ALCOHOL CONSUMPTION AND PROBLEM DRINKING AS A FUNCTION OF SOCIAL NORMS AMONG COLLEGE MALES

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ABSTRACT

While there have been numerous studies on alcohol consumption and problem drinking on college campuses, there have been fewer studies identifying why alcohol is so prevalent. Some studies now point to the social norms and prototypes that students hold as being an important culprit for alcohol consumption and abuse on college campuses. This study looks at the role of social norms as factors of alcohol consumption among college males, specifically in regard to fraternity versus non-fraternity membership. There are three parts to the study: an individual differences component (to determine the various amounts of alcohol consumed by fraternity and non-fraternity members), men's perceptions of others' drinking behavior, and an experimental portion. The results revealed fraternity men actually consumed, and are also perceived to consume, more alcohol than non-fraternity men. The results also indicated that both fraternity and non-fraternity men's current drinking patterns are influenced by their peers, but only those in their own social groups. A 2 (high or low alcohol consumption portrayed in the vignette) x 2 (fraternity or non-fraternity portrayed in the vignette) x 2 (whether the participant is Greek or Non-Greek) between subjects factorial analysis of variance showed that fraternity and non-fraternity men view others differently based on Greek membership and drinking behavior in regard to likeability and morality. For likeability, non-fraternity participants reported a portrayed non-fraternity member in the vignette as being more likeable than a portrayed fraternity member, while non-fraternity participants also judged light drinkers to be significantly more favorable than heavy drinkers. For morality, fraternity participants rated portrayed fraternity men in the vignette as being more moral. Of importance as well, was that men displayed in the vignette as light drinkers were believed to be more moral than heavy drinkers.

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DEDICATION

I would like to dedicate this thesis to the two most important and influential women in my life, my mother, Lynn Whitman and my wife, Suzanne Smith. Without each of you I would not be the man I am today.

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INTRODUCTION

Considering the fact that alcohol has been well documented as being a major issue on college campuses (Greenfield & Rogers, 1999; Schulenberg et al., 2001; Prentice & Miller, 1993), the current study will look to examine the role of social norms as a factor in students' consumption of alcohol. Specifically, this study will look to identify different norms and prototypes held among fraternity and non-fraternity members. This study will also look at the relationship between students' perceptions of others' drinking behavior as it directly relates to their view of others as a whole and their own alcohol consumption.

Alcohol Consumption in College

It has been found in numerous studies that alcohol consumption is a major problem on college campuses. Most individuals who drink alcohol fall into the 18-29 age range, an age group that comprises the vast majority of the college population (Greenfield & Rogers, 1999). Though many college students are under the legal age for alcohol consumption, a recent study of 18-24 year olds found excessive consumption of alcohol resulted in a number of problems, including unwanted sexual experiences, fights, sickness, academic problems, and even death (Hingson, Heeren, Winter, & Wechsler, 2005). Sixty-two percent of students enrolled in college full-time reported using alcohol at least once during the past month, with 43% citing they had participated in binge drinking during that month, according to a survey conducted by the National Center for Health Statistics (2005). It is clear, then, that alcohol is used frequently by college students.

Despite many preventative measures to decrease alcohol use on campus, its abuse has continued to remain a constant threat and appears to be on the rise. In a study conducted in 2002, heavy drinking rates had remained stable, while extreme drinking (including drinking to

get drunk and frequent drunkenness) had significantly increased over the past ten years (Wechsler, Lee, Kuo, Seibring, Nelson, & Lee). It has also been reported that college students drink more, on average, than their non-college peers (Schulenberg et al., 2001). College campuses, then, may be places that foster drinking, as opposed to repelling it.

Though there are a number of negative consequences and risks associated with drinking, such as fights, injuries, academic failures, economic issues, and legal consequences, students continue to use and abuse alcohol (Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994). In a national survey of 140 college campuses, college students reported negative consequences from both their own drinking as well as others' drinking behaviors (Wechsler et al., 1994). Students, then, are not blind or immune to alcohol's impact on their lives. The data suggests that this is, in fact, quite the opposite. Students appear to be very aware of the consequences associated with drinking, yet they continue to partake in alcohol. Many of these negative consequences appear to be due to excessive or binge drinking.

Binge Drinking

In dealing specifically with college students, binge drinking has been defined as five consecutive drinks for men and four consecutive drinks for women for at least one single occasion within the last two weeks (Weitzman, Nelson, & Wechsler, 2003). Using this definition in a college survey, 44% of college students reported binge drinking (Wechsler, Lee, Kuo, & Lee, 2000). One study found alcohol and binge drinking to be responsible for 1,400 student deaths, 500,000 unintentional injuries, 600,000 student assaults, 112,000 arrests, and 2.1 million DWIs (Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002). As these studies show, alcohol and the negative consequences it brings are severe problems on college campuses. These consequences appear to have major ramifications in the lives of college students. Thus, if

students are continuing this heavy drinking behavior, even when negative consequences occur, there must be other variables at work aside from simple operant conditioning that mediate students' drinking behaviors.

Social Norms and Prototypes

One of the major causes of increased alcohol consumption by college students are the social norms and prototypes that they hold. From a basic viewpoint, there are two types of norms: attitudinal and behavioral. To define, behavioral norms are what the majority of the people in a group do, while attitudinal, or injunctive, norms are the beliefs about how the majority of others should act. Alcohol has the ability to impact both of these norms. Many college students are not immune to social pressures and still go along with the majority. Thus, in the realm of drinking behavior, most people are going to follow their believed norm, whether it is based on actual fact or their own pre-set notions. Looking at a nationwide sample, Perkins, Haines, and Rice (2005) found that 71% of college students overestimated how much alcohol was consumed by their peers. From this study, one can see that alcohol consumption can shift one's injunctive norms, with these norms being especially vulnerable during college. Therefore, one's perception is certainly a variable that can impact the amount that a student is drinking. In a recent study, students with strong social motives for drinking were found to have strong correlations between their perceived descriptive norms and their own personal alcohol consumption, especially when their friends approved of their drinking (Lee, Geisner, Lewis, Neighbors, & Larimer, 2007).

Going along with this study, one major theory that many have applied to research on alcohol use in college is the social norms theory. Stated simply, individuals regularly overestimate how much alcohol their peers consume, which directly affects how much alcohol

they, themselves, consume (Prentice & Miller, 1993). In other words, college students typically drink more because they hold the belief that everyone else is drinking more. Berkowitz (2004) found that students' overestimation of alcohol use seems to come from, in part, the very memorable behavior witnessed by the heavy drinking minority and not the unmemorable behavior of the light drinking majority.

Not only do students overestimate the typical college student's drinking behavior, but they also overestimate their close friend's alcohol consumption, leading to a much greater impact on their own alcohol use (Baer, Stacy, & Larimer, 1991). Baer et al. (1991) also found that students estimated those in their social living groups to drink more than the actual students' self-reports in those same living groups. The closer the person or group was to them, the greater the impact on one's own norms regarding alcohol. Though specifically targeting athletes, Dams-O'Connor, Martin, and Martens (2007) found that perceived social norms (with regard to friends and typical athletes) collectively accounted for a significant increase in students' own alcohol consumption. It appears, for many students, there is a gap between their perceptions and reality that is directly impacting their own drinking behavior.

This gap may be due to a variety of reasons. For many students, alcohol use is not always planned in advance. It appears that one's willingness to participate in a given activity, be it planned or not, can directly impact one's decisions. Like many things people act upon, alcohol consumption in not always planned in advance. Specifically targeting alcohol consumption, a student's willingness to try something new also plays a role into his or her mindset and decision-making. One study found that elementary school children, whose prototypes of alcohol and cigarette use became more favorable over time, were much more likely to engage in smoking and drinking as adults (Andrews, Hampson, Barckley, Gerrard, & Gibbons, 2008). The cognitions

held by these participants, and their willingness as children to partake in drugs, carried over into adulthood and could be used to predict later use. Thus, students' willingness to try new activities and their changing prototypes appear to directly impact their drinking behavior later on in life, arguably as college students.

A prototype is something that serves as the basis, or perfect example, for everything that falls in a specific category. Prototypes are the standard cognitive images students hold in regard to the "model" college student and overall college "experience"; many times, this prototypical view of a college student, especially fraternity members, involves alcohol use. In other words, a prototype is something that is the model from which everything else is judged. A prototype is central to one's cognitive make-up, and a prototype for a typical college student is no different. Andrews et al. (2008) argued that prototypes for substance use and abuse are "affect-laden," meaning that many students associate substance use with positive or negative qualities. These prototypes are more highly related to "their willingness to engage in an activity than to their more reasoned intentions to do so" (Andrews et al., 2008, p. 103). Since these prototypes typically carry on into college years, it may be inferred that these prototypes and one's willingness to partake in a risky behavior, such as drinking, may have an impact on one's alcohol consumption in college. If a student enters into college with the prototypical mindset of a high drinking fraternity member, they too may be inclined to drink heavily. This may especially be true if they attend a Greek function, as they may drink more to keep up with their prototypical norm of other college students at a fraternity party. Research has shown that students' drinking behavior is more closely correlated to other student's drinking in their own social network, than to student drinking on campus as a whole (Carter & Kahnweiler, 2000). Students may also join a fraternity themselves and engage in heavy drinking with their fellow fraternity members.

Students with positive prototypes regarding alcohol are more inclined toward frequent drinking behavior (Andrews et al., 2008).

College Perceptions and Prototypes

Another issue with many students may be the perception of many students that college is a time period that is removed from the real world. Their prototypical experience of college appears to be detached from the rest of their lives. Drinking during college seems to be met with the idea that this risky behavior is a disassociation from the life they will lead in the future (Colby, Colby, & Raymond, 2009). Students appear to see college as a time when they can experiment and take part in activities they would not, in good thought, participate in. Many college students believe they can do this without any direct impact on their future lives. Colby et al. (2009) reported that many students viewed post-college drinking as a threat to their family and career, holding to the belief there would be less alcohol in their lives after graduation; this did not, however, seem to impact their drinking behavior during college. It is as if time can stand still for students in college and they can experiment with alcohol in their own, enclosed bubble, keeping the rest of the world locked outside. Colby et al. (2009) also found students' two main motivations for drinking were the social benefits and disinhibition. Many students may believe the prototypical student to be one who experiments, parties, socializes, and drinks throughout their college life while suffering few, if any, repercussions. As stated above with social norms, many students are misperceiving the amount of alcohol used by their peers. This may, in turn, be contributing to this notion of college as a time to drink to receive these perceived social benefits and disinhibition without suffering any "real world" consequences.

Alcohol in Greek Societies

These social norms may be best applied to the Greek population on campuses. Park, Sher, Wood, and Krull (2009) found that students in sororities and fraternities held significantly higher levels of drinking norms during their freshman and sophomore years at college than non-Greek students. Findings from one study indicate that individuals who eventually become members of a Greek organization, or attend Greek activities in college, experienced greater social influences related to alcohol before college (Capone, Wood, Borsari, & Laird, 2007). By self reports, these individuals also had greater experiences with alcohol before they were introduced into college life and the Greek system (Capone et al., 2007). This, then, may explain how the social norms they brought with them into college predicted their behavior upon arrival on campus and subsequent drinking behavior in college.

Alcohol consumption in Greek society is extremely prevalent. Greek members have been shown to be at an increased risk in regard to alcohol-related problems (Turrisi, Mallett, Mastroleo, & Larimer, 2006). In looking at 33 variables, living in Greek residence housing was the strongest correlate of binge drinking during college (Wechsler, Dowdall, Davenport, & Castillo, 1995). During the first two years of college, constant Greek members showed higher levels of heavy drinking, more alcohol consequences, and higher peer drinking norms than non-Greeks (Park, Sher, & Krull, 2008). Fraternity and sorority members reported significantly higher rates of binge drinking (70% for males, 50% for females) than those not in a fraternity or sorority (42% male, 29% female) during the past two weeks (McCabe et al., 2005). Living in a fraternity or sorority house was also associated with higher levels of drinking (Larimer, 1992). This seems to be especially important to note as individuals that are surrounded by heavy drinkers show an increase in self-reported alcohol consumption when compared to those not

surrounded by heavy drinkers (Rosenquist, Murabito, Fowler, & Christakis, 2010). Taking these studies into account, Greek members typically drink more alcohol than their non-Greek counterparts and can be greatly influenced by others' drinking patterns.

Fraternity Alcohol Consumption

In regard to drinking, men simply behave differently than women. In one study by Colby et al. (2009), almost all male groups and only half of the female groups noted that partying and drinking is normal and expected during college. This may be largely due to how men's perceptions and prototypes often differ from women's. Many men thrive on brotherhood, competition, and friendship amongst one another. For boys only, the "positive individual competence prototype", such as wanting to be perceived as smart, good-looking, and self-confidence, appeared to be the most important indicator for lifetime smoking (Piko, Bak, & Gibbons, 2007). One could hypothesize that it would be the same with drinking, as well. This would seem to be an indicator as to why men in fraternities fall prey to the social norms theory in regards to their alcohol use.

Fraternities, specifically, have a high drinking rate. In a nationwide study, 97% of fraternity men reported drinking alcohol in the last month, with 86% reporting binge drinking during that same time period (Caudill et al., 2006). Tewksbury, Higgins, and Mustaine, (2008) found that being male, having greater numbers of male friends that drink, and drinking in locations other than bars were all positively correlated with high levels of alcohol consumption. This seems to fit the mold of a fraternity member and a fraternity living arrangement, be it at a fraternity house or apartment shared by brothers, directly. Fraternities typically have more parties and availability of alcohol than sororities. Fraternities that are reputed to consume more alcohol are rated higher in social status among fraternity members in general (Larimer,

Anderson, Baer, & Marlatt, 2000). Along with the above mentioned data, Tewksbury et al. (2008) also found that if one disaffiliates themselves with the Greek system, this disaffiliation causes a decrease in risky drinking behavior. Though alcohol consumption was significantly higher for both fraternity and sorority members when compared to non-members, in a study conducted by Cashin, Presley, and Meilman (1998), fraternity members reported having twelve drinks per week on average, while sorority members reported only six drinks per week. (Still double the average for non-Greek men who reported six drinks per week and non-Greek women who reported two). Capone et al. (2007) found that both being male and being involved in a fraternity were associated with higher alcohol use and problems during the first two years of college.

Prototypes and norms certainly appear to be a major reason as to why Greek students, specifically fraternity members, consume higher quantities of alcohol. Baer (1994) examined students' residence as a prediction for perceived norms in regards to alcohol. He tested students that lived in dormitories, Greek housing, or off-campus and found that for all three groups, fraternity members were rated the highest in regards to their drinking frequency. All students, both those students currently in the Greek system and those who were not, perceived fraternity members as consuming more alcohol than those students living in sororities or in dormitories (Baer, 1994).

Many students may, in fact, have a prototype of a fraternity member as a heavy drinker early on in their college careers. In studying only those students currently in fraternities and sororities, Baer and Carney (1993) noted that most students reported that others drank more than they did themselves. For the two fraternities that participated in the study, both ranked a member of their fraternity as the highest perceived drinker. Ratings for the "typical member" of both the

fraternities and sororities were significantly higher than the ratings for themselves or their best friend in each of the four samples (Baer et al., 1993). If the previous data and research are taken into account, one could easily see how the viewed norm is skewed and how fraternity members may feel that they must consume more alcohol to stay around the same consumption level as their fellow brothers. In an earlier study, 77% of subjects reported that typical members of their living group drank more than they did (Baer et al., 1991). This report notably violates the law of averages and again brings into account the social norms theory. Baer et al. (1991) also found that students rated themselves lowest in alcohol consumption in all three conditions (dormitory, sorority, and fraternity), rating "close friend", "living group", and "typical student" as all being higher than themselves. These findings indicate that university and Greek students see friends and members of their social group as drinking more than they do themselves. This raises an important issue as Baer (1991) also found that self-reported drinking was highly correlated with how much students estimated others drank. Thus, if a student perceives others as drinking more than they actually do, the student will drink more themselves to simply keep up with their perceived, albeit false, drinking norm.

Group Membership

Greek societies provide an ideal environment for students to become a member of a much larger group. With this group, however, students may be more influenced by the peers in their direct social group due to the increased amount of time spent with one another. Wells and Corts (2008) found that members of Greek organizations preferred other Greek members over members of a service or academic organization, noting a clear in-group bias. This is critical in regard to drinking, as one longitudinal study found individuals were more likely to drink heavily if a person they are close to drinks heavily (Rosenquist et al., 2010). It is also important to note

that students not involved in the Greek system preferred academic or service organization members over Greek members (Wells & Corts, 2008). This seems to indicate a preference on college campuses for students to choose, and form groups with, others that are similar to themselves in regard to Greek or non-Greek membership.

THE PRESENT STUDY

The purpose of the proposed study is to gain a better understanding of alcohol norms and prototypes among fraternity and non-fraternity members. This study looks to enhance previous research in a number of ways. By using focus groups in a pilot study to gather a closer approximation of true drinking behavior on a college campus, students in the experimental condition received a more accurate portrayal of a heavy or light college drinker. This study also directly compares fraternity and non-fraternity members on the same campus in both their perceptions of others' drinking behavior, as well as their own consumption. It also uses a true experimental method, rather than surveys, to examine individual's perceptions of other fraternity and non-fraternity members more deeply.

This study is a multi-method study, focusing on the amount of alcohol consumed (including heavy or binge drinking) by both fraternity and non-fraternity members by self-reported measures, as well as perceptions of others. In the first part of the study, individual differences of actual drinking behavior and norms individuals either currently in a fraternity or not involved in a fraternity hold were examined. The second part of the study looked to compare fraternity and non-fraternity members as high or low drinkers in an experimental condition by using two separate analyses of variance, one for likeability and one for morality. This experimental portion focuses on the perceptions students have of their college peers and their prototypical view of an "average" fraternity or non-fraternity member in regards to drinking

behavior and personality traits. A pilot study was conducted to get the most accurate portrayals of heavy and light drinking behavior among college students. This experimental condition will include 2 x 2 x 2 between subject design, with the independent variables being: high or low drinking portrayal in the experimental vignette, fraternity or non-fraternity student portrayed in the experimental vignette, and whether the participant, themselves, is currently in a fraternity or not. Two of these, then, are manipulated variables and one is a person variable. The experimental condition then looks at a number of dependent variables from Byrne's Interpersonal Judgment Scale, specifically, likeability and morality, to gauge student's perceptions of the vignettes.

This research will overcome some of the past limitations by using vignettes as a direct, experimental approach for students to reflect upon. It will directly compare fraternity and non-fraternity men and their perceptions by using the same experimental vignette for each group. This study looks to shed light on the basic judgments made by individuals in regard to their drinking norms during college, while noting if there are individual differences in drinking norms and patterns based on fraternity membership. This study also examines the social norm belief that one's perception of other's drinking is directly correlated with one's own alcohol consumption.

Hypothesis

In order to answer a number of the issues above, there will be four hypotheses presented in this study: (1) there will be significantly greater use of alcohol by fraternity members when compared to non-fraternity members, (2a) participants will perceive fraternity men as consuming more alcohol than non-fraternity men and will significantly over-estimate how much alcohol fraternity men consume (2b) participants will consume significantly more alcohol themselves if they report others as being heavy drinkers and (2c) participants will be more heavily influenced by others' drinking behaviors that are more like them (i.e.-fraternity men will be more influenced by their perception of other fraternity men's drinking behavior versus non-fraternity men and vice versa), (3) there will be a significantly more positive evaluation of the higher consuming (alcohol) fraternity member and the lower consuming (alcohol) non-fraternity member by all the participants in the experimental condition on likeability factors, and (4) a higher order interaction will exist, as participants who are currently in a fraternity will significantly evaluate higher consuming fraternity members more positively, while participants not in a fraternity will significantly evaluate low consuming non-fraternity members more positively.

METHOD

Participants

Participants were 213 male students from a mid-sized, public southeastern university. *Pilot Study Focus Group*. Eighteen currently enrolled students, five currently involved in a fraternity and thirteen not involved in a fraternity, were used for pilot research on alcohol norms within focus groups. Sixteen of these students were Caucasian (88.88%), with one being Hispanic (5.56%) and one listing his ethnicity as "Other" (5.56%).

Experimental Study. In the experimental portion of the study, 195 currently enrolled students participated. Of these students, 92 were currently in a fraternity on campus and 97 students were not involved in a fraternity, either in the past or presently. Due to improperly filled data where the participant had either left large portions of the questionnaires blank or filled out the DDQ and/or Demographics Questionnaire for "John" and not themselves, six participants' data were removed from analysis (3.07%). Eight participants missed one or both of the critical manipulation questions (4.10%), and were thus removed from the data analysis as well. In total, 14 participants' data was removed from the study, leaving 181 participants' data to be used in the study. There were three participants who left one or two questions blank on the DDQ, their demographics, or the DNRF. Since the rest of their data was properly filled out, their data was included for all the questions they answered. This did, however, affect the overall numbers and degrees of freedom in part of the analyses where these three participants left questions blank. Of the 181 participants, 47.5% (n=86) were in a fraternity and 52.5% (n=95) were not in a fraternity. Though fraternity men were not asked which fraternity they were involved in due to confidentiality reasons, there were at least eight different fraternities represented in the study based on the enrollment of participants from fraternity chapter meetings. The majority of the participants were Caucasian (90.1%, n=163), with the remaining participants reporting their ethnicity as African-American (1.7%, n=3), American-Indian (1.7%, n=3), Hispanic (3.3%, n=6), Multiracial (2.8%, n=5), or other (0.6%, n=1). There was a fairly equal representation of class standing, with 35.9% (n=65) reporting themselves as freshman, 25.4% (n=46) as sophomores, 19.3% as juniors (n=35), 18.8% as seniors (n=34), and one special status student (0.6%). Though all were current students, participants' ages fell between 18 and 28 years, with 97.8% of participants falling within a typical college student's range of 18-24 years. The exact breakdown

of reported age was 75.1% (n=136) between 18-20 years, 22.7% (n=41) between 21-24 years, and 2.2% (n=4) as 25 years or older.

Recruitment Methods

The participants volunteered their time in exchange for course research credit in a psychology class or to be entered into a drawing for a $50 gift card, with focus group participants receiving free food. Participants were recruited by flyers and visits to fraternity chapter meetings. Each participant either signed up via an online sign-up system through the Psychology Department (Experimental Management System; EMS; Sona Systems, Ltd., 2008), or by agreeing to participate at a fraternity chapter meeting by writing their name on a sign-up sheet, with a time to participate in the study emailed to them at a later date.

PROCEDURE

Pilot Study Focus Group.

Most research on social norms and alcohol has been carried out using surveys. An integral part of this study was to use a true experimental method that included vignettes. In order to do this, however, it had to be ensured that the content used in the vignette was salient to the population that was being tested. An important part of any experimental vignette is to ensure that the independent variable is accurate. There will always be a trade-off of internal and external reliability with experiments, but it had to be ensured that this vignette could be interpreted as being an accurate portrayal of a typical college student's lifestyle and, most importantly, their drinking behavior. This study's hypotheses depended greatly on these portrayals of a heavy or light drinker. As previous research with focus groups demonstrates, the focus needs to be specific with the same student population that will be taking part in the later

study (Noel et al., 2008). It had to be demonstrated that "John" (the name used in the later vignette) was, in fact, a believable college drinker.

Two separate hour-long focus groups were conducted one week apart to determine valid drinking levels and norms for current male college students. Posters were hung in the Psychology building offering free pizza, drinks, and an hour psychology research credit to those students who wanted to participate. Each focus group was made up of nine male participants and contained both fraternity and non-fraternity men. The majority of participants were freshmen and sophomores, with one junior and one senior in the first focus group, and two juniors, one senior, and one special status student in the second focus group.

Upon entering the room, participants were greeted by the experimenter and asked for a valid form of identification. Informed consents were passed out, and each participant was read the informed consent out loud. Before participants agreed to consent, all questions were answered. All procedures were approved by the University of North Carolina Wilmington Institutional Review Board. Participants were told that they would be taking part in a semi-structured discussion of alcohol use and perceptions of alcohol use on campus. They were invited to eat and, when ready, asked to sign the consent form if there were no further questions.

The room was set up in an oval of chairs, couches and recliners, with food and drinks in the center. The participants had been offered a seat, and offered pizza and soda to enjoy. This was done to help the participants relax and feel a better sense of community with each other, in hopes that they would speak more freely and honestly when the questions began. Again following the example of a recent study conducted with focus groups, a male assistant recorded the session while another male student took notes of the sessions as participants were given a set time to discuss the specific topics presented (Noel et al., 2008). The topics covered drinking

frequency and volumes regarding the normative male drinker on campus. Again following the lead of Noel et al. (2008), a moderator was present to make sure everyone's opinion was heard, to assist in presenting each question in a timely manner, and to ensure each discussion question was adequately covered. Each student was told that everything shared during this session would be kept confidential and that the session would be audio-recorded to ensure accuracy. After ten minutes of eating and casual conversation, the male moderator began the question session. Students were asked to be open and honest and again reminded that everything said would be confidential. Students were also instructed not to use specific names of people or groups on campus during the discussion. The session was semi-structured, with questions directed at each participant in the group about overall drinking impressions and prototypical drinking levels of college men. Audio-recording was performed for the entire session and participants were told to please speak clearly. After notes were taken from the recording, it was erased.

To begin, participants were asked to discuss the following three questions for ten minutes each:

Question 1: What is your overall impression of alcohol use on this campus?

Question 2: How much alcohol does the average student on this campus consume? How frequently? Where?

Question 3: What type of person drinks? Are there characteristics that distinguish a heavy drinker from a light drinker other than their alcohol use?

After each of these questions, participants were asked to respond accordingly. For both sessions, the conversation was very upbeat and each question generated a great deal of discussion. The discussion was round-robin, with some students talking more than others. From these questions, all students agreed that alcohol was used frequently on campus, with average

drinking behavior falling between four and twelve drinks per drinking occasion. There appeared to be no real differences in personality characteristics, school involvement, or other extracurricular activities in those students that drank heavier or lighter than others. The one point that was made in each session was that those who drink more probably go to more parties, and are, thus, perhaps more sociable. This point, however, was also refuted by a couple participants when another participant brought it up, so this idea of greater sociability was not agreed upon by all. Heavy and light college drinkers appeared, then, to have no major differences other than the amount of alcohol they consume on a given night. Another point that was discussed was what students typically drink, with beer being far and away the most common perceived drink of choice. These questions, while very important, were also used as a priming mechanism to get discussions started about alcohol use in general and get to the most important questions of the session. The last two questions were used for the direct quantitative data that was put into the vignette. These questions were:

Question 4: What type of person is a heavy drinker on campus? How much do they consume at a typical Friday night party?

Question 5: What type of person is a light drinker on campus? How much do they consume at a typical Friday night party?

Not every participant was made to answer the first three questions, but for questions four and five, all participants were instructed to first think about the questions and then write a number down on a piece of paper provided for alcoholic beverages consumed before they said that answer out loud. This was done to ensure everyone's opinion was taken into account and to keep participants from changing their answers to fit in with others. For questions 3, 4, and 5,

participants were given a "Standard Drink Conversion Chart" (see Appendix C) to base their decision with.

Participants were asked to be as accurate as possible, and to be as specific as possible in regards to the amount of alcohol they believed a heavy and light drinker would consume on a given night. Questions four and five specifically provided more accurate information of heavy and light drinkers on the college campus. After all five questions were answered, participants were debriefed and told their input would be used in a later study. They were thanked for their participation and then released. The information was then analyzed and used in the make-up of the experimental vignettes.

Students were very vocal in their responses and were also very consistent. During the first session, the mean number of standard drinks consumed by a heavy drinker was perceived to be 12.28 drinks on a weekend night. For the second session, the mean number of standard drinks believed to be consumed by a heavy drinker was 11.89 drinks during a weekend night. As one can see, the numbers are remarkably close from the two separate sessions. As far as the light drinker is concerned, participants in the first session believed the light drinker to consume an average of 3.55 standard drinks on a weekend night, while the second session perceived the average to be 3.33 drinks. Again, one can see how similar the perceptions of each session's participants were. For each group, there was no real outlier, as everyone's range fell between 17 and 10 standard drinks for the heavy drinker and 2 to 6 drinks for the light drinker. The two sessions were later combined and analyzed, showing a mean of 12.08 standard drinks on a given weekend night for the heavy drinker and 3.44 standard drinks on a weekend night for the light drinker. The earlier questions also showed that students do not view heavy and light drinkers differently in their social settings minus the drinking behavior. This will confirm the constancies

portrayed in the vignettes, with only drinking behavior and fraternity membership manipulated. By having both fraternity and non-fraternity men in each session of the focus groups, this should ensure that drinking perceptions of both fraternity and non-fraternity men were included in these standard drink numbers. Beer was also chosen as the alcohol beverage that would be displayed in the vignette based on the focus groups resounding agreement of beer as the college drink of choice. The above numbers (12.08 and 3.44) were then rounded off, giving the vignettes whole numbers to clarify a heavy and light drinker out on a typical weekend night. Thus, for the heavy drinking condition, 12 standard drinks (beers) were used, while 3 standard drinks (beers) were used for the light drinking condition in the experimental vignette as an accurate representation of college drinking patterns based on the data of this pilot study.

By using these two focus groups, this helps us to validate the drinking norms that will be portrayed in the experimental vignettes, aligning these norms with the perceptions of what a typical college student views as "heavy" and "light" drinking. These groups offer a very specific number, and thus more accurate portrayal, of both the high and low drinking fraternity and non-fraternity member presented in the vignettes.

Experimental Study.

Participants signed up via an on-line sign-up system or were emailed an available time slot during a three month period from October to December. This was done to ensure that all participants were tested during the same semester and so that all students, namely freshmen and transfer students, would have at least two months of college experience and perceptions of the same campus to base their judgments on. Each session had between five and twenty participants, depending on the date and time of their specific experimental session.

Participants were told that they would be taking part in a study on "Male's Interpersonal Judgment" skills, both when they signed up for the study and upon arrival at the study. There were two to three experimenters present for each session. Upon entering the room, participants were greeted by the experimenters and asked for a valid form of identification. Informed consents were passed out, and each participant was read the informed consent out loud. Before participants agreed to consent, all questions were answered. All procedures were approved by the University of North Carolina Wilmington Institutional Review Board. Participants were told that they would be taking part in a study on male's interpersonal judgment skills and overall judgment abilities. While this study was, in a way, on interpersonal judgment, this was done so that participants were not directly aware of the main variables and manipulations involved in the study.

Before the experimental sessions began, folders containing all the questionnaires were assembled by graduate and undergraduate assistants. These folders contained all the materials used in the study, including the experimental vignettes, labeled "case study." Each folder packet contained the following items in order: one of the four experimental vignettes with instructions included at the top (all of which included a fictitious student named "John"), Byrne's Interpersonal Judgment Scale, where each participant was asked to answer six questions about John, a Standard Drink Conversion Chart to be used for the DDQ and DNRFs (the same chart used in the pilot study), two Drinking Norms Rating Forms, counter-balanced with half the participants filling out their perception of fraternity members' drinking behavior first and half filling out their perception of non-fraternity members' drinking behavior first, a Daily Drinking Questionnaire to record their own alcohol consumption, a Memory Test to act as a control for the manipulations in the experimental vignettes, and, finally, a demographics questionnaire. The

case study, or vignette, was kept separate so that participants could remove it from the folder first, while the rest of the questionnaires were stapled together.

Before participants entered the room, the folders were shuffled once by the administrator and then again, in a separate room, by an assistant before being placed in a checker-board fashion on the desks with a writing utensil. This was done to ensure that the study was a true double-blind experiment. After participants were greeted and asked for their identification, they were assigned seats in a varying fashion, with one row being assigned front to back and the next row back to front. This was done to keep students that entered the room together, and were perhaps friends or acquaintances, apart and, again, to ensure that the experimenter had no control over which vignette each participant received in their folder.

Participants were asked to sit quietly at their desk and to not open their folder until instructed to do so. After the start time had passed, the door was closed and participants were passed out the informed consent, read it aloud, and asked to sign it if there were no further questions. No participant refused to sign the informed consent. After all the informed consents were collected, participants were instructed to open their folders and remove only the first page (labeled "case study"), read the directions above the vignette and to read the vignette itself (see Appendix A). The vignette was color-coded green to ensure each participant removed the correct sheet and was, in fact, reading the vignette and not moving ahead to the rest of the stapled questionnaire packet. All participants were told that they would be asked questions about the vignette later, so to please read it over carefully as many times as needed. When all the participants were finished reading the vignette, they were asked to put it back into the folder and pull out the stapled packet of questionnaires.

The participants were asked to please complete the questionnaire in order, filling out each page in its entirety and not to skip ahead. They were told to raise their hand if they encountered any problems or had a question. As noted above, participants first completed the Interpersonal Judgment Scale in regards to "John" and their impression of him, next they found the Standard Drink Conversion Chart (see Appendix C) and were told to please use the chart to define a standard drink for the next three questionnaires. The three questionnaires followed (two separate Drinking Norms Rating Forms (DNRFs) that were counter-balanced (see Appendix D and E), with half of the participants recording their perceptions of a fraternity member's drinking habits first and half recording their perceptions regarding the non-fraternity member's drinking habits first and then the Daily Drinking Questionnaire (DDQ) for self-reported alcohol consumption (see Appendix F). The DNRFs were counter-balanced to offset any priming issues that may have arose in participants' perceptions of alcohol use. The DDQ was placed after the DNRFs because participants should not be primed in regards to their own alcohol consumption, since they are the ones that know their own consumption most accurately. After completing the DDQ, the next two questionnaires were the Memory Test (see Appendix G) followed by the Demographics Questionnaire (see Appendix H) as the last paper in the stapled packet. When the participants finished, they were asked to return all the materials back to the folder and close it. They were asked to wait quietly until all other participants in that session were finished. The packets were then collected and the participants were debriefed, with any questions participants had about the study being answered. After all questions were answered, the participants were released.

Materials

Vignettes. A single hypothetical description of a target male, "John," was created for all the experimental conditions. Though somewhat vague, the male was described as slightly above average in various characteristics, with only the manipulated independent variables, high or low drinking consumption portrayal and fraternity or non-fraternity membership portrayal, differing in each vignette. Thus "John's" description was held constant in every way except the two independent variables: whether he was in a fraternity or not and whether, when at a party on Friday night, he was a light (3 beers) or heavy (12 beers) drinker. The portrayal was kept fairly vague, so as to limit other extraneous variables, and have the participants focus on alcohol consumption and Greek or non-Greek membership in each vignette.

Standard Drink Conversion Chart. This chart was used in both the pilot study and in the experimental study for all three forms, the DDQ and both DNRFs, to give students an accurate representation of the definition of a "standard drink." It defined standard drinks for the majority of alcohol beverages that participants would encounter during college. It included fluid ounces, pictures, and conversions for these typical alcohol beverages.

Byrne's Interpersonal Judgment Scale. After completing the vignette, participants were then asked to complete Byrne's scale on their perception of the student portrayed in the vignette ("John") along various dependent measures (Byrne, 1971). The measures included their perceptions on the target's mental health, intelligence, moral character, and likeability. Though the main focus of this study is on likeability and morality (questions 3, 5, and 6 on the scale), this scale will give us a valid indication of how likeable and moral the person portrayed in the vignette was perceived in regards to alcohol use and fraternity membership, while still maintaining the rouse that participants are rating overall interpersonal judgments. For some

questions, this scale is reverse-scored to keep participants from simply putting a check by the same blanks for better reliability.

Drinking Norms Rating Form. The Drinking Norms Rating Form, or DNRF, is an extension of the DDQ, which asks participants to rate other's alcohol consumption (Baer et al., 1991). Similar to the DDQ, it asks participants to rate others' drinking over the past three months, while providing students with target groups and asking them to rate the "average" drinker in that group in regards to amount and frequency of alcohol consumed. The targets given to the participants in the DNRF were a "typical fraternity member" and, a "typical non-fraternity member." Participants assigned a number to amount of drinks consumed for each day of a typical week for each target group. Like the DDQ, the DNRF looks to get an accurate representation of the average number of drinks consumed for each drinking day of the week for each target group. Combining the drinking days and amount consumed, the total number of drinks consumed during a typical week was recorded for analysis.

Daily Drinking Questionnaire. The Daily Drinking Questionnaire, or DDQ, is a self-reported alcohol measure (Collins, Parks, & Marlatt, 1985). It asks participants to report the actual number of standard alcoholic beverages consumed for each day of a typical week during the last three months. Students were instructed to refer to the Standard Drink Conversion chart to standardize each reported drink. From the DDQ, the number of days participants drank was recorded, as well as the amount consumed during each day, to form an overall picture of alcohol use. This provides a total number of drinks consumed during a typical week to use for analysis.

Manipulation Check (Memory Test). Two of the Memory Test questions acted as manipulation checks to ensure that the participants correctly perceived the independent variables (fraternity membership and alcohol consumption). The Memory Test asks participants five

questions about the case study, or vignette, to ensure they were accurately recalling the information when filling out questions about "John" during Byrne's Interpersonal Judgment Scale. Questions two and four were matched to each participant's case study, or vignette, for accuracy. If either question, number two or number four, was incorrectly answered, that participant's data was not used for fear that the independent variable manipulation was not perceived.

Demographics Questionnaire. This questionnaire was used to obtain basic information about the participant, including age, ethnicity, class standing, fraternity membership, and if the participant had been, or currently was, an officer in a fraternity. These demographics were grouped and analyzed for the overall study.

Data Analysis

There are a number of separate analyses conducted in this study. T-tests were run to see if fraternity men reported drinking more than non-fraternity men and if impressions significantly differed between fraternity and non-fraternity men. The individual differences of participants were computed using a regression analysis for predictor variables to see if perceptions of others' drinking patterns directly impacts one's own alcohol consumption and to see if fraternity men are more impacted by their own social norms and perceptions than non-fraternity men. The experimental condition vignettes were analyzed using two separate ANOVAs that explore the 2 (high or low alcohol consumption portrayed in the vignette) x 2 (fraternity or non-fraternity portrayed in the vignette) x 2 (whether the participant is Greek or Non-Greek) model, examining the dependent variables of a combined likeability score and a morality score.

RESULTS

Differences in Alcohol Consumption and Fraternity Membership

Do fraternity men report more consumption?

This study's first hypothesis was that fraternity men would consume significantly more alcohol than non-fraternity men. An independent samples t-test was conducted to see if fraternity men drank significantly more standard drinks per week than non-fraternity men ($t(178) = 4.20$, $p < .001$), as self-reported on the DDQ. As predicted, fraternity men drank significantly more ($M = 24.61$, $SD = 12.25$) standard drinks per week than non-fraternity men ($M = 16.17$, $SD = 14.46$).

Social Norms and Perceptions

Are students over-estimating how much alcohol is consumed?

In analyzing social norms, the first part of the second hypothesis was that participants, regardless of their own Greek membership or drinking behavior, would perceive fraternity men as heavier drinkers than non-fraternity men. An independent-samples t-test was conducted and revealed that participants perceived a significantly higher consumption of alcohol *(*$t(180) = 11.48$, $p < .001$) by the average fraternity male ($M = 33.84$ standard drinks per week, $SD = 13.64$) when compared to the average non-fraternity male ($M = 22.20$ standard drinks per week, $SD = 9.30$).

To ensure that one group of participants, either the fraternity men or the non-fraternity men, were not skewing these perceptions on the DNRFs, independent sample t-tests were conducted on participants' perceptions. For the DNRF of the average fraternity man, fraternity participants' perception ($M = 32.08$, $SD = 12.42$) did not significantly differ ($t(178) = -1.72$, $p = .087$) from non-fraternity participants' perception ($M = 35.57$, $SD = 14.50$) of the average

fraternity male's drinking behavior. Continuing this trend, a separate independent sample t-test ($t(177) = .93$, $p = .356$) was conducted to compare the perceptions on the DRNF for the average non-fraternity man. This test revealed the perceptions of non-fraternity participants did not significantly differ ($M = 21.61$, $SD = 9.14$) on the DNRF for the average non-fraternity man from the fraternity participants ($M = 22.90$, $SD = 9.54$).

Continuing with the hypothesis, it was expected that participants' perceptions would be over-exaggerated in the amount of alcohol that fraternity men consume. To explore this misperception further, repeated measures t-tests were conducted to determine if perceptions of fraternity and non-fraternity participants (as reported on the DNRF) were significantly different from both fraternity and non-fraternity men's self-reported drinking behavior (reported on the DDQ). A repeated measures t-test ($t(180) = 9.10$, $p < .001$) showed that the perception participants had of an average fraternity man's drinking total (M =33.84 standard drinks per week, $SD = 13.64$) was significantly higher than fraternity participants' actual reported consumption ($M = 24.61$). By conducting another repeated measures t-test ($t(179) = 8.66$, $p < .001$), it was found the perception participants held of an average non-fraternity man ($M = 22.20$ standard drinks per week, $SD = 9.30$) was, again, significantly different from non-fraternity participants' actual reported consumption ($M = 16.17$).

Correlation and Regression Analysis

Is a student's drinking related to their perception of others' drinking?

It was hypothesized that participants who perceive others as heavy drinkers would consume significantly more alcohol than participants who perceive others as light drinkers. A correlation was conducted to see if self-reported drinking totals, provided on the DDQ, correlated with the perceptions of other males' drinking behavior on the two DNRFs. The

correlation analysis revealed that both non-fraternity (.51**) and fraternity (.43**) perceptions on the DNRFs were significantly correlated at the 0.01 level with participants' self-reported drinking totals on the DDQ.

Breaking this hypothesis down further, a simultaneous multiple regression analysis was conducted to assess how much variance each variable shared with one's reported alcohol consumption. The three predictor variables (fraternity membership, perceptions of fraternity men, and perceptions of non-fraternity men) combined significantly to predict one's drinking behavior, $R^2 = .38$, $F(3,175) = 35.21$, $p < .001$. Individually, the non-fraternity DNRF, $t(175) = 4.11$, $p < .001$, the fraternity DNRF, $t(175) = 3.67$, $p < .001$, and participant fraternity membership, $t(175) = -5.09$, $p < .001$, all significantly predicted one's own drinking behavior.

To gauge if participants were more affected by others that were like them as hypothesized, two separate multiple regression analyses were conducted, one for fraternity participants and one for non-fraternity participants, to determine the greatest predictor of one's own drinking behavior for each group. Beginning with a multiple regression for fraternity men, the results indicated that for participants currently in a fraternity, perceptions of other fraternity men's drinking behavior recorded on the DNRF ($\beta = .59$, $p < .001$) explained a significant proportion of variance of their own alcohol use. Perceptions of non-fraternity men's drinking behaviors recorded on the DNRF ($\beta = .14$, $p = .26$) did not significantly explain fraternity men's alcohol use.

Conducting a second multiple regression for non-fraternity men, the results indicated that perceptions of other fraternity men's drinking behavior recorded on the DNRF did not explain a significant proportion of the variance of their alcohol use ($\beta = .13$, $p = .250$). Perceptions of non-

fraternity men's drinking behaviors recorded on the DNRF, however, did explain a significant proportion of variance of non-fraternity men's alcohol use ($\beta = .44$, $p < .001$).

Based on previous research and literature in regards to prototypes and fraternity membership, it is hypothesized that by using Byrne's Interpersonal Judgment Scale as a gauge for likeability, there will be an overall interaction between portrayed fraternity membership and alcohol consumption. Simply put, participants will hold a more positive view of high drinking fraternity members and a more positive view of low drinking non-fraternity members as portrayed in the vignettes. There should also be a higher order interaction, taking into account the participant's status as a fraternity or non-fraternity member, as those participants that are in a fraternity will prefer the high-drinking fraternity member over the low-drinking fraternity member and those participants not in a fraternity will prefer the low-drinking non-fraternity member over the high-drinking non-fraternity member. Essentially, students should like those that most resemble their own group and, predictably, their own group norms.

ANOVAs

For the experimental portion of this study, participants were placed in eight conditions (See Table 1).

Table 1

Number of Participants in Each Experimental Condition

Condition	N
Non-Fraternity Participant with Non-Frat, Light Drinking Vignette	22
Non-Fraternity Participant with Non-Frat, Heavy Drinking Vignette	21
Non-Fraternity Participant with Frat, Light Drinking Vignette	26
Non-Fraternity Participant with Frat, Heavy Drinking Vignette	26
Fraternity Participant with Non-Frat, Light Drinking Vignette	27
Fraternity Participant with Non-Frat, Heavy Drinking Vignette	20
Fraternity Participant with Frat, Light Drinking Vignette	23
Fraternity Participant with Non-Frat, Light Drinking Vignette	16

As stated earlier in the procedure section, manipulation checks were put in place to ensure that participants actually processed the independent variables. Two key questions on the memory test: how much alcohol "John" consumed and whether or not "John" was in a fraternity, were graded for accuracy. If either one of these questions were answered incorrectly, that participants' data was removed from the study. Eight participants missed one or both of the control manipulation questions (4.42% of the total participants) and, thus, their data was removed from the study.

What are the perceptions of a target male based on fraternity membership and alcohol consumption?

A 2 (high or low alcohol consumption portrayed in the vignette) x 2 (fraternity or non-fraternity portrayed in the vignette) x 2 (whether the participant is Greek or Non-Greek) between subjects factorial analysis of variance was conducted on overall likeability of the target "John" by combining participants' ratings on a 7-point Likert Scale (with 1 being the least likeable and 7 being the most likeable) of two questions from Byrne's Interpersonal Judgment Scale: question four on "personal feelings," and question five on "working together in an experiment." These two questions are both judged to be likeability measures and were combined to keep from analyzing two separate ANOVAs. These two questions correlated at a .50, with a cronbach's alpha of 0.67.

This ANOVA revealed a significant main effect for participant Greek membership, $F(1, 171) = 10.19$, $p = .002$, $\eta = .06$. Fraternity participants rated the target as more likeable than non-fraternity participants. There was also a significant main effect for how much alcohol consumption was displayed in the vignette, in other words, whether "John" was portrayed as a heavy or light drinker, $F(1, 171) = 7.54$, $p = .007$, $\eta = .04$. As a whole, participants rated the

light drinking portrayal of "John" more favorably. There was no significant effect for fraternity membership portrayed in the vignette, whether "John" was or was not in a fraternity, $F(1, 171) = .83$, $p > .05$. The three-way interaction was not significant, $F(1, 171) = .28$, $p > .05$. There was, however, a significant participant Greek membership by fraternity membership portrayed in the vignette interaction, $F(1, 171) = 7.43$, $p = .007$, $\eta = 04$. Simple effect analysis revealed that when comparing participant Greek membership at each level of portrayed fraternity membership in the vignette, significant differences emerged only out of the non-fraternity participants. Here, non-fraternity participants reported a portrayed non-fraternity member in the vignette as being more likeable ($M = 5.08$, $SD = .84$) than portrayed fraternity members ($M = 4.58$, $SD = 1.09$), $F(1, 92) = 6.12$, $p = .015$. There was also an interaction nearing significance with participant Greek membership by alcohol consumption displayed in the vignette, $F(1, 171) = 3.79$, $p = .053$, $\eta = .02$. For this interaction, simple effects analysis revealed that when comparing participants' membership in a fraternity at each level of drinking displayed in the vignette, only non-fraternity participants' likeability ratings changed between the light ($M = 5.13$, $SD = .78$) and heavy ($M = 4.48$, $SD = 1.12$) drinking portrayal, $F(1, 92) = 10.62$, $p = .002$. Essentially, light drinkers were rated as significantly more favorable than heavy drinkers among only non-fraternity participants. No other interaction was significant.

Table 2

Means and Standard Deviations of Likeability and Morality Ratings as a Function of Participant Membership, Vignette Fraternity Condition, and Vignette Drinking Condition

	Likeability			Morality		
	N	Mean	SD	N	Mean	SD
Participant Membership						
Fraternity	85	5.27	.89	86	4.80	.98
Non-Fraternity	94	4.80	1.01	95	4.43	.93
Vignette Membership						
Fraternity	90	4.92	1.08	91	4.71	1.07
Non-Fraternity	89	5.13	.86	90	4.50	.85
Vignette Drinking						
Heavy (12 beers)	83	4.79	1.05	83	4.24	.74
Light (3 beers)	96	5.23	.87	98	4.92	1.03

Figure 1

Likeability as a Function of the Interaction between Participant Fraternity Membership and Fraternity Membership Displayed in the Vignette

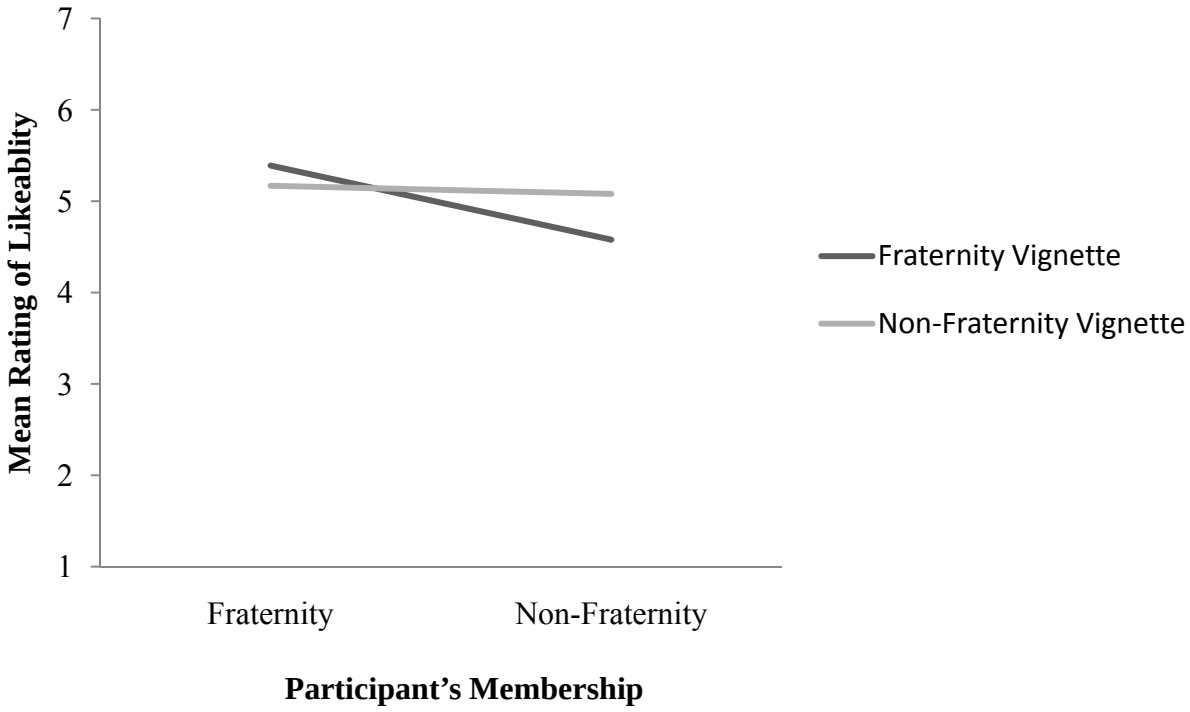
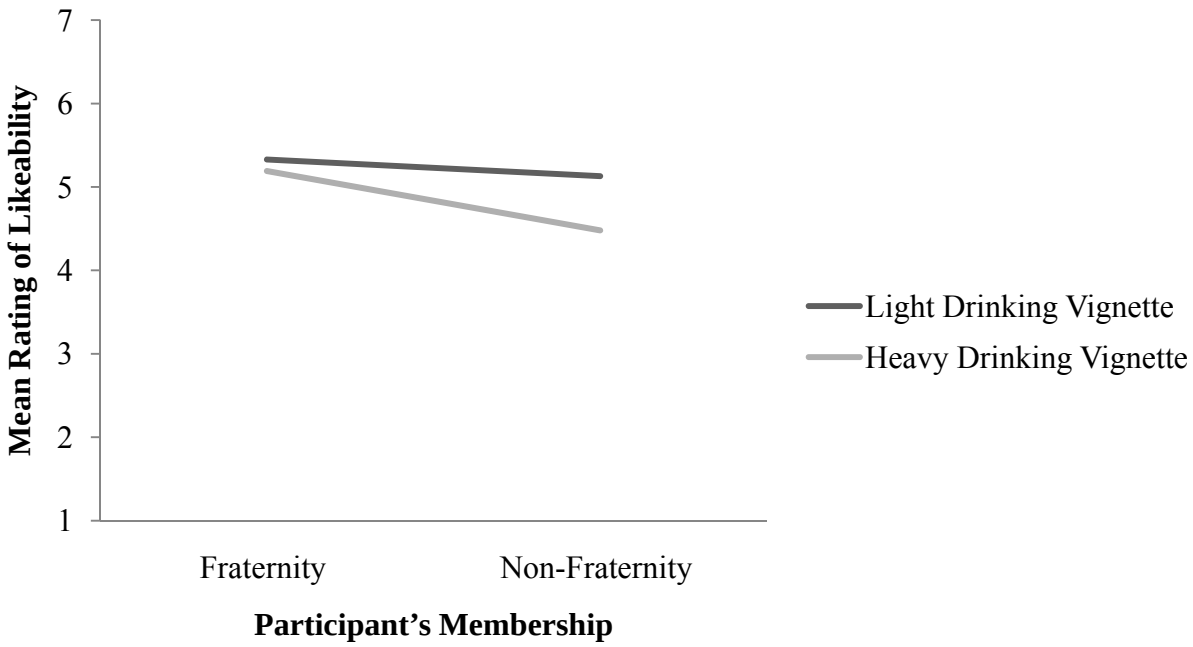


Figure 2

Likeability as a Function of the Interaction between Participant Fraternity Membership and Drinking Condition Displayed in the Vignette



Expanding on the hypothesis of likeability, perceived morality has also been associated with likeability. Typically, most people that others like, and enjoy, are perceived to be more moral than people they dislike. Exploring this idea, a second 2 (high or low alcohol consumption portrayed in the vignette) x 2 (fraternity or non-fraternity portrayed in the vignette) x 2 (whether the participant is Greek or Non-Greek) between subjects factorial analysis of variance was conducted for morality. Morality ratings were taken from question number three on Byrne's Interpersonal Judgment Scale, again based on a 7-point Likert scale with 1 being the least moral and 7 being the most moral.

This ANOVA showed a significant main effect for participant fraternity membership, $F(1, 173) = 6.75$, $p = .010$, $\eta = .04$. Fraternity participants rated the depiction of "John" as more moral than non-fraternity participants. There was also a significant main effect for how much alcohol consumption was displayed in the vignette, $F(1, 173) = 25.08$, $p < .001$, $\eta = .13$. Here, participants rated the target male as more moral if he was depicted as a light drinker. There was no significant main effect for fraternity membership portrayed in the vignette, $F(1, 173) = 3.08$, $p = .081$. The three-way interaction, also, was not significant, $F(1, 173) = 1.15$, $p > .05$. However, there was a significant participant fraternity membership by membership portrayed in the vignette interaction, $F(1, 173) = 4.73$, $p = .031$, $\eta = .03$. Simple effects analysis revealed that only fraternity participants rated portrayed fraternity men in the vignette as more moral ($M = 5.13$, $SD = 1.08$) than non-fraternity men ($M = 4.53$, $SD = .80$) portrayed in the vignette, $F(1, 84) = 8.56$, $p = .004$. There was also a significant portrayed fraternity membership in the vignette by alcohol consumption displayed in the vignette interaction, $F(1, 173) = 4.41$, $p = .037$, $\eta = .03$. Simple effects analysis revealed that when comparing the vignette fraternity conditions by the vignette drinking conditions, both non-fraternity portrayed vignettes and fraternity portrayed

vignettes changed in relationship to the drinking conditions portrayed in the vignettes. For the non-fraternity portrayed vignette, if the person portrayed was a light drinker (M =4.68, SD =.96), they were seen as more moral than the person portrayed as a heavy drinker (M = 4.29, SD = .64), $F(1, 89) = 4.90$, p =.03. For the fraternity portrayed vignette, if the person was portrayed as a light drinker (M =5.16, SD = 1.05), they, too, were seen as more moral than the portrayed heavy drinker (M =4.19, SD = .83), $F(1, 89) = 23.47$, $p < .001$. No other interaction was significant.

Figure 3

Morality as a Function of the Interaction between Participant Fraternity Membership and Fraternity Condition Displayed in the Vignette

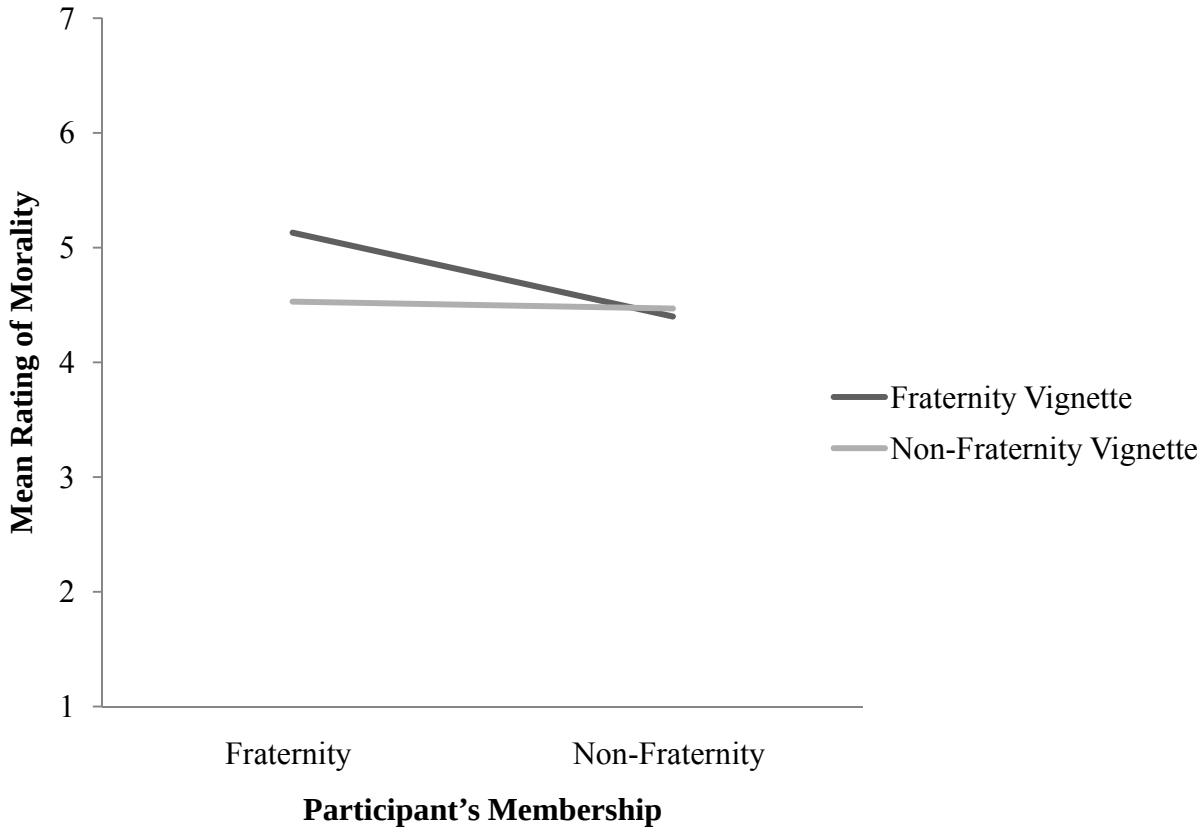
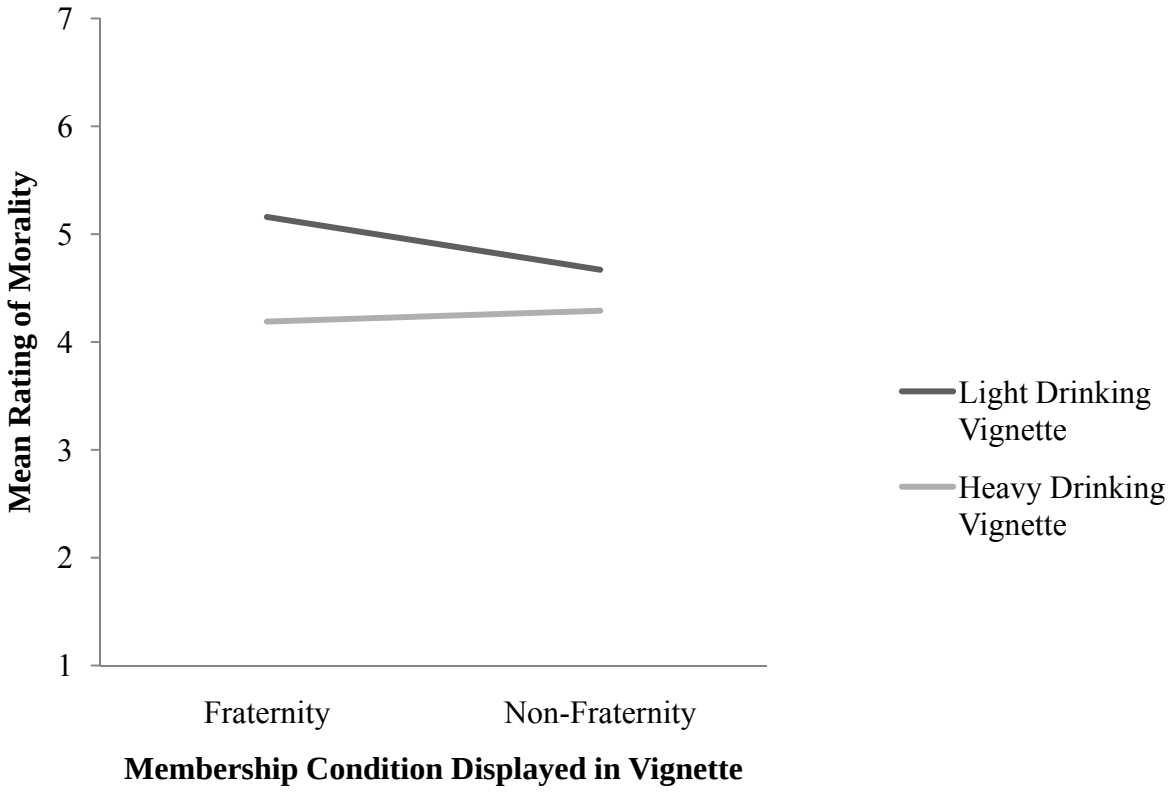


Figure 4

Morality as a Function of the Interaction between Membership Condition Displayed in the Vignette and Drinking Condition Displayed in the Vignette



DISCUSSION

As the results indicated, fraternity men consumed significantly more alcohol in an average week than non-fraternity men based on self-reported measures. On the DDQ, the vast majority of participants reported drinking two to three times per week. In a 1998 study reported earlier in this paper, Cashin et al. (1998) found that fraternity men reported drinking an average of 12 drinks per week; this study's results are double that amount at an average of 25 drinks per week. Though past studies have shown fraternity men to consume more alcohol than non-fraternity members, it is still somewhat surprising considering the large difference (better than eight standard drinks per week) that exists between fraternity and non-fraternity men in general, especially on a university campus with no fraternity housing and a campus below the national college average in Greek involvement. Though some may argue that eight drinks is not that much difference in a week, that is four more standard drinks per night by those fraternity men that drink 2 nights a week and slightly under 3 standard drinks more per night by those that reported drinking 3 nights a week. Adding this on top of the average 16 drinks by a non-fraternity man, this could be a cause for concern. Taking these factors into account, the number of standard drinks consumed per drinking occasion by college men, especially those currently in a fraternity, is troublesome. It is also important to note that found that Wechsler et al. (1995) found that living in fraternity housing was the highest predictor of binge drinking. Since this university has no fraternity housing, the volume of drinking would be hypothesized to be higher if fraternity housing existed on campus. This may also appear as an issue should fraternity housing become approved on campus.

The perceptions and social norms which students hold were shown to be important factors in their own drinking behavior. With both fraternity and non-fraternity drinking numbers

reported on the DNRFs being significantly larger than what fraternity and non-fraternity men self-reported on the DDQ, participants appear to be greatly misinterpreting the drinking behavior of their college peers. Though originally hypothesized that participants would only over-estimate fraternity men's drinking behavior, the results showed that participants exaggerated the amount both fraternity and non-fraternity men drink. Though the difference in estimation for fraternity men was greater than non-fraternity men, college men are misperceiving how much both groups drink, believing that both groups drink significantly more than they actually do. Still, given the high estimation of fraternity drinking and the correlation between one's perception of others' drinking and one's own consumption, this is an area that should cause concern for fraternity men. Still, as the data shows, over-estimation of alcohol consumption is a problem for all men.

It does not appear to be just one group of men that are misperceiving the alcohol use by others. Since there were no significant differences in perceived drinking by fraternity and non-fraternity participants, this would lead one to believe that these overall perceptions of drinking, be it by fraternity or non-fraternity men, permeate the entire university campus. It is not just one select group that skews these perceptions, but rather these perceptions appear to be a campus-wide issue that all tested participants hold equally. All men are exaggerating the amount of alcohol other men consume.

Taking this misperception into account, the results showed these drinking norms did correlate with participants' own self-reported drinking. Breaking this correlation down further, regression results showed that participants were more likely influenced by others who were like them. In a way, this is to be expected, as college students would be more influenced by those who are like them and, presumably, who they hang around the most. Non-fraternity participants

would tend to be more influenced by non-fraternity men and vice versa for fraternity men. Still, it was interesting to note that non-fraternity participants did not look to fraternity men's drinking to set their own drinking behavior nor did fraternity participants look to non-fraternity men to set their drinking norm.

While over-estimation of drinking is occurring for both groups, the only group that truly impacts students' own drinking is the group they are associated with. These results seem to point to the idea that it is not general drinking norms that impact students, but rather norms of their social groups. It is this reference group, or reference norm, that is truly having an impact on their drinking behavior. It is also important to note that fraternity men had a larger proportion of variance explained by other fraternity men's drinking than non-fraternity men. Though not initially hypothesized, the results indicate that fraternity men do seem to be under greater social pressure (or at least perceived social pressure) than non-fraternity men, with their perception of other fraternity men's drinking behavior accounting for a large portion of variance in their own drinking behavior.

Students believe that others drink more than they really do. This directly impacts their own drinking, notably within their own social groups. Students appear to be striving for this ideal that really does not exist. Students have this pre-set notion, or injunctive norm, in their mind, but that is the only place it exists; it is not real. If a student does drink a lot of alcohol, even they perceive themselves as normative, they will still overestimate how much others drink. In essence, it appears that college students are trying to keep up with this over-estimation that a complete fabrication and only causes more drinking and, thus, more problems.

Another important piece of information to take note of in this study is the age of the participants. As shown in numerous other studies, the average college student, regardless of age,

does consume alcohol. Still, it is important to point out with these reported and perceived drinking numbers that 75% of the participants in this study were between 18 and 20 years old, obviously below the legal drinking age. It would be interesting to see if the results differed in any way on participants all over the age of 21.

As stated earlier, most studies have used only surveys in trying to understand how college men perceive others and their drinking behavior. Using Byrne's Interpersonal Judgment Scale to study likeability and morality presented interesting results. Fraternity and non-fraternity men do seem to look at different variables, namely alcohol consumption and Greek membership, in judging a typical college student as likeable or moral. The manipulation check produced only eight student participants (4.10%) that did not correctly perceive the independent variables. Their data was removed, insinuating that, since all else was held constant, it was the manipulation of the two independent variables in the vignette that produced the varying results.

Though it was originally hypothesized that all participants, especially fraternity men, would rate the heavy drinking fraternity portrayal to be most likeable, this was not the case. Fraternity participants, in general, rated the target ("John") as more likeable regardless of the manipulations, which included the heavy drinking condition. Fraternity participants, while not rating the higher consuming fraternity member as more likeable, did not really have a preference on whether "John" consumed a heavy or light amount of alcohol; they liked him equally. As hypothesized, non-fraternity participants did rate the light drinking portrayal of "John" as more likeable. Based on the data, non-fraternity men would prefer a light drinking friend. Non-fraternity participants also rated the non-fraternity vignette as more likeable than the fraternity vignette, displaying a higher-order effect, but not necessarily the one hypothesized at the beginning of the study. This leads one to believe, however, that non-fraternity men may judge

fraternity men in a negative light with very little information known about a college peer, other than the fact that they are a fraternity member. This idea may need to be investigated further in terms of stereotypes and schemas even without alcohol involved.

Morality is also a concept that has rarely been looked at with alcohol in the college population. Although morality is certainly different than likeability, most people would still find a correlation in their mind between the two. For this reason, it, too, was used as a basis of perception with alcohol use and fraternity membership. Almost opposite of likeability, fraternity men found the fraternity portrayal of "John" in the vignette as being more moral simply because he was in a fraternity. This may be due to the fact that fraternity member perceive themselves as moral and thus, if "John" is in a fraternity, he must be moral as well.

Participants, regardless of portrayed fraternity or non-fraternity membership, rated "John" portrayed as the light drinker in the vignette to be more moral. So, if "John" was portrayed as being in a fraternity or not, it did not matter, participants in both conditions found John to be more moral when he drank less. Though significant for both conditions, this was especially true if "John" was portrayed as a fraternity member, light drinker. This supports the notion of higher morality ratings for the non-fraternity, light drinking vignette, but it refutes the idea that the fraternity, high drinking vignette would be evaluated in a more moral light. This, however, was not hypothesized and was simply looked at to see if any differences persisted between fraternity and non-fraternity men and their perceptions of morality. It is interesting to note the difference on morality when "John" was portrayed as a light drinking fraternity member as opposed to a heavy drinking one. Perhaps consistent with the earlier results reported in this study, fraternity men are perceived to drink significantly more than non-fraternity men. Thus, when a fraternity man is involved in Greek culture that is saturated with alcohol and can still

abstain, or drink only a few beers, the perception of that college student is one with extremely high morals.

Limitations

Like most studies that deal with college drinking, this study used self-reported measures. Self-reporting is generally considered valid, but recall can be biased from participants' memories over the past month. Still, these measures had been validated and used in numerous other studies and anonymity was assured multiple times to the participants by the experimenters.

In the experimental portion, there were unequal sample sizes. The cells were uneven due to the inability to predict whether the participant was in a fraternity or not. As stated earlier, this was a true double-blind study and impossible to know which vignette each participant received. It would have been better to have equal sample sizes, but fraternity participants were somewhat exhausted and, to keep things consistent, all participants needed to be tested in the same semester. Essentially, there was a lack of resources and a lack of time.

Some may also argue that likeability questions should have been more direct, but it seems this may cause a change in what the questions are actually interpreting. In other words, if one were to include, "How likely would you be to drink with John?" or "Would you like to go to a party with John?" then the whole dynamic of the question changes. It would no longer be about likeability, but more about shared interest and similar alcohol consumptions, which were already explored in the study.

Though there were almost equal numbers of fraternity and non-fraternity men and fairly equal numbers of each class of students represented, there was not a great sample size based on ethnicity. A very high percentage of participants were Caucasian; in the future it would be beneficial to have a more diverse sample size. Also, fraternity membership was a dichotomous

variable in this study. With fraternity participants, it was not asked how long they had been involved in their fraternity. It was also not asked how involved they were in their respective fraternity or how frequently they attended fraternity functions. This may be helpful in understanding how connected a participant was to their specific fraternity, though, as stated earlier, all data was collected between October and December of the fall semester, so all fraternity participants had been with their respective fraternity for at least a month after rush.

Implications

There are several important implications regarding this research. With these significant results, this would seem to indicate that college students have distinct prototypes and norms in regards to alcohol consumption and fraternity membership that appear to be directly impacting their own alcohol consumption in an unhealthy way. The discussion, in a way, is two-fold. For all students, the perception that fraternity members drink in greater quantities may lead them to drink more themselves when around fraternity members, perhaps at a fraternity party, in order to keep up with the "normal" consumption. For students looking to pledge a fraternity, if their prototype is of a high drinking fraternity member at the beginning of the pledge period, they may feel a greater amount of pressure to drink higher quantities of alcohol to fit in and live up to their pre-set mental standard. Each scenario would lead college students to begin consuming more alcohol, presumably early on in their college career. This would then directly contribute to the result that fraternity members drink more than non-fraternity members.

This research could be used in early prevention programs to get at the mindset of high school students and college freshman to re-shape these prototypes and norms of college drinking, specifically at fraternity functions. If one could show students that their perceptions of drinking are skewed, then they would, perhaps, change their own perceptions to fit a healthier, non- or

lower-consuming alcohol level. This could benefit a great number of students if one could change their perception so they would like, and prefer, the lower-consuming fraternity member the same as the lower-consuming non-fraternity member. Considering this study, and all the past data reported on how one's own alcohol consumption is directly tied with the perceptions of others' drinking behavior, this is a great starting point at attempting to lower drinking in college.

Cognitive psychology is also researching the idea of exemplars, or actual memories of prior events and experiences, in contrast to a strictly prototypical approach. Thus students may have a number of actual, individual memories they compare their own drinking and others' drinking to. Surrounding students in environments where they are less likely to have memories of excessive drinking during college by having students become more involved in other social areas aside from partying should help. Also, discussing these past memories for actual truth and not just vivid exemplars of loud, obnoxious drinking occasions or inflated stories may help as well. Using these alcohol-affected memories and contrasting them with vivid memories of non-drinkers in a non-bias way could also be of use in early prevention programs.

All students want to fit in and feel a part of a group; drinking similar quantities of alcohol as their friends or perceived norms of their college peers is no different. Students, however, need to interact with peers who do not drink. Promising research by Rosenquist et al. (2010) shows that in longitudinal studies, individuals who are surrounded by abstaining others decreased their reported alcohol consumption when compared to those in more alcohol-saturated cultures. By showing students before they enter into college, or during their freshman year, that they do not have to drink as much to fit in, this should greatly lower the amount of alcohol they consume. Further research should be continued, using this study and others like it, by a number of college and high school counseling offices and preventive alcohol programs on campuses.

Specifically, this research could be used in two distinct ways during interventions. Groups that share the same norms about alcohol should be placed together for an intervention program. While over-estimation of alcohol use is occurring by most students, it is clear that the more a group shares common drinking norms with one another, the more they would benefit from having these specific, reference group norms attacked as a whole. Along with this, it is imperative to understand what reference groups students are using to base their drinking behaviors. The more one could isolate specific reference groups, the more accurate and better prepared an intervention could become.

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APPENDICES

Appendix A. Experimental Vignette

Case Study

We are interested in people's interpersonal judgments and memory about others, and the accuracy of interpersonal judgments in general. Below is a description of a UNCW student. Please read the description and respond to the attached questions accordingly. After you have finished carefully reading this case study, please return it to your folder and continue with the following questionnaires.

"John is a 19 year old UNCW sophomore from North Carolina. He is of average height and weight and considers himself moderately attractive. John is (in a fraternity/ not in a fraternity). He currently has a 3.1 GPA. He is actively involved in a couple student organizations. John also enjoys a social life. On a typical Friday night, John consumes around (3/12) beers throughout the night."

Appendix B. Byrne's Interpersonal Judgment Scale

Please answer the following questions about John.

Interpersonal Judgment Scale

1. Intelligence (check one)

_I believe that John is very much above the average in intelligence.
_I believe that John is above average in intelligence.
_I believe that John is slightly above average in intelligence.
_I believe that John is average in intelligence.
_I believe that John is slightly below average in intelligence.
_I believe that John is below average in intelligence.
_I believe that John is very much below average in intelligence.

2. Knowledge of Current Events (check one)

_ I believe that John is very much below average in his knowledge of current events.
_ I believe that John is below average in his knowledge of current events.
_ I believe that John is slightly below average in his knowledge of current events.
_ I believe that John is average in his knowledge of current events.
_ I believe that John is slightly above average in his knowledge of current events.
_ I believe that John is above average in his knowledge of current events.
_ I believe that John is very much above average in his knowledge of current events.

3. Morality (check one)

_ John impresses me as being extremely moral.
_ John impresses me as being moral.
_ John impresses me as being moral to a slight degree.
_ John impresses me as being neither particularly moral nor particularly immoral.
_ John impresses me as being immoral to a slight degree.
_ John impresses me as being immoral.
_ John impresses me as being extremely immoral.

4. Adjustment (check one)

_ I believe that John is extremely maladjusted.
_ I believe that John is maladjusted.
_ I believe that John is maladjusted to a slight degree.
_ I believe that John is neither particularly maladjusted nor particularly well adjusted.
_ I believe that John is well adjusted to a slight degree.
_ I believe that John is well adjusted.
_ I believe that John is extremely well adjusted.

5. Personal Feelings (check one)

_ I feel that I would probably like John very much.
_ I feel that I would probably like John.
_ I feel that I would probably like John to a slight degree.
_ I feel that I would probably neither particularly like nor particularly dislike John.
_ I feel that I would probably dislike John to a slight degree.
_ I feel that I would probably dislike John.
_ I feel that I would probably dislike John very much.

6. Working Together in an Experiment (check one)

_ I believe that I would very much dislike working with John in an experiment.
_ I believe that I would dislike working with John in an experiment.
_ I believe that I would dislike working with John in an experiment to a slight degree.
_ I believe that I would neither particularly dislike nor particularly enjoy working with John in an experiment.
_ I believe that I would enjoy working with John in an experiment to a slight degree.
_ I believe that I would enjoy working with John in an experiment.
_ I believe that I would very much enjoy working with John in an experiment.

Appendix C. Standard Drink Conversion Chart

PLEASE USE THE FOLLOWING CHART FOR THE NEXT THREE QUESTIONNAIRES TO DEFINE A "STANDARD DRINK."

What's a Standard Drink? A standard drink in the United States is any drink that contains about 14 grams of pure alcohol (about 0.6 fluid ounces or 1.2 tablespoons). Below are U.S. standard drink equivalents. These are approximate, since different brands and types of beverages vary in their actual alcohol content.

12 oz. of beer or cooler	8-9 oz. of malt liquor 8.5 oz. shown in a 12-oz. glass that, if full, would hold about 1.5 standard drinks of malt liquor	5 oz. of table wine	3-4 oz. of fortified wine (such as sherry or port) 3.5 oz. shown	2-3 oz. of cordial, liqueur, or aperitif 2.5 oz. shown	1.5 oz. of brandy (a single jigger)	1.5 oz. of spirits (a shot) (a single jigger of 80-proof gin, vodka, whiskey, etc.) Shown straight and in a highball glass with ice to show level before adding mixer*
						
12 oz.	8.5 oz	5 oz.	3.5 oz.	2.5 oz.	1.5 oz.	1.5 oz.

Many people don't know what counts as a standard drink and so they don't realize how many standard drinks are in the containers in which these drinks are often sold. Some examples:

For **beer,** the approximate number of standard drinks in

- 12 oz. = 1
- 16 oz. = 1.3
- 22 oz. = 2
- 40 oz. = 3.3

For **malt liquor,** the approximate number of standard drinks in

- 12 oz. = 1.5
- 16 oz. = 2
- 22 oz. = 2.5
- 40 oz. = 4.5

For **table wine,** the approximate number of standard drinks in

-a standard 750 mL (25 oz.) bottle = 5

For **80-proof spirits,** or "hard liquor," the approximate number of standard drinks in

- a mixed drink = 1plus
- a pint (16 oz.) = 11
- a fifth (25 oz.) = 17
- 1.75 L (59 oz.) = 39

***Note:** It can be difficult to estimate the number of standard drinks in a single mixed drink made with hard liquor. Depending on factors such as the type of spirits and the recipe, a mixed drink can contain from one to one to three or more standard drinks.

Appendix D. Drinking Norms Rating Form (DNRF) for Average Fraternity Member

INSTRUCTIONS FOR RECORDING DRINKING DURING A TYPICAL WEEK

IN THE CALENDAR BELOW, PLEASE FILL IN THE AMOUNT OF ALCOHOL YOU BELIEVE WAS CONSUMED DURING A TYPICAL WEEK IN THE LAST 3 MONTHS FOR AN AVERAGE FRATERNITY MEMBER.

First, think of a typical week for an average fraternity member in the last 3 months. Try to think as accurately as you can *when* and *how much* a typical fraternity member would drink during a typical week during a three month period.

For each day of the week in the calendar below, fill in the number of standard drinks typically consumed on that day for a fraternity member in the box.

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of Drinks							

Appendix E. Drinking Norms Rating Form (DNRF) for Average Non-Fraternity Member

INSTRUCTIONS FOR RECORDING DRINKING DURING A TYPICAL WEEK

IN THE CALENDAR BELOW, PLEASE FILL IN THE AMOUNT OF ALCOHOL YOU BELIEVE WAS CONSUMED DURING A TYPICAL WEEK IN THE LAST 3 MONTHS FOR AN AVERAGE NON-FRATERNITY MEMBER.

First, think of a typical week for an average non-fraternity member in the last 3 months. Try to think as accurately as you can *when* and *how much* a typical non-fraternity member would drink during a typical week during a three month period.

For each day of the week in the calendar below, fill in the number of standard drinks typically consumed on that day for a non-fraternity member in the box.

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of Drinks							

Appendix F. Daily Drinking Questionnaire (DDQ)

Height _____ Weight _____ lbs.

INSTRUCTIONS FOR RECORDING YOUR DRINKING DURING A TYPICAL WEEK

IN THE CALENDAR BELOW, PLEASE FILL IN THE AMOUNT OF ALCOHOL YOU CONSUMED DURING A TYPICAL WEEK IN THE LAST 3 MONTHS.

First, think of a typical week in the last 3 months. Try to remember as accurately as you can *when* and *how much* you typically drank in a week during that three month period.

For each day of the week in the calendar below, fill in the number of standard drinks typically consumed on that day in the box.

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of Drinks							

Appendix G. Manipulation Control Check

Memory Test

Please circle your answer.

1. What state was John from?
    a. NC
    b. GA
    c. TN
    d. FL

2. Was John in a fraternity?
    a. Yes
    b. No

3. What was John's GPA?
    a. 2.5
    b. 2.8
    c. 3.1
    d. 3.4

4. How much alcohol did John consume on a typical Friday night?
    a. 3 beers
    b. 7 beers
    c. 12 beers
    d. 16 beers

5. Was John involved in any student organizations on campus?
    a. Yes
    b. No

Appendix H. Demographics Questionnaire

Demographics Questionnaire
Please answer the following questions about yourself.

Age:
18-20_____ 21-24_____ 25-older_____

Class Standing:
Freshman_____ Sophomore_____ Junior____ Senior_____ Special Status Student____

Ethnicity:
African American____
American Indian/Alaska Native ____
Asian/Pacific Islander____
Hispanic____
White/Caucasian____
Multiracial____
Other____

Fraternity Member/Pledge:
Yes_____

No_____

If a fraternity member, are you, or have you ever been, an officer?
Yes____

No____