analysis and review. *Personality and Social Psychology Review, 3*, 303-325.
- Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology, 42*, 116-131.
- Cantrill, J. G. (1991). Inducing health care voluntarism through sequential requests: Perceptions of effort and novelty. *Health Communication, 3*, 59-74.
- Carducci, B. J., Deuser, P. S., Bauer, A., Large, M., & Ramaekers, M. (1989). An application of the foot in the door technique to organ donation. *Journal of Business and Psychology, 4*, 245-249.
- Carey, K. B. (2001). Understanding binge drinking: Introduction to the special issue. *Psychology of Addictive Behaviors, 15*, 283-286.
- Cashin, J. R., Presley, C. A., & Meilman, P. A. (1998). Alcohol use in the Greek system: Follow the leader? *Journal of Studies on Alcohol, 59*, 63-70.
- Cialdini, R. B. (1995). Principles and techniques of social influence. In A. Tesser (Ed.), *Advanced social psychology* (pp. 257-281). New York: McGraw-Hill.
- Cialdini, R. B. (2001). *Influence: Science and practice* (4th ed.). Boston: Allyn and

Bacon.

- Cialdini, R. B., & Ascani, K. (1976). Test of a concession procedure for inducing verbal, behavioral, and further compliance with a request to give blood. *Journal of Applied Psychology, 61*, 295-300.
- Cialdini, R. B., Cacioppo, J. T., Bassett, R., & Miller, J. A. (1978). Low-ball procedure for producing compliance: Commitment then cost. *Journal of Personality and Social Psychology, 36*, 463-476.
- Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity, and compliance. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 151-192). New York: McGraw-Hill.
- Cialdini, R. B., Trost, M. R., & Newsom, J. T. (1995). Preference for consistency: The development of a valid measure and the discovery of surprising behavioral implications. *Journal of Personality and Social Psychology, 69*, 318-328.
- Cialdini, R. B., Vincent, J. E., Lewis, S. K., Catalan, J., Wheeler, D., & Darby, B. L. (1975). Reciprocal concessions procedure for inducing compliance: The door-in-the-face technique. *Journal of Personality and Social Psychology, 31*, 206-215.
- Cialdini, R. B., Wosinka, W., Barrett, D. W., Butner, J., & Gornik-Durose, M. (1999). Compliance with a request in two cultures: The differential influence of social proof and commitment/consistency on collectivists and individualists. *Personality and Social Psychology Bulletin, 25*, 1242-1253.
- Clapp, J. D., Voas, R. B., & Lange, J. E. (2001). Cross-border college drinking. *Journal of Safety Research, 32*, 299-307.
- Cummings, S. (1997). An empowerment model for collegiate substance abuse prevention

- and education programs. *Journal of Alcohol and Drug Education*, 43, 46-62.
- DeJong, W. (1981). Consensus information and the foot-in-the-door effect. *Personality and Social Psychology Bulletin*, 7, 423-430.
- DeJong, W. (2001). Finding common ground for effective campus-based prevention. *Psychology of Addictive Behaviors*, 15, 292-296.
- DeJong, W. (2002). The role of mass media campaigns in reducing high-risk drinking among college students. *Journal of Studies on Alcohol*(Suppl. 14), 182-192.
- DeJong, W., & Atkin, C. K. (1995). A review of national television PSA campaigns for preventing alcohol-impaired driving, 1987-1992. *Journal of Public Health Policy*, 16, 59-79.
- Dillard, J. P. (1991). The current status of research on sequential-request compliance techniques. *Personality and Social Psychology Bulletin*, 17, 283-288.
- Dillard, J. P., Hunter, J. E., Burgoon, M. (1984). Sequential-request persuasive strategies: Meta-analysis of foot-in-the-door and door-in-the-face. *Human Communication Research*, 10, 461-488.
- Dolin, D. J., & Booth-Butterfield, S. (1995). Foot-in-the-door and cancer prevention. *Health Communication*, 7, 55-66.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. New York: Harcourt Brace & Company.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Festinger, L. (1964). *Conflict, decision, and dissonance*. Stanford, CA: Stanford University Press.
- Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance.

- Journal of Abnormal and Social Psychology*, 58, 203-210.
- Fointiat, V. (2000). "Foot-in-the-mouth" versus "door-in-the-face" requests. *The Journal of Social Psychology*, 140, 264-266.
- Foss, R. D. & Dempsey, C. B. (1979). Blood donation and the foot-in-the-door technique: A limiting case. *Journal of Personality and Social Psychology*, 37, 580-590.
- Freedman, J. L. & Fraser, S. C. (1966). Compliance without pressure: The foot-in-the-door technique. *Journal of Personality and Social Psychology*, 4, 195-202.
- Girandola, F. (2002). Sequential requests and organ donation. *The Journal of Social Psychology*, 142, 171-178.
- Glider, P., Midyett, S. J., Mills-Novoa, B., Johannessen, K., & Collins, C. (2001). Challenging the collegiate rite of passage: A campus-wide social marketing media campaign to reduce binge drinking. *Journal of Drug Education*, 3, 207-220.
- Gomberg, L., Kessel Schneider, S., DeJong, W. (2001). Evaluation of a social norms marketing campaign to reduce high-risk drinking at the University of Mississippi. *American Journal of Drug and Alcohol Abuse*, 27, 375-389.
- Gorassini, D. R., & Olson, J. M. (1995). Does self-perception change explain the foot-in-the-door effect? *Journal of Personality and Social Psychology*, 69, 91-105.
- Guadagno, R. E., Asher, T., Demaine, L. J., & Cialdini, R. B. (2001). When saying yes leads to saying no: Preference for consistency and the reverse foot-in-the-door effect. *Personality and Social Psychology Bulletin*, 27, 859-867.
- Haemmerlie, F. M., Montgomery, R. L., & Cowell, S. L. (1999). Alcohol abuse by university students and its relationship to sociomoral reasoning. *Journal of Alcohol and Drug Education*, 44, 29-43.

- Harari, H., Mohr, D., & Mosey, K. (1980). Faculty helpfulness to students: A comparison of compliance techniques. *Personality and Social Psychology Bulletin*, *6*, 373-377.
- Jacobs, J. B. (1989). *Drunk driving: An American dilemma*. Chicago, IL: University of Chicago Press.
- Johnson, T. J., Hamilton, S., & Sheets, V. L. (1999). College students' self-reported reasons for playing drinking games. *Addictive Behaviors*, *24*, 279-286.
- Joule, R. V. (1987). Tobacco deprivation: The foot-in-the-door technique versus the low-ball technique. *European Journal of Social Psychology*, *17*, 361-365.
- Lange, J. E., & Voas, R. B. (2001). Defining binge drinking quantities through resulting blood alcohol concentrations. *Psychology of Addictive Behaviors*, *15*, 310-316.
- Leary, M. R., & Kowalski, R. M. (1990). Impression management: A literature review and two-component model. *Psychological Bulletin*, *107*, 34-47.
- Martens, B. K., Kelly, S. Q., & Diskin, M. T. (1996). The effects of two sequential-request strategies on teachers' acceptability and use of a classroom intervention. *Journal of Educational and Psychological Consultation*, *7*, 211-221.
- Milgram, S. (1963). Behavioral study of compliance. *Journal of Abnormal and Social Psychology*, *67*, 371-378.
- Millar, M. G. (2001). Promoting health behaviours with door-in-the-face: The influence of the beneficiary of the request. *Psychology, Health & Medicine*, *6*, 115-119.
- Millar, M. G. (2002). The effectiveness of the door-in-the-face compliance strategy on friends and strangers. *The Journal of Social Psychology*, *142*, 295-304.
- Moscato, S., Black, D., Blue, C. L., Mattson, M., Galer-Unti, R. A., & Coster, D. C.

- (2001). Evaluating a fear appeal message to reduce alcohol use among "Greeks."
American Journal of Health Behavior, 25, 481-491.
- Murphy, J. G., Duchnick, J. J., Vuchinich, R. E. Davison, J. W., Karg, R. S., Olson, A. M., Smith, A. F., & Coffey, T. T. (2001). Relative efficacy of a brief motivational intervention for college student drinkers. *Psychology of Addictive Behaviors*, 15, 373-379.
- Nelson, T. F., & Wechsler, H. (2001). Alcohol and college athletes. *Medicine and Science in Sports and Exercise*, 33, 43-47.
- Nelson, T. F., & Wechsler, H. (2003). School spirits: Alcohol and collegiate sports fans. *Addictive Behaviors*, 28, 1-11.
- Norman, P., Bennett, P., & Lewis, H. (1998). Understanding binge drinking among young people: An application of the theory of planned behaviour. *Health Education Research*, 13, 163-169.
- O'Keefe, D. J., & Figge, M. (1997). A guilt-based explanation of the door-in-the-face influence strategy. *Human Communication Research*, 24, 64-81.
- O'Keefe, D. J., & Hale, S. L. (1998). The door-in-the-face influence strategy: A random-effects meta-analytic review. In M. E. Roloff (Ed.), *Communication yearbook 21*, (pp. 1-33). Thousand Oaks, CA: Sage.
- Pendleton, M. G., & Batson, C. D. (1979). Self-presentation and the door-in-the-face technique for inducing compliance. *Personality and Social Psychology Bulletin*, 5, 77-81.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson. P. P. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social*

- psychological attitudes* (pp.17-59). New York: Academic Press.
- Perkins, H. W. (2002). Social norms and the prevention of alcohol misuse in collegiate contexts. *Journal of Studies on Alcohol*(Suppl. 14), 164-172.
- Perkins, H. W. (Ed). (2003). *The social norms approach to preventing school and college age substance abuse: A handbook for educators, counselors, and clinicians*. San Francisco, CA: Jossey-Bass.
- Perkins, H. W., & Berkowitz, A. D. (1986). Perceiving the community norms of alcohol use among students: Some research implications for campus alcohol education programming. *The International Journal of the Addictions*, 21, 961-976.
- Perkins, H. W., DeJong, W. & Linkenbach, J. (2001). Estimated blood alcohol levels reached by “binge” and “nonbinge” drinkers: A survey of young adults in Montana. *Psychology of Addictive Behaviors*, 15, 317-320.
- Perkins, K. A. (1987). The shortage of cadaver donor organs for transplantation: Can psychology help? *American Psychologist*, 42, 921-930.
- Petty, R. E. (1995). Attitude change. In A. Tesser (Ed.), *Advanced social psychology* (pp. 194-255). New York: McGraw-Hill.
- Petty, R. E., & Cacioppo, J. T. (1996). *Attitudes and persuasion: Classic and contemporary approaches*. Boulder: Westview Press.
- Petty, R. E., Fleming, M. A., & White, P. H. (1999). Stigmatized sources and persuasion: Prejudice as a determinant of argument scrutiny. *Journal of Personality and Social Psychology*, 76, 19-34.
- Petty, R. E., & Wegener, D. T. (1998). Attitude change: Multiple roles for persuasion variables. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *Handbook of social*

- psychology* (4th ed., pp. 323-390). New York: McGraw Hill.
- Petty, R. E., & Wegener, D. T. (1999). The elaboration likelihood model: Current status and controversies. In S. Chaiken & Y. Trope (Eds.), *Dual-process models in social psychology* (pp. 41-72). New York: The Guilford Press.
- Pliner, P., Hart, H., Kohl, J., & Saari, D. (1974). Compliance without pressure: Some further data on the foot-in-the-door compliance technique. *Journal of Experimental Social Psychology*, *10*, 17-22.
- Presley, C. A., Meilman, P. W., & Leichter, J. S. (2002). College factors that influence drinking. *Journal of Studies on Alcohol*(Suppl. 14), 82-90.
- Saffer, H. (2002). Alcohol advertising and youth. *Journal of Studies on Alcohol*(Suppl. 14), 173-181.
- Schwarzwald, J., Bizman, A., & Raz, M. (1983). The foot-in-the-door paradigm: Effects of second request size on donation probability and donor generosity. *Personality and Social Psychology Bulletin*, *9*, 443-450.
- Schwarzwald, J., Raz, M., & Zvibel, M. (1979). The applicability of the door-in-the-face technique when established behavioral customs exist. *Journal of Applied Social Psychology*, *9*, 576-586.
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogenous versions of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, *28*, 191-193.
- Taylor, T., & Booth-Butterfield, S. (1993). Getting a foot-in-the-door with drinking and driving: A field study of healthy influence. *Communication Research Reports*, *10*, 95-101.

- Tetlock, P. E., & Manstead, A. S. R. (1985). Impression management versus intrapsychic explanations in social psychology: A useful dichotomy? *Psychological Review*, *92*, 59-77.
- Thombs, D. L., & Hamilton, M. J. (2002). Effects of a social norms feedback campaign on the drinking norms and behavior of Division I student-athletes. *Journal of Drug Education*, *32*, 227-244.
- Treise, D., Wolburg, J. M., & Otnes, C. C. (1999). Understanding the “social gifts” of drinking rituals: An alternative framework for PSA developers. *Journal of Advertising*, *28*, 17-31.
- Trockel, M., Williams, S. S., & Reis, J. (2003). Considerations for more effective social norms based alcohol education on campus: An analysis of different theoretical conceptualizations in predicting drinking among fraternity men. *Journal of Studies on Alcohol*, *64*, 50-59.
- Tryon, G. S. (1986). Outcome of an alcohol use and attitude survey. *Counseling and Values*, *30*, 183-186.
- Tusing, K. J., & Dillard, J. P. (2000). The psychological reality of the door-in-the-face: It's helping, not bargaining. *Journal of Language and Social Psychology*, *19*, 5-25.
- Vicary, J. R., & Karshin, C. M. (2002). College alcohol abuse: A review of the problems, issues, and prevention approaches. *The Journal of Primary Prevention*, *22*, 299-331.
- Wang, T., Brownstein, R., & Katzev, R. (1989). Promoting charitable behaviour with compliance techniques. *Applied Psychology: An International Review*, *38*, 165-

183.

- Wechsler, H., Kelley, K., & Weitzman, E. (2000b). What colleges are doing about student binge drinking: A survey of college administrators. *Journal of American College Health, 48*, 219-226.
- Wechsler, H., Kuh, G., & Davenport, A. (1996). Fraternities, sororities, and binge drinking: Results from a national study of American colleges. *National Association of Student Personnel Administrators, 33*, 260-279.
- Wechsler, H., & Kuo, M. (2000). College students define binge drinking and estimate its prevalence: Results of a national survey. *Journal of American College Health, 49*, 57-64.
- Wechsler, H., Lee, J. E., Gledhill-Hoyt, J., & Nelson, T. F. (2001b). Alcohol use and problems at colleges banning alcohol: Results of a national survey. *Journal of Studies on Alcohol, 62*, 133-141.
- Wechsler, H., Lee, J. E., Kuo, M., & Lee, H. (2000a). College binge drinking in the 1990's: A continuing problem--Results of the Harvard School of Public Health 1999 College Alcohol Study. *Journal of American College Health, 48*, 199-210.
- Wechsler, H., Lee, J. E., Nelson, T. F., & Lee, H. (2001a). Drinking levels, alcohol problems and secondhand effects in substance-free college residences: Results of a national study. *Journal of Studies on Alcohol, 62*, 23-31.
- Wechsler, H., & Nelson, T. (2001). Binge drinking and the American college student: What's five drinks? *Psychology of Addictive Behaviors, 15*, 287-291.
- Wechsler, H., Nelson, T. F., Lee, J. E., Seibring, M., Lewis, C., & Keeling, R. P. (2003). Perception and reality: A national evaluation of social norms marketing

interventions to reduce college students' heavy alcohol use. *Journal of Studies on Alcohol*, 64, 484-494.

Wechsler, H., Seibring, M., Liu, I. C., & Ahl, M. (2004). Colleges respond to student binge drinking: Reducing student demand or limiting access. *Journal of American College Health*, 52, 159-168.

Weitzman, E. R., Nelson, T. F., & Wechsler, H. (2003). Taking up binge drinking in college: The influences of person, social group, and environment. *Journal of Adolescent Health*, 32, 26-35.

Wood, M. D., Vinson, D. C., & Sher, K. J. (2001). Alcohol use and misuse. In A. Baum, R. A. Revenson, and J. E. Singer (Eds.), *Handbook of health psychology* (pp. 281-318). Mahwah, NJ: Erlbaum.

Workman, T. A. (2001). Finding the meanings of college drinking: An analysis of fraternity drinking stories. *Health Communication*, 13, 427-447.

Table 1

Experiment 1 Pretest Items Regarding Responsible Alcohol Consumption: Mean Likelihood and Standard Deviation for Each Item

Pretest Item	Mean (<i>SD</i>)
1. No alcohol, one month, included in count	3.52 (2.15)
2. No alcohol, one month, name published	3.58 (2.46)
3. No excessive alcohol (personal limit), entire month, name published	3.85 (2.37)
4. No excessive alcohol (more than five), entire month, included in count	3.89 (2.11)
5. No excessive alcohol (more than five), entire month, name published	3.94 (2.34)
6. No excessive alcohol (personal limit), entire month, included in count	3.95 (2.13)
7. No excessive alcohol (more than five), entire month, name to SGA	4.16 (2.35)
8. No excessive alcohol (personal limit), entire month, name to SGA	4.19 (2.35)
9. No alcohol, entire month, name to SGA	4.23 (2.25)
10. No excessive alcohol (more than five), entire week, name published	4.57 (1.81)
11. No excessive alcohol (personal limit), entire week, name published	4.64 (1.81)
12. No excessive alcohol (more than five), entire week, name to SGA	4.72 (1.87)
13. No alcohol, one night in next month, name to SGA	4.75 (1.96)

Table 1, Continued

	<u>Pretest Item</u>	<u>Mean (SD)</u>
14.	No excessive alcohol (more than five), entire week, included in count	4.81 (2.24)
15.	No alcohol, one night in next week, name published	4.81 (2.23)
16.	No excessive alcohol (personal limit), entire week, included in count	4.84 (2.13)
17.	No excessive alcohol (personal limit), entire week, name to SGA	4.89 (1.87)
18.	No alcohol, one night in next week, included in count	4.95 (1.83)
19.	No alcohol, one night in next week, name published	4.97 (1.98)
20.	No alcohol, one night in next month, included in count	4.97 (2.10)
21.	No alcohol, one night in next week, name to SGA	5.35 (2.08)

Notes. The full text of each pretest item appears below. The superscript numbers correspond to the item number in the table. A stem preceded the items reading “How likely are you to...” All items were rated along a scale from 1=Extremely Unlikely to 7=Extremely Likely. The *N* was 61-62 for each item. Item 2 was the Experiment 1 DITF request, Item 17 was the Experiment 1 target request, and Item 21 was the Experiment 1 FITD request.

Full text of pretest items:

¹ Agree to not drink alcohol at all for an entire month if you knew that your name would be included in a count of people who agreed to this request and this number would be published in the school newspaper?

² Agree to not drink alcohol at all for an entire month if you knew that your name would be published in the school newspaper as someone who agreed to this request?

³ Agree to not drink excessive amounts of alcohol (more than you personally think is reasonable) for an entire month if you knew that your name would be published in the school newspaper as someone who agreed to this request?

⁴ Agree to not drink excessive amounts of alcohol (more than five drinks in a row) for an entire month if you knew that your name would be included in a count of people who agreed to this request and this number would be published in the school newspaper?

⁵ Agree to not drink excessive amounts of alcohol (i.e., more than five drinks in a row) for an entire month if you knew that your name would be published in the school newspaper as someone who agreed to this request?

⁶ Agree to not drink excessive amounts of alcohol (more than you personally think is reasonable) for an entire month if you knew that your name would be included in a count of people who agreed to this request and this number would be published in the school newspaper?

⁷ Agree to not drink excessive amounts of alcohol (more than five drinks in a row) for an entire month if you knew that your name would be shown to the Student Governing Association as someone who agreed to this request, to help establish the group on campus?

⁸ Agree to not drink excessive amounts of alcohol (i.e., more than you personally think is reasonable) for an entire month if you knew that your name would be shown to the Student Governing Association as someone who agreed to this request, to help establish the group on campus?

⁹ Agree to not drink alcohol at all for an entire month if you knew that your name would be shown to the Student Governing Association as someone who agreed to this request, to help establish the group on campus?

¹⁰ Agree to not drink excessive amounts of alcohol (more than five drinks in a row) for an entire week if you knew that your name would be published in the school newspaper as someone who agreed to this request?

¹¹ Agree to not drink excessive amounts of alcohol (more than you personally think is reasonable) for an entire week if you knew that your name would be published in the school newspaper as someone who agreed to this request?

¹² Agree to not drink excessive amounts of alcohol (more than five drinks in a row) for an entire week if you knew that your name would be shown to the Student Governing Association as someone who agreed to this request, to help establish the group on campus?

¹³ Agree to not drink alcohol at all for one night in the next month if you knew that your name would be shown to the Student Governing Association as someone who agreed to this request, to help establish the group on campus?

¹⁴ Agree to not drink excessive amounts of alcohol (more than five drinks in a row) for an entire week if you knew that your name would be included in a count of people who agreed to this request and this number would be published in the school newspaper?

¹⁵ Agree to not drink alcohol at all for one night in the next week if you knew that your name would be published in the school newspaper as someone who agreed to this request?

¹⁶ Agree to not drink excessive amounts of alcohol (more than you personally think is reasonable) for an entire week if you knew that your name would be included in a count of people who agreed to this request and this number would be published in the school newspaper?

¹⁷ Agree to not drink excessive amounts of alcohol (more than you personally think is reasonable) for an entire week if you knew that your name would be shown to the Student Governing Association as someone who agreed to this request, to help establish the group on campus?

¹⁸ Agree to not drink alcohol at all for one night in the next week if you knew that your name would be included in a count of people who agreed to this request and this number would be published in the school newspaper?

¹⁹ Agree to not drink alcohol at all for one night in the next month if you knew that your name would be published in the school newspaper as someone who agreed to this request?

²⁰ Agree to not drink alcohol at all for one night in the next month if you knew that your name would be included in a count of people who agreed to this request and this number would be published in the school newspaper?

²¹ Agree to not drink alcohol at all for one night in the next week if you knew that your name would be shown to the Student Governing Association as someone who agreed to this request, to help establish the group on campus?

Table 2

Demographic Variables: Experiment 1 Participants (Part 1, Mean Information)

<u>Demographic Item</u>	Mean (<i>SD</i>) <i>N</i>
Number of drinking occasions attended per two-week period	4.06 (2.45) <i>141</i>
Number of alcoholic beverages consumed per drinking occasion	6.25 (3.61) <i>141</i>
Number of drinks personally considered reasonable per drinking occasion	6.46 (3.52) <i>140</i>
Number of alcoholic beverages consumed by mother per two-week period	3.63 (10.15) <i>116</i>
Number of alcoholic beverages consumed by father per two-week period	7.18 (13.15) <i>121</i>
Number of religious activities attended per two-week period	1.35 (1.41) <i>104</i>
Age	20.40 (1.87) <i>141</i>

Note. Cell entries are means, standard deviations (parentheses), and *N*s (in italics).

Table 2, Continued

Demographic Variables: Experiment 1 Participants (Part 2, Frequency Information)

	<u>Demographic Item</u>	<u>Percentage</u>
Gender		
	Female	55.3
	Male	44.7
Ethnicity		
	White	93.5
	Black	0.7
	Hispanic	1.4
	Other	4.3
Year in School		
	Freshman	39.7
	Sophomore	17.0
	Junior	14.9
	Senior	28.4
Participation in a Sorority or Fraternity		
	Involved	42.6
	Not Involved	57.4
Participation in Athletics		
	Involved	42.6
	Not Involved	57.4

Note. Cell entries are the percentage of the sample reporting each demographic characteristic.

Table 3

Correlation Matrix: Demographic Variables for Experiment 1 Participants

<u>Variable</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
1. Times drink	--	.56**	.51**	.18*	.04	-.20*	-.32**	-.01	.04	-.16	-.14
2. # Drinks	--	--	.73**	.24**	-.03	-.28**	-.51**	-.14	-.12	-.10	-.31**
3. Reasonable	--	--	--	.11	.04	-.17	-.48**	-.01	.00	-.12	-.23**
4. Mother	--	--	--	--	.18	-.08	-.05	-.09	-.03	-.08	-.08
5. Father	--	--	--	--	--	-.10	.07	.01	-.05	.02	.07
6. Religious	--	--	--	--	--	--	.10	.11	-.07	-.22*	.06
7. Gender	--	--	--	--	--	--	--	.05	-.10	.03	.32**
8. Year	--	--	--	--	--	--	--	--	.67**	-.07	.14
9. Age	--	--	--	--	--	--	--	--	--	.08	.15
10. Frat./Sor.	--	--	--	--	--	--	--	--	--	--	.30**
11. Athletics	--	--	--	--	--	--	--	--	--	--	--

Notes. The full variable names appear below.

Cell *Ns* ranged from 93-141.

* $p < .05$; ** $p < .01$.

Full variable names:

¹Times Drink=Number of drinking occasions attended per two-week period

²# Drinks=Number of alcoholic beverages consumed per drinking occasion

³Reasonable=Number of drinks personally considered reasonable per drinking occasion

⁴Mother=Number of alcoholic beverages consumed by mother per two-week period

⁵Father=Number of alcoholic beverages consumed by father by two-week period

⁶Religious=Number of religious activities attended per two-week period

⁷Gender=Male (1) or Female (2)

⁸Year=Year in School (1=Freshman, 2=Sophomore, 3=Junior, 4=Senior, 5=Graduate Student)

⁹Age=Age in Years

¹⁰Frat./Sor.=Involvement in a fraternity or sorority (1=Yes, involved; 2=No, not involved)

¹¹Athletics=Involvement in athletics (1=Yes, involved; 2=No, not involved)

Table 4

Mean Likelihood of Not Drinking to Excess, Standard Error, and Cell Size as a Function of Message Strength and Appeal Type: Experiment 1

<i>Appeal</i>	Argument Strength		Row Means
	Weak	Strong	
DITF	66.91 _a (5.75) <i>18</i>	83.75 _a (7.14) <i>15</i>	75.33 (4.54) <i>33</i>
FITD	67.22 _a (4.81) <i>26</i>	83.34 _a (5.44) <i>21</i>	75.28 (3.63) <i>47</i>
Control	82.22 _b (4.99) <i>24</i>	76.60 _a (4.94) <i>25</i>	79.41 (3.52) <i>49</i>
Column Means	72.11 (3.00) <i>68</i>	81.23 (3.42) <i>61</i>	76.67 (2.27) <i>129</i>

Note. The cell entries are means adjusted for the covariates (number of alcoholic beverages consumed per occasion and social desirability). Standard errors (in parentheses) and *N*s (in italics) appear below means. Cell means in the same column that do not share subscripts differ at the $p < .05$ level, according to planned comparisons carried out to investigate the significant Strength \times Appeal interaction.

Table 5

ANCOVA Source Table for Likelihood of Not Drinking to Excess: Experiment 1

Source	Type III SS	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Corrected Model	48,344.72	13	3,718.82	6.37	.00	.42
Intercept	104,966.32	1	104,966.32	179.72	.00	.61
Drinks/Occasion Covariate	28,918.25	1	28,918.25	49.51	.00	.30
Social Desirability Covariate	1,730.52	1	1,730.52	2.96	.09	.03
Strength	2,321.32	1	2,321.32	3.97	.05	.03
Appeal	480.50	2	240.25	0.41	.66	.01
Gender	241.85	1	241.85	0.41	.52	.00
Strength \times Appeal	3,504.07	2	1,752.04	3.00	.05	.05
Strength \times Gender	2,111.47	1	2,111.47	3.62	.06	.03
Appeal \times Gender	1,456.93	2	728.47	1.25	.29	.02
Strength \times Appeal \times Gender	1,595.59	2	797.79	1.37	.26	.02
Error	67,166.79	115	584.06			
Total	855,305.00	129				
Corrected Total	115,511.50	128				

Notes. The η^2 reported is partial η^2 . Covariates appearing in the model were evaluated at the value of 6.27 drinks per occasion and 5.71 average social desirability score.

Table 6

Number of Mail-In Questionnaires Returned and Percentage of Respondents Agreeing to Comply with Request to Not Drink to Excess as a Function of Message Strength and Appeal Type: Experiment 1

<i>Appeal</i>	Argument Strength	
	Weak	Strong
DITF	80.0 <i>5</i>	100.0 <i>1</i>
FITD	71.4 <i>7</i>	100.0 <i>2</i>
Control	100.0 <i>2</i>	66.7 <i>3</i>

Note. The cell entries are the percentage of respondents who reported their intention to comply. Below the percentage is the total number of questionnaires returned per cell (in italics).

Table 7

Number of Electronic Mail Responses Received, and Percentage of Respondents Who Felt They Did Not Drink Excessively, as a Function of Message Strength and Appeal Type: Experiment 1

<u>Appeal</u>	Argument Strength	
	Weak	Strong
DITF	100.0 <i>2</i>	80.0 <i>5</i>
FITD	100.0 <i>6</i>	50.0 <i>2</i>
Control	71.4 <i>7</i>	66.7 <i>3</i>

Note. The cell entries are the percentage of respondents who reported they did not drink excessively following their participation in Experiment 1. Below the percentage is the total number of questionnaires returned per cell (in italics).

Table 8

Experiment 2 Pretest Items Regarding Communicating Responsible Alcohol Consumption Message: Mean Likelihood and Standard Deviation for Each Item

Pretest Item	Mean (<i>SD</i>)
1. Join group, present one workshop per week	2.40 (1.42)
2. Wear a pin that says “I am a responsible drinker” when you drink socially	2.84 (1.98)
3. Post 25 signs around campus in support of responsible drinking	2.95 (2.10)
4. Talk to 25 friends about drinking responsibly	3.02 (1.89)
5. Wear a pin that says “I am a responsible drinker” whenever you choose	3.32 (2.18)
6. Talk to ten friends about drinking responsibly when drinking with them	3.35 (2.00)
7. Join group, attend two meetings each month	3.42 (2.01)
8. Talk to 25 friends about drinking responsibly when drinking with them	3.48 (1.73)
9. Wear a pin that says “I am a responsible drinker” when you are on campus	3.51 (2.09)
10. Distribute 25 pamphlets to KSU students	3.68 (1.83)
11. Ask ten KSU students to sign pledge	3.74 (2.16)
12. Distribute ten pamphlets to KSU students	3.81 (2.26)
13. Post ten signs around campus in support of responsible drinking	4.07 (1.93)

Table 8, Continued

<u>Pretest Item</u>	<u>Mean (SD)</u>
14. Ask 25 KSU students to sign pledge	4.18 (1.72)
15. Sign name in support of group, included in count	4.35 (2.27)
16. Talk to one friend about responsible drinking when drinking with person	4.39 (1.75)
17. Sign name in support of group, name published	4.39 (1.82)
18. Talk to ten friends about drinking responsibly anytime	4.44 (1.78)
19. Post one sign on campus in support of responsible drinking	4.52 (2.21)
20. Talk to one friend about drinking responsibly anytime	4.63 (2.19)
21. Sign name in support of group, name to SGA	4.69 (1.80)
22. Ask one KSU student to sign pledge	5.03 (1.80)
23. Distribute one pamphlet to a KSU student	5.16 (1.67)

Notes. The full text of each pretest item appears below. The superscript numbers correspond to the item number in the table. A stem preceded the items reading “How likely are you to...” All items were rated along a scale from 1=Extremely Unlikely to 7=Extremely Likely. The *N* was 61-62 for each item. Item 2 was used as the Experiment 2 DITF request, Items 16 and 20 were selected and combined to serve as the Experiment 2 target request (which ultimately read “I will discuss the dangers of excessive alcohol

consumption with one person,” name not published) and Item 23 was selected for the Experiment 2 FITD request.

Full text of pretest items:

¹ Join the group, knowing that group membership would require you to attend a week-long conference over the summer to be trained in presenting alcohol responsibility information, and to be involved in presenting at least one two-hour long workshop each week on drinking responsibly beginning in Fall, 2003?

² Agree to wear a pin that says “I am a responsible drinker” when you drink socially.

³ Agree to post 25 signs around campus (e.g., dorms, fraternity/sorority houses, rec center, union) in support of responsible drinking.

⁴ Agree to talk to 25 friends (or any other people of your choosing) about the importance of drinking responsibly at any time of your choosing?

⁵ Agree to wear a pin that says “I am a responsible drinker” whenever you choose.

⁶ Agree to talk to ten friends (or any other people of your choosing) about the importance of drinking responsibly when you are out drinking with these people?

⁷ Join the [responsible alcohol consumption] group, knowing that group membership would require you to attend two meetings each month beginning in Fall, 2003?

⁸ Agree to talk to 25 friends (or any other people of your choosing) about the importance of drinking responsibly when you are out drinking with these people?

⁹ Agree to wear a pin that says “I am a responsible drinker” on your jacket or book bag when you are on campus.

¹⁰ Agree to distribute 25 pamphlets about responsible drinking to KSU students (friends or other people of your choosing).

¹¹ Agree to ask ten KSU students (friends or other people of your choosing) to sign a pledge in support of responsible drinking.

¹² Agree to distribute ten pamphlets about responsible drinking to KSU students (friends or other people of your choosing).

¹³ Agree to post ten signs around campus (e.g., dorms, fraternity/sorority houses, rec center, union) in support of responsible drinking.

- ¹⁴ Agree to ask 25 KSU students (friends or other people of your choosing) to sign a pledge in support of responsible drinking.
- ¹⁵ Sign your name in support of the [responsible alcohol consumption] group if you knew that your name would be included in a count of people who support the group and this number, but no names, would be published in the school newspaper?
- ¹⁶ Agree to talk to one friend (or any other person of your choosing) about the importance of drinking responsibly when you are out drinking with this person?
- ¹⁷ Sign your name in support of the [responsible alcohol consumption] group if you knew that your name would be published in the school newspaper as someone who supported the group?
- ¹⁸ Agree to talk to ten friends (or any other people of your choosing) about the importance of drinking responsibly at any time of your choosing?
- ¹⁹ Agree to post one sign on campus (e.g., dorms, fraternity/sorority houses, rec center, union) in support of responsible drinking?
- ²⁰ Agree to talk to one friend (or any other person of your choosing) about the importance of drinking responsibly at any time of your choosing?
- ²¹ Sign your name in support of the group if you knew that your name would be shown to the Student Governing Association, to help establish the group on campus?
- ²² Agree to ask one KSU student (a friend or other person of your choosing) to sign a pledge in support of responsible drinking.
- ²³ Agree to distribute one pamphlet about responsible drinking to a KSU student (a friend or other person of your choosing).

Table 9

Demographic Variables: Experiment 2 Participants (Part 1, Mean Information)

<u>Demographic Item</u>	Mean (<i>SD</i>) <i>N</i>
Number of drinking occasions attended per two-week period	3.54 (2.04) <i>132</i>
Number of alcoholic beverages consumed per drinking occasion	5.88 (3.87) <i>132</i>
Number of drinks personally considered reasonable per drinking occasion	5.94 (2.72) <i>132</i>
Number of alcoholic beverages consumed by mother per two-week period	2.80 (6.60) <i>104</i>
Number of alcoholic beverages consumed by father per two-week period	9.52 (18.51) <i>105</i>
Number of religious activities attended per two-week period	1.23 (1.39) <i>97</i>
Age	20.64 (1.91) <i>132</i>

Note. Cell entries are means, standard deviations (parentheses), and *Ns* (in italics).

Table 9, Continued

Demographic Variables: Experiment 2 Participants (Part 2, Frequency Information)

	<u>Demographic Item</u>	<u>Percentage</u>
Gender		
	Female	56.1
	Male	43.9
Ethnicity		
	White	86.9
	Black	3.1
	Hispanic	6.9
	Other	3.1
Year in School		
	Freshman	33.3
	Sophomore	15.9
	Junior	15.2
	Senior	35.6
Participation in a Sorority or Fraternity		
	Involved	29.5
	Not Involved	70.5
Participation in Athletics		
	Involved	33.3
	Not Involved	66.7

Note. Cell entries are the percentage of the sample reporting each demographic characteristic.

Table 10

Correlation Matrix: Demographic Variables for Experiment 2 Participants

<u>Variable</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
1. Times drink	--	.43**	.44**	.24*	.26**	-.17	-.08	.08	-.04	-.12	-.09
2. # Drinks	--	--	.49**	.19	.07	-.20*	-.15	.01	-.09	.00	.02
3. Reasonable	--	--	--	-.06	.04	-.15	-.33**	-.14	-.19*	-.09	-.20*
4. Mother	--	--	--	--	.28**	-.04	.02	-.07	-.16	-.02	-.05
5. Father	--	--	--	--	--	.36**	.03	.02	-.07	.18	.06
6. Religious	--	--	--	--	--	--	.28**	-.01	-.11	-.13	.09
7. Gender	--	--	--	--	--	--	--	-.06	-.16	-.07	.38**
8. Year	--	--	--	--	--	--	--	--	.61**	.05	-.05
9. Age	--	--	--	--	--	--	--	--	--	.20*	.06
10. Frat./Sor.	--	--	--	--	--	--	--	--	--	--	.21**
11. Athletics	--	--	--	--	--	--	--	--	--	--	--

Notes. The full variable names appear below.

Cell *Ns* ranged from 82-132.

p* <.05; *p*<.01.

Full variable names:

¹Times Drink=Number of drinking occasions attended per two-week period

²# Drinks=Number of alcoholic beverages consumed per drinking occasion

³Reasonable=Number of drinks personally considered reasonable per drinking occasion

⁴Mother=Number of alcoholic beverages consumed by mother per two-week period

⁵Father=Number of alcoholic beverages consumed by father by two-week period

⁶Religious=Number of religious activities attended per two-week period

⁷Gender=Male (1) or Female (2)

⁸Year=Year in School (1=Freshman, 2=Sophomore, 3=Junior, 4=Senior, 5=Graduate Student)

⁹Age=Age in Years

¹⁰Frat./Sor.=Involvement in a fraternity or sorority (1=Yes, involved; 2=No, not involved)

¹¹Athletics=Involvement in athletics (1=Yes, involved; 2=No, not involved)

Table 11

Mean Likelihood of Talking to Someone About the Dangers of Excessive Alcohol Consumption, Standard Error, and Cell Size as a Function of Message Strength and Appeal Type: Experiment 2

<i>Appeal</i>	Argument Strength		Row Means
	Weak	Strong	
DITF	60.31 (6.21) <i>21</i>	54.73 (7.89) <i>17</i>	57.52 (5.00) <i>38</i>
FITD	76.13 (6.62) <i>18</i>	69.10 (6.04) <i>23</i>	72.62 (4.47) <i>41</i>
Control	75.26 (6.07) <i>21</i>	73.70 (6.39) <i>22</i>	74.48 (4.42) <i>43</i>
Column Means	70.57 (3.69) <i>60</i>	65.84 (3.95) <i>62</i>	68.21 (2.66) <i>122</i>

Note. The cell entries are means adjusted for the covariates (number of alcoholic beverages consumed per occasion and social desirability). Standard errors (in parentheses) and *Ns* (in italics) appear below means. No planned comparisons were carried out on cell means because the Strength \times Appeal interaction was not significant.

Table 12

ANCOVA Source Table for Likelihood of Talking to Someone About the Dangers of Excessive Alcohol Consumption: Experiment 2

Source	Type III SS	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Corrected Model	21,602.17	13	1,661.71	2.20	.01	.21
Intercept	39,759.20	1	39,759.2	52.6	.00	.33
Drinks/Occasion Covariate	6,616.39	1	6,616.39	8.77	.00	.08
Social Desirability	810.42	1	810.42	1.07	.30	.01
Strength	556.73	1	556.73	0.74	.39	.01
Appeal	5,623.29	2	2,811.64	3.73	.03	.07
Gender	29.43	1	29.43	0.04	.84	.00
Strength \times Appeal	154.89	2	77.44	0.10	.90	.00
Strength \times Gender	94.37	1	94.37	0.13	.72	.00
Appeal \times Gender	1,232.15	2	616.08	0.82	.45	.02
Strength \times Appeal \times Gender	2,309.11	2	1,154.56	1.53	.22	.03
Error	81,490.24	108	754.54			
Total	694,609.00	122				
Corrected Total	103,092.40	121				

Notes. The η^2 reported is partial η^2 . Covariates appearing in the model were evaluated at the value of 5.49 drinks per occasion and 5.72 average social desirability score.

Table 13

Number of Mail-In Questionnaires Returned and Percentage of Respondents Agreeing to Comply with Request to Talk to Someone About the Dangers of Excessive Alcohol Consumption: Experiment 2

<i>Appeal</i>	<i>Argument Strength</i>	
	<i>Weak</i>	<i>Strong</i>
DITF	50.0 <i>2</i>	100.0 <i>1</i>
FITD	100.0 <i>1</i>	80.0 <i>5</i>
Control	50.0 <i>4</i>	100.0 <i>1</i>

Note. The cell entries are the percentage of respondents who reported their intention to comply. Below the percentage is the total number of questionnaires returned per cell (in italics).

Table 14

Number of Electronic Mail Responses Received, and Percentage of Respondents Who Talked to Someone About the Dangers of Excessive Alcohol Consumption, as a Function of Message Strength and Appeal Type: Experiment 2

<i>Appeal</i>	Argument Strength	
	Weak	Strong
DITF	100.0 <i>1</i>	50.0 <i>2</i>
FITD	50.0 <i>2</i>	80.0 <i>5</i>
Control	66.7 <i>3</i>	50.0 <i>2</i>

Note. The cell entries are the percentage of respondents who reported they did not drink excessively following their participation in Experiment 2. Below the percentage is the total number of questionnaires returned per cell (in italics).

Table 15

Demographic Variables for All Potential Participants (Including Non-Drinkers) for Experiments 1 and 2 Combined (Part 1, Mean Information)

<u>Demographic Item</u>	Mean (<i>SD</i>) <i>N</i>
Number of drinking occasions attended per two-week period	3.72 (2.45) <i>495</i>
Number of alcoholic beverages consumed per drinking occasion	5.91 (3.70) <i>498</i>
Number of drinks personally considered reasonable per drinking occasion	6.00 (3.16) <i>500</i>
Number of alcoholic beverages consumed by mother per two-week period	3.26 (8.55) <i>416</i>
Number of alcoholic beverages consumed by father per two-week period	8.70 (20.73) <i>430</i>
Number of religious activities attended per two-week period	1.62 (1.63) <i>405</i>
Age	20.73 (2.10) <i>552</i>

Note. Cell entries are means, standard deviations (parentheses), and *N*s (in italics).

Table 15, Continued

Demographic Variables for All Potential Participants (Including Non-Drinkers) for Experiments 1 and 2 Combined (Part 2, Frequency Information)

	<u>Demographic Item</u>	<u>Percentage</u>
Gender		
	Female	57.0
	Male	43.0
Ethnicity		
	White	89.3
	Black	3.9
	Hispanic	3.7
	Other	3.1
Year in School		
	Freshman	39.3
	Sophomore	17.2
	Junior	15.0
	Senior	27.7
	Graduate Student	0.7
Participation in a Sorority or Fraternity		
	Involved	30.5
	Not Involved	69.5
Participation in Athletics		
	Involved	37.1
	Not Involved	62.9

Note. Cell entries are the percentage of the sample reporting each demographic characteristic.

Table 16

Correlation Matrix: Demographic Variables for All Potential Participants (Including Non-Drinkers) for Experiments 1 and 2 Combined

Variable	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
1. Times drink	--	.57**	.53**	.26**	.15**	-.21**	-.25**	.01	-.04	-.17**	-.10*
2. # Drinks	--	--	.68**	.24**	.11*	-.22**	-.39**	-.10*	-.15**	-.13**	-.17**
3. Reasonable	--	--	--	.16**	.06	-.20**	-.44**	-.08	-.12**	-.11**	-.19**
4. Mother	--	--	--	--	.28**	-.03	-.04	-.06	-.06	-.05	-.02
5. Father	--	--	--	--	--	.02	.01	.03	-.03	.04	.04
6. Religious	--	--	--	--	--	--	.19**	-.03	-.09	-.01	.08
7. Gender	--	--	--	--	--	--	--	-.05	-.13**	-.02	.29**
8. Year	--	--	--	--	--	--	--	--	.65**	-.04	-.02
9. Age	--	--	--	--	--	--	--	--	--	.09*	.06
10. Frat./Sor.	--	--	--	--	--	--	--	--	--	--	.21**
11. Athletics	--	--	--	--	--	--	--	--	--	--	--

Notes. The full variable names appear below.

Cell *Ns* ranged from 328-552.

* $p < .05$; ** $p < .01$.

Full variable names:

¹Times Drink=Number of drinking occasions attended per two-week period

²# Drinks=Number of alcoholic beverages consumed per drinking occasion

³Reasonable=Number of drinks personally considered reasonable per drinking occasion

⁴Mother=Number of alcoholic beverages consumed by mother per two-week period

⁵Father=Number of alcoholic beverages consumed by father by two-week period

⁶Religious=Number of religious activities attended per two-week period

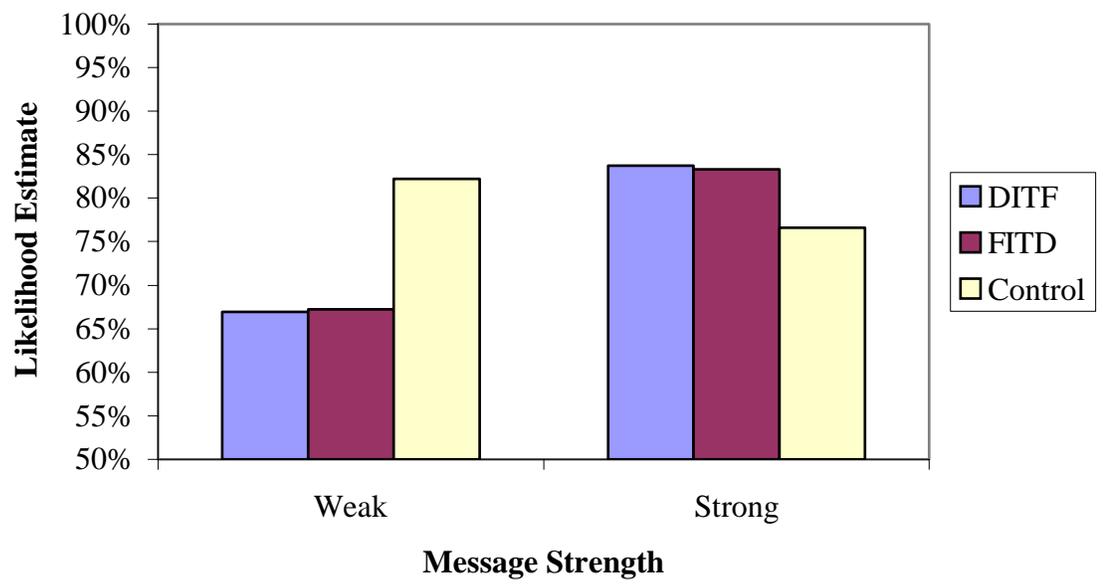
⁷Gender=Male (1) or Female (2)

⁸Year=Year in School (1=Freshman, 2=Sophomore, 3=Junior, 4=Senior, 5=Graduate Student)

⁹Age=Age in Years

¹⁰Frat./Sor.=Involvement in a fraternity or sorority (1=Yes, involved; 2=No, not involved)

¹¹Athletics=Involvement in athletics (1=Yes, involved; 2=No, not involved)



Appendix A

Pretest: Strong Message Rating Instrument

Please read the following message carefully and rate it on the scales provided.

Drinking excessive amounts of alcohol is a real problem among American college students. According to numerous studies conducted on thousands of college students just like you, almost **half** of all college students report that they have engaged in this behavior (e.g., Wechsler et al. 2000).

So what's the harm in excessive drinking? Students who frequently drink excessive amounts of alcohol are **6 to 17** times more likely than students who do not drink excessively to miss class, get behind in school work, engage in unplanned and/or unprotected sex, get in trouble with police, damage property, or get hurt or injured. Additionally, they are **10 times** more likely to drive after drinking alcohol, and **16 times** more likely to ride with a high or drunk driver than students who do not drink excessively. Even students who only **occasionally** drink excessive amounts of alcohol are about **3 times** more likely than students who drink responsibly to experience these problems. And if these consequences of excessive drinking aren't bad enough, consider that **1,400** college students **die each year** from alcohol-related injuries (Hingson et al., 2002).

You may read these statistics and think, "I'm smarter than that, it won't happen to me." But that's what most students think, even those who actually **are** experiencing these problems as a result of drinking too much (Wechsler et al., 2000). You can play the odds if you want, but it only takes one bad decision to change your life forever. And it only takes one good decision to keep you safe, out of trouble, and in school: If you choose to drink, drink responsibly.

Questions About This Message:

1. How weak or strong were the arguments against excessive drinking?

1	2	3	4	5	6	7
Extremely Weak						Extremely Strong

2. All in all, how persuasive was the message?

1	2	3	4	5	6	7
Not at All Persuasive						Extremely Persuasive

Appendix B

Pretest: Weak Message Rating Instrument

American college students drink too much alcohol. They say they drink to have fun, but people our parents' age had plenty of fun **without** drinking themselves silly. If it was good enough for them, it's good enough for us.

Why do college students today drink so much anyway? Do they really like to go to loud and smoky bars and parties to drink beer that doesn't even **taste** good and that makes them feel bloated and spend half of the night in the bathroom? When they get home from their "night out" they smell bad and have the terrible aftertaste of beer in their mouth. And everyone knows that drinking too much alcohol makes people feel "buzzed" or "tipsy." Who really wants to feel like that? Drinking too much alcohol is definitely **not** fun.

But you know what **is** fun? It's fun to stay in with friends and play board games. Remember how much fun you used to have playing "Monopoly" or "Trivial Pursuit"? Guess what--they're even more fun when you're older and wiser! Or hey, what about studying? That may sound ridiculous, but it's really fun to bring home good grades so your parents know how hard you're working in college. And if you feel you **must** go out and consume some sort of beverage to have a good time, why not arrange to meet some friends to get coffee with dessert? At least if you do this you get to taste something appetizing, not revolting (like alcohol). Take it from people who know--it's more fun to get intoxicated on **life** than on alcohol.

Questions About This Message:

1. How weak or strong were the arguments against excessive drinking?

1	2	3	4	5	6	7
Extremely Weak						Extremely Strong

2. All in all, how persuasive was the message?

1	2	3	4	5	6	7
Not at All Persuasive						Extremely Persuasive

Appendix E

Alcohol Consumption and Demographic Questions

Please read questions 1-5 on this page carefully, then write the number requested in response to each question. If the question is not applicable to you (e.g., because you do not drink/do not attend church) then select the N/A response instead. *Your answers are confidential so please respond honestly.*

1. On average, how many times do you consume alcohol in the average **two-week period?**

_____ times per **two-week period** _____ N/A

2. On average, how many alcoholic beverages do you consume each time you drink? (NOTE: One drink = one bottle of beer, one glass of wine, one wine cooler, or one shot of liquor).

_____ drinks **per occasion** _____ N/A

3. How many drinks do you *personally* consider a reasonable amount of alcohol to consume during a drinking occasion? (For example, if you drink more than this amount then you may do something you regret and/or feel sick.)

_____ drinks is a reasonable amount for me to consume _____ N/A

4. How many alcoholic beverages do your parent(s) consume in the average **two-week period?**

Mother: _____ number of drinks _____ N/A

Father: _____ number of drinks _____ N/A

5. How many church-related and/or religious activities do you attend in the average **two-week period?**

_____ activities per **two-week period** _____ N/A

Please complete the remaining questions on this page by checking the appropriate response to each question.

6. What is your gender? _____ Male
_____ Female

Appendix E Continued

- 7. What is your ethnicity/race?** _____ White/European-American
_____ Black/African-American
_____ Hispanic-American
_____ Native-American
_____ Asian-American
_____ Not a citizen of the United States
_____ Other
- 8. What is your year in school?** _____ Freshman
_____ Sophomore
_____ Junior
_____ Senior
_____ Graduate Student
- 9. How old are you?** _____ years old
- 10. Is English your native language?** _____ Yes
_____ No
- 11. Are you active in a fraternity/sorority?** _____ Yes
_____ No
- 12. Are you active in athletics?** _____ Yes
_____ No

Appendix F

Script for Experimental Sessions

Hi. How are you doing today?

My name is Amy McCabe and I am conducting a study on personality and drinking behavior, which is being conducted by a group of researchers I am involved with. We call the group 'Responsible Alcohol Consumption Team' or 'ReACT'.

One major purpose of this group to get the word out about how important it is for KSU students to drink responsibly so that they can safely enjoy every party. In order to reach this goal, we first need to collect some background information on KSU students' personalities and drinking behaviors.

So the packet I'm giving you has two parts: First, there are a few pages about this research group and its goals. The group, ReACT is small right now and needs some help in becoming more prominent on campus. The first section of the packet contains some information about how you can help make that happen, if you choose. Of course, agreeing to help at all is purely voluntary but we appreciate anything you can do.

After you read about ReACT and its goals, you'll complete a few surveys about your typical feelings and drinking behaviors. Please complete these surveys as completely and as honestly as you can so we can distribute accurate information to KSU students.

Go ahead and start working your way the packet as soon as you get it. Finish it at your own pace and complete the materials quietly and independently. Raise your hand if you have any questions.

Be aware that you'll get a full hour of research credit even though it takes most people only about a half hour to complete everything, so please do not rush. Your participation in research is very important to us, and we appreciate you giving us thoughtful responses. If you finish early, please sit quietly and wait for further instructions. You may read or complete school work if you finish early. Thank you.

Appendix G

Cover Page

Responsible Alcohol Consumption Team

Who are we?

We are a group of concerned Kansas State University researchers and students.

We know that KSU students have been in fights with best friends, gotten sick in front of amazing dates, slept through final exams, and decided to get behind the wheel of a car when that was clearly the wrong decision. These students have done some things they're not proud of, all because they had to have "just another drink" (which became another, then another...).

We know that all KSU students are affected by students who drink too much. We know that students are awakened from sleep and that they have had their personal property damaged by people who stopped drinking a few drinks too late. Most importantly, we know that KSU students deserve better.

What do we hope to accomplish?

We realize that many college students consider drinking an important part of college life. We think college should be fun, and we don't think excessive drinking is always fun. We hope to spread the message of responsible alcohol consumption. We're not asking students to completely stop drinking, just to start thinking while drinking.

ReACT

You can have a blast without getting trashed.

Appendix H

Experiment 1 Foot-in-the-Door Request

Responsible Alcohol Consumption Team

ReACT needs your help!

In order for our group to obtain support from the KSU Student Governing Association (SGA), we want to show them how we can make a difference on campus. You can help us do this by signing below to show your support.

We are simply asking that you not drink alcohol for one night in the next week. This can be any night you choose within the next seven days.

Even if you were already planning not to drink one night this week, if you sign your name below we can show SGA representatives how we plan to make a difference on campus.

No one besides ReACT members and appropriate SGA personnel will see your signature.

“I acknowledge, by signing below, that I will not drink alcohol for one night in the next week. This is any one night that I choose in the next week.”

Name (signature)

Date

Thank you very much! ReACT appreciates your helpfulness.

ReACT
You can have a blast without getting trashed.

Appendix I

Experiment 1 Door-in-the-Face Request

Responsible Alcohol Consumption Team

ReACT needs your help!

In order for our group to obtain support from the KSU Student Governing Association (SGA), we want to show them how we can make a difference on campus. You can help us do this by signing below to show your support.

We are simply asking that you not drink alcohol at all for an entire month.

Even if you were already planning not to drink alcohol at all for the entire month, if you sign your name below we can show SGA representatives how we plan to make a difference on campus.

By signing your name below, you are agreeing to have your name (along with the names of other students who agreed to help us) published in a full-page ad in the KSU newspaper (the Collegian) as someone who agreed to this request.

“I acknowledge, by signing below, that I will not drink alcohol at all for the entire month, effective immediately. I also agree to having my name published in the Collegian.”

Name (signature)

Date

Thank you very much! ReACT appreciates your helpfulness.

ReACT
You can have a blast without getting trashed.

Appendix J

Experiment 1: Description of Responsible Drinking and Explanation of Target Request

Responsible Alcohol Consumption Team

One more thing!

Thank you for the attention you've given to our group so far. We really appreciate your time and support.

In order for our group to obtain support from the KSU Student Governing Association (SGA), it would really help ReACT if you could agree to not drink excessively for one week.

What is excessive alcohol consumption? For some people, this is drinking more than a certain amount of alcohol (for example, 5 beers). For other people, this means that they get a certain feeling if they start to drink too much alcohol, and this is their limit.

We are simply asking that you agree not to cross the line between responsible and excessive alcohol consumption for one week. We are not asking you to stop drinking completely, but just to be careful—think when you drink.

Even if you were already planning to not drink excessively for one week, if you sign your name below we can show the SGA how we plan to make a difference on campus.

No one besides ReACT members and appropriate SGA personnel will see your signature.

“I acknowledge, by signing below, that I will not drink excessive amounts of alcohol for one week.”

Name (signature)

Date

Thank you very much! ReACT appreciates your helpfulness.

ReACT
You can have a blast without getting trashed.

Appendix J Continued

Experiment 1 Target Request (In boldface)

Responsible Alcohol Consumption Team

Just a few more questions!

If you signed on the previous page to indicate that you would not drink excessive amounts of alcohol for one week, would you be willing to have your name published (along with the names of other students who agreed to help) in an ad in the KSU newspaper (the Collegian) as someone who agreed to this request?

(Check one)

_____ Yes-I will not drink excessively for one week, and you have permission to publish my name.

_____ No-I will not drink excessively for one week, but please keep my name confidential.

_____ No-I did not agree to help ReACT by not drinking excessively for one week.

Please answer the following questions for ReACT's database. Only ReACT researchers will see your responses, so please be honest.

1. Regardless of how you responded to the previous questions, what is the likelihood that you would not drink to excess for one week? (Write a number from 0 to 100 on the line. 0 means you are not at all likely to follow through, and 100 means you are completely likely to follow through): _____ % likely

2. If you pledged your support to ReACT, when do you plan to start the week of no excessive drinking? (Write the number of days until you *begin* your week of not drinking excessively):

_____ days

Appendix J Continued

Request for Follow-Up Contact Information

3. Can we contact you in the future to see if you would did not drink excessively for one week? If you agree to be contacted, ReACT will send you an e-mail message in the near future asking you a couple short questions. If you respond to the message we send, you will help us immensely AND you will be entered in a raffle for \$100! (Not bad for a few minutes of work).

Are you interested in responding to a couple short questions in the future? Check one:

Yes, contact me so I can have the chance to win \$100! (Please provide contact info below)

No, do not contact me

If you checked “yes,” please provide your e-mail address below. If you do not have an e-mail address, please provide your phone number instead.

e-mail address: _____ **phone number:** _____

ReACT

You can have a blast without getting trashed.

ReACT thanks you for any support you offered.

Now, please complete the surveys that begin on the next page so we have accurate information about KSU students’ attitudes and behaviors.

Appendix K

Social Desirability

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally, and circle TRUE or FALSE for each statement.

I never hesitate to go out of my way to help someone in trouble. **TRUE** **FALSE**

I have never intensely disliked anyone. **TRUE** **FALSE**

There have been times when I was quite jealous of the good fortune of others. **TRUE** **FALSE**

I would never think of letting someone else be punished for my wrong doings. **TRUE** **FALSE**

I sometimes feel resentful when I don't get my way. **TRUE** **FALSE**

There have been times when I felt like rebelling against people in authority even though I knew they were right. **TRUE** **FALSE**

I am always courteous, even to people who are disagreeable. **TRUE** **FALSE**

When I don't know something I don't at all mind admitting it. **TRUE** **FALSE**

I can remember "playing sick" to get out of something. **TRUE** **FALSE**

I am sometimes irritated by people who ask favors of me. **TRUE** **FALSE**

Appendix L

Mail-In Follow-Up Measure

Responsible Alcohol Consumption Team

Please **DETACH** this page, complete it,
then return it in campus mail as soon as possible!

ReACT wishes to keep track of the different ways we've reached KSU students, and learn how to provide the best information possible. We'd also like to provide more information to students who want it. We're asking *all* students we come into contact with to answer the following three questions and mail this page to us. It is very important to us that you provide your feedback. And remember, campus mail is free!

1. How did you hear about ReACT? (Select all that apply):

- ReACT members presented to a class I attend
- ReACT members presented to a meeting of a campus group I'm involved in:

(Name of Group)

- Radio/Newspaper Advertisement about ReACT
- I saw a ReACT sign on campus
- A friend told me about ReACT
- Other: _____

(Please describe)

2. In order to determine which type of presentation is most effective (as determined by your answer to the previous question), please respond honestly. Select all of the following that apply to you:

- I intend to discuss the dangers of excessive alcohol consumption with one person.
- I intend to not drink excessive amounts of alcohol for one week.

3. Indicate if you would like to receive more information on the following topics (Select all that apply):

- How to Cut Down on Alcohol Consumption (provide mailing address below)
- Alcohol: What you Don't Know Can Harm You (provide mailing address below)
- Alcoholism: Getting the Facts (provide mailing address below)
- None of the above, I am not interested in receiving more information

If you indicated you would like to receive more information in question three, please provide your name and mailing address on the lines provided:

Appendix L Continued

ReACT

You can have a blast without getting trashed.

To return this form, simply fold (so that only the address below appears) and staple, then send through campus mail. THANK YOU!

CAMPUS MAIL

ReACT, C/O Amy McCabe
Bluemont Hall Room 492

Appendix M

Follow-up E-Message for Participants who Agreed to be Contacted after Experiment

Hello!

A week ago, you completed a questionnaire for ReACT (Responsible Alcohol Consumption Team) for credit. At that time, you agreed to answer some additional questions for the chance to be entered in a raffle for \$100.

Please answer these five questions honestly so that we can know if we are making an impact on campus. Simply respond to this message, and type in your response after each question. Please respond as soon as possible, but no later than a week after you receive this message.

1. Did you drink alcohol in the past week? (Respond by typing either “yes” or “no”).
2. If you responded “yes” to question 1, how many times did you drink alcohol in the past week? (Respond by typing the number of times you drank alcohol in the past week).
3. If you responded “yes” to question 1, on average, how many alcoholic beverages did you consume each time you drank alcohol in the past week? (Respond by typing the average number of alcoholic beverages you consumed each time you drank, keeping in mind that one drink = one bottle of beer, one glass of wine, one wine cooler, or one shot of liquor).
4. Do you personally believe that you drank an excessive amount of alcohol at any point during the past week? (Respond by typing either “yes” or “no”).
5. Did you talk to someone about the dangers of excessive alcohol consumption during the past week? (Respond by typing either “yes” or “no”).

Now that you’ve answered our questions, please provide the following contact information in case you are selected as the winner of the \$100 raffle:

Name:

Current phone number:

Summer phone number (if different than spring semester):

Thank you for your help! We will call you if you are selected as the winner of the raffle. Remember, you can have a blast without getting trashed!

Appendix N

Experiment 2 Foot-in-the-Door Request

Responsible Alcohol Consumption Team

ReACT needs your help!

In order for our group to obtain support from the KSU Student Governing Association (SGA), we want to show them how we can make a difference on campus. You can help us do this by signing below to show your support.

We are simply asking that you distribute one informational sheet about ReACT. We will provide you with the sheet, and all you have to do is give it to someone or leave it somewhere you know people will read it.

In addition to sharing ReACT information, we are asking you to sign your name below so that we can show SGA representatives how we plan to make a difference on campus, one person at a time.

No one besides ReACT members and appropriate SGA personnel will see your signature.

“I acknowledge, by signing below, that I will distribute one informational sheet about ReACT and its goals.”

Name (signature)

Date

Thank you very much! ReACT appreciates your helpfulness.

ReACT

You can have a blast without getting trashed.

Appendix O

Experiment 2 Door-in-the-Face Request

Responsible Alcohol Consumption Team

ReACT needs your help!

In order for our group to obtain support from the KSU Student Governing Association (SGA), we want to show them how we can make a difference on campus. You can help us do this by signing below to show your support.

We are simply asking that agree to wear a pin that says “I drink responsibly” when you are out drinking socially or when you are on the KSU campus (on a backpack or jacket you use frequently). ReACT will provide the pin to you for a nominal \$3 fee. The pin is square (3” by 3”), has a bright yellow background, and says “I drink responsibly” in big black letters.

In addition to wearing the pin when you drink socially and are on the KSU campus, we are asking you to sign your name below so that we can show SGA representatives how we plan to make a difference on campus, one person at a time.

“I acknowledge, by signing below, that I will pay \$3.00 for a pin that says ‘I drink responsibly’ and wear it when I drink socially and when I am on the KSU campus.”

Name (signature)

Date

Thank you very much! ReACT appreciates your helpfulness.

ReACT

You can have a blast without getting trashed.

Appendix P

Experiment 2: Description of Responsible Drinking and Explanation of Target Request

Responsible Alcohol Consumption Team

One more thing!

Thank you for the attention you've given to our group so far. We really appreciate your time and support.

In order for our group to obtain support from the KSU Student Governing Association (SGA), it would really help ReACT if you could agree to talk to one person about the dangers of excessive alcohol consumption. This can be a friend or any other person of your choosing. You can have the talk while you are out drinking with this person (perhaps when that person is about to have "one too many"), or any other time you feel is appropriate.

What is excessive alcohol consumption? For some people, this is drinking more than a certain amount of alcohol (for example, 5 beers). For other people, this means that they get a certain feeling if they start to drink too much alcohol, and this is their limit.

We are simply asking that you agree to talk to one person about the dangers of excessive alcohol consumption. We are not asking you to tell the person to stop drinking completely, but that you tell the person to be careful—think when you drink.

In addition to agreeing to talk to one person about the dangers of excessive alcohol consumption, we are asking you to sign your name below so that we can show SGA representatives how we plan to make a difference on campus, one person at a time.

No one besides ReACT members and appropriate SGA personnel will see your signature.

"I acknowledge, by signing below, that I will discuss the dangers of excessive alcohol consumption with one person."

Name (signature)

Date

Thank you very much! ReACT appreciates your helpfulness.

ReACT
You can have a blast without getting trashed.

Appendix P Continued

Experiment 2 Target Request (In boldface)

Responsible Alcohol Consumption Team

Just a few more questions!

If you signed on the previous page to indicate that you would talk to one person about the dangers of excessive alcohol consumption, would you be willing to have your name (along with the names of other students who agreed to help) published in an ad in the KSU newspaper (the Collegian) as someone who agreed to this request? (Check one)

_____ Yes-I will talk to one person as requested, and you have permission to publish my name.

_____ No-I will talk to one person as requested, but please keep my name confidential.

_____ No-I did not agree to help ReACT by talking to one person as requested.

Please answer the following questions for ReACT's database. Only ReACT researchers will see your responses, so please be honest.

1. Regardless of how you responded to the previous questions, what is the likelihood that you would agree to talk to one person about the dangers of excessive alcohol consumption? (Write a number from 0 to 100 on the line. 0 means you are not at all likely to follow through, and 100 means you are completely likely to follow through):

_____ % likely

2. If you pledged your support to ReACT, approximately how long do you believe it will be before you will talk to the person about the dangers of excessive alcohol consumption? (Write the number of days until you believe you will have the discussion):

_____ days

Appendix P Continued

Request for Follow-Up Contact Information

3. Can we contact you in the future to see if you talked to one person about the dangers of excessive alcohol consumption? If you agree to be contacted, ReACT will send you an e-mail message in the near future asking you a couple short questions. If you respond to the message we send, you will help us immensely AND you will be entered in a raffle for \$100! (Not bad for a few minutes of work).

Are you interested in responding to a couple short questions in the future? Check one:

Yes, contact me so I can have the chance to win \$100! (Please provide contact info below)

No, do not contact me

If you checked “yes,” please provide your e-mail address below. If you do not have an e-mail address, please provide your phone number instead.

e-mail address: _____ **phone number:** _____

ReACT

You can have a blast without getting trashed.

ReACT thanks you for any support you offered.

Now, please complete the surveys that begin on the next page so we have accurate information about KSU students’ attitudes and behaviors.