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Everybody's Doing It But Me: Comparing Pluralistic Ignorance Across Behaviors

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EVERYBODY'S DOING IT BUT ME:

COMPARING PLURALISTIC IGNORANCE ACROSS BEHAVIORS

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Abstract

This study examined pluralistic ignorance (PI) for a variety of behaviors and attitudes such as health behaviors (exercise frequency, fruits and vegetables consumed, personal hygiene, marijuana use), subjective well-being, and television habits. Student and nonstudent participants indicated their, their best friend's, the average student's, and the average American adult's attitudes on various topics (e.g., drugs, personal well-being; Prentice & Miller, 1993) and completed measures of alienation (Dean, 1961). Student and nonstudent populations showed PI; however, some items showed greater PI than others. High PI items tended to be health behaviors for the student sample and television habits for the nonstudent sample. Alienation was not related to pluralistic ignorance. These findings suggest that pluralistic ignorance is a broad construct that may be affected by a moderator such as concealment.

Everybody's Doing It But Me: Comparing Pluralistic Ignorance Across Behaviors

Imagine you are at a cocktail party with colleagues from work. The crowd is populated with people you know, some better than others, and there are others you do not know at all. As you scan the room, everyone around you looks relaxed and comfortable. People are laughing, chatting, and enjoying hors d'oeuvres. In spite of your own feelings of nervousness and anxiety, based on your observation, you decide that everything is as it seems: people (except for you) are genuinely relaxed and enjoying themselves. However, social events such as the one described above can be intensely uncomfortable, anxiety-ridden experiences for many people. Why then, are people so quick to assume that others feel differently than they do in common situations, even though people act identically?

The situation described above demonstrates pluralistic ignorance, first described by Floyd Allport in 1924 (see also Katz & Allport, 1931). Pluralistic ignorance is "the belief that one's private attitudes and judgments are different from those of others, even though one's public behavior is identical" (Prentice & Miller, 1993, p. 244). Pluralistic ignorance has been demonstrated to occur in a variety of situations (see Miller & McFarland, 1991, for review). To date, the majority of research in the area has cited pluralistic ignorance as a possible explanation for various psychological phenomena (e.g., the unresponsive bystander, Darley & Latané, 1968; excessive drinking among college students, Prentice & Miller, 1993), but little empirical research has been done in this area of psychology. Research has not yet examined the mechanisms by which pluralistic ignorance functions, and we know little of the processes that moderate pluralistic ignorance. Additionally, research has failed to examine populations beyond the stereotypic college sophomore. This study will examine pluralistic ignorance across a wider

variety of attitudes, examine possible moderators of the process, and examine pluralistic ignorance in nonstudent populations.

Pluralistic Ignorance

Early Studies

Katz and Allport (1931) used pluralistic ignorance to help them explain "widespread conformity to social norms in the absence of widespread private support" (Miller & McFarland, 1987, p. 298). The concept remained unstudied until it was again brought forth by researchers (Latané & Darley, 1968) to help solve a difficult puzzle: the problem of the unresponsive bystander. It has been demonstrated that in an emergency situation, people look to others to determine the severity of the situation. As the size of the group increases, people become less likely to act (Latané & Darley). Because people assume that others would act if the situation were really an emergency, when faced with the inaction of the others, people draw the conclusion that a situation must be a nonemergency, fail to respond to the situation, and demonstrate pluralistic ignorance. However in this study, researchers did not test pluralistic ignorance explicitly, making it difficult to draw conclusions of causality.

Pluralistic Ignorance in the Classroom

Later researchers (e.g., Miller & McFarland, 1987) examined pluralistic ignorance in other areas. In one study, small groups of students read a "purposefully obtuse" essay and were told to ask for help if necessary. None of the study's participants asked for help at any point in the study, but participants estimated that 37% of other students would ask for help (Miller & McFarland). In a follow-up study, participants read the same obtuse essay and half of participants were instructed to ask the experimenter for clarification (unconstrainted condition), if necessary, whereas the other half were told they could not ask for clarification (constrained

condition). Participants in the unconstrained condition rated their understanding of the essay as significantly less than participants in the constrained condition, due to the fact that in the constrained condition, participants could attribute the inaction of their peers to the experimental directions. In the unconstrained condition, participants could attribute their peers' inaction only to a better understanding of the essay. This is a classic example of pluralistic ignorance because participants attribute their own and others' identical behavior (failure to ask for help) to different motives (fear of embarrassment versus competence).

Attitudes about Alcohol and Other Health Behaviors among College Students

Alcohol and other health behaviors also seem to be affected by pluralistic ignorance in college students. In a series of studies, students did, in fact, systematically overestimate both their friends' and the average undergraduate's comfort with drinking (Prentice & Miller, 1993). Bourgeois and Bowen (2001) also found this to be the case, using a broader measure of pluralistic ignorance and a Western United States versus an Eastern United States sample of students. These results indicate that students are less comfortable with alcohol norms than they reveal to their peers. Although their perception of the norm is false, students sometimes adjust their behavior and their interpersonal communication to appear in line with the norm (Prentice & Miller).

Pluralistic ignorance occurs not only for attitudes about alcohol, but also for attitudes about other health behaviors (Hines, Saris, & Throckmorton-Belzer, 2002). In fact, pluralistic ignorance occurs to a greater extent (the discrepancy between own and perceived other's beliefs is larger) for smoking, sexual behavior, and illegal drug use than for alcohol use. This finding may be due to a greater willingness to discuss attitudes about alcohol. If pluralistic ignorance is due to a misperception of other's beliefs about a particular norm, then correcting the

misperception should dispel pluralistic ignorance. Indeed, in studies in which researchers attempted to correct college students' misperceptions of alcohol use on campus, education dispelled pluralistic ignorance (Schroeder & Prentice, 1998). It follows, then, that if false norms are not identified and dispelled, pluralistic ignorance will continue and will be more severe the less a belief is discussed.

Other Instances of Pluralistic Ignorance

In a study of pluralistic ignorance of attitudes about gays, lesbians, and bisexuals (GLB), students rated themselves as significantly more comfortable with GLB individuals than both their friends and the average student (Bowen & Bourgeois, 2001). It is noteworthy that this study took place in Laramie, Wyoming shortly after Matthew Shepard was murdered, perhaps increasing the salience of GLB issues. One criticism of this study is that the differences observed between self and other can be attributed to the better-than-average effect (Alicke & Govorun, 2005), insofar as it is socially desirable to be more accepting of GLB individuals than one's peers. Other studies have since remedied this problem.

One such study (Monin & Norton, 2003) demonstrated that pluralistic ignorance extends to attitudes that may not be as socially desirable. This study examined bathing behavior using a naturally occurring situation (tropical storm Floyd). Under ordinary conditions, it is considered (in the United States) hygienic and polite to shower quite often, but in the wake of the storm, a ban on showering was imposed to help conserve water. Participants in the study answered questions about their and the average student's bathing during the ban. Additionally, participants were asked how much they and the average student cared about the community. Those who violated the ban and showered anyway ("bathers") felt that they cared more about the community than other bathers, and those who did not violate the ban ("non-bathers") felt that they cared less

about the community than other non-bathers. This difference can be explained by pluralistic ignorance. Bathers assumed that their reasons for showering during the ban were special (e.g., they exercised and were forced to shower) but that their peers who showered did so because they cared less about the community. Non-bathers may have similarly attributed their non-showering behavior to special circumstances (e.g., they did not shower regularly anyway, they did not have time) but they assumed (due to pluralistic ignorance) that their peers who did not shower did so because they cared about the community. Thus, because both groups felt that they had different motives for the same behavior, pluralistic ignorance was demonstrated.

Moderators of Pluralistic Ignorance and Pluralistic Ignorance in Nonstudent Populations

In most of the studies mentioned thus far, pluralistic ignorance was considered in an isolated context; the studies looked at a single attitude (i.e., comfort with alcohol, bathing behavior, classroom discussion). Hines et al.'s (2002) study is unique in that it compared the degree of pluralistic ignorance for comfort with alcohol, drugs, sexual behavior, and smoking and did find differences among behaviors. It has been posited (Prentice & Miller, 1993) that pluralistic ignorance develops because social norms are defined by people's public behavior in spite of the fact that public behavior does not always reflect true attitudes. While people recognize that this fact is true for themselves, they fail to recognize that it is also true for other people. This misperception leads to pluralistic ignorance because people recognize that their own behavior is disguised but fail to interpret other's identical behavior as equally covert. It follows, then, that those attitudes which people are most motivated to conceal should show the most pluralistic ignorance (concealment should moderate pluralistic ignorance).

Additionally, all of the studies considered thus far examined pluralistic ignorance in college student populations. It is possible that the situation of living in a university community

affects pluralistic ignorance via local social influence. People who are spatially or functionally close to one another influence each other more (Harton, Green, Jackson & Latané, 1998; Latané, 1996b). The nature of college campuses is such that people interact with one another more than they would in ordinary life, due to the small size of the campus environment, the amount of time spent on campus, and the number of people present on campus at one time. Thus, it is possible that pluralistic ignorance is facilitated by increased social interaction, and it remains undetermined whether pluralistic ignorance occurs in situations in which people are not part of a close-knit community, as in the more isolated population of Internet users.

Effects of Pluralistic Ignorance

Cognitive Dissonance

According to cognitive dissonance theory (Festinger, 1957), when one's beliefs and actions fail to coincide, a state of dissonance results. Dissonance is an uncomfortable state, and people are motivated to alleviate dissonance by doing one of three things. They can either change their actions to coincide with their beliefs, change their beliefs to coincide with their actions, or introduce a third variable which explains the dissonance. In Festinger's classic study of dissonance, students completed an extremely boring task and were paid either $1 or $20 to tell the next person in the study that the study was fun, creating dissonance. Participants paid $20 justified their lie by telling themselves that a small lie was worth the money (they introduced a third variable – money – that explained their dissonance). However, participants paid just $1 changed their beliefs to coincide with their actions because $1 was not enough to explain why they acted against their beliefs.

Thus, when people believe that their actions are out of line with social norms, they are motivated to correct the situation. People in this circumstance can either decide that the norm is

different than they first believed (and change their beliefs), or they can change their actions to be more aligned with their perception of the norm. There is also a third option: people can choose to reject the group altogether.

Accepting the Norm

Previous studies of pluralistic ignorance have shown that deciding to change beliefs or actions is often too costly as a viable dissonance-reducing option. Take the example of drinking on campus. Students systematically overestimate how comfortable others are with drinking on campus (e.g., Bourgeois & Bowen, 2001; Prentice & Miller, 1993). They believe themselves to be different from others, even though they see others behaving similarly at campus bars, and this creates a state of pluralistic ignorance. To reduce this state, students can either decide they miscalculated the norm, they can increase their drinking behavior to match the norm, or they can reject the culture of drinking on campus altogether. Recalculating the perceived norm is not really a viable option because it would involve rejecting years of entrenched beliefs formed by one's cultural upbringing (e.g., movies like *Animal House*), and it goes against what they observe. Accepting the norm is one possibility that people sometimes choose when they experience dissonance. One study (Prentice & Miller, 1993) showed that college men increased their drinking over the course of a semester, reflecting acceptance of the belief that drinking excessively in college is normal and acceptable. However, increasing drinking behavior is a less than desirable option for some, especially if one has strong beliefs against drinking excessively. Another option, then, would be for a person to reject community, thus alienating him or herself from the culture of drinking and perhaps even the campus at large.

Alienation

Alienation is a term for a class of variables all related to a sense of separation from society, friends, or family. A plethora of research has examined alienation among adolescents (see Brown et al., 2003, for review), but less has looked at alienation among adults. Perhaps this is due to the idea that alienation has historically been characterized as a youth issue (Dean, 1961; Lane & Daugherty, 1999). Youth have been viewed as rebels at odds with mainstream society, making them ripe candidates for study of alienation.

In the only published study testing the relation between pluralistic ignorance and alienation, the two were found to be highly correlated (Prentice & Miller, 1993). In the early 1990s, a keg ban was imposed at Princeton University. Students were thought to be opposed to the ban, but researchers thought that in reality students might be more in favor of the keg ban than they revealed publicly. Indeed, nearly 90% of students in the study believed that others had a more negative attitude toward the keg ban than they themselves did, reflecting pluralistic ignorance. Alienation was measured in the study using a single item measure (expected percentage of attendance at Princeton reunions). Those demonstrating pluralistic ignorance reported that they would attend more than 20% fewer reunions than those who were not pluralistically ignorant. It is unclear whether or not this single item was a good measure of alienation. Perhaps the correlation between attendance at Princeton reunions and pluralistic ignorance in terms of the keg ban can be explained by a third variable: extraversion. It may be that those who rated themselves as less in favor of the keg ban than their peers are also less likely to attend parties (including reunions) in general.

One of the most widely used scales of alienation is Dean's (1961) general alienation scale, which is divided into three subscales: powerlessness, normlessness, and social isolation. Powerlessness refers to a feeling of lack of control over life events, whereas normlessness is

defined as a lack of social structure and rules. Social isolation is similar to the idea of loneliness; it is the opposite of social support (Seeman, 1991). Of the subscales of alienation, social isolation seems to be the most likely to be related to pluralistic ignorance because social isolation is most closely related to the construct of alienation as Prentice and Miller (1993) defined it. Pluralistic ignorance is defined by a clear (although false) norm, so normlessness is probably not a logical effect of pluralistic ignorance. Additionally, pluralistically ignorant people are not typically powerless; in fact, they often take action to reduce feelings of dissonance caused by pluralistic ignorance. Thus, powerlessness may not be a logical effect of pluralistic ignorance either. Because alienation results from an effort to control feelings of dissonance caused by pluralistic ignorance, isolating oneself from one's peers is the most logical course of action to resolve this conflict.

The Current Study

The current study will expand on previous pluralistic ignorance work (e.g., Bowen & Bourgeois, 2001, Miller & McFarland, 1987; Prentice & Miller, 1993), examining a broader variety of behaviors and attitudes than have previously been researched. It is expected that pluralistic ignorance will be demonstrated for a broad group of behaviors and attitudes. Additionally, it is hypothesized that behaviors and attitudes that people are more motivated to conceal will show higher levels of pluralistic ignorance.

Both student and nonstudent participants were recruited, and this allowed the comparison of pluralistic ignorance between these populations. The Internet was used to recruit nonstudents because it allowed contact with a broader group of people than those within reach of the University of Northern Iowa. The Internet has been demonstrated to be a valuable tool in research data collection (see Krantz & Dalal, 2000, for review).

Finally, the relation of alienation to pluralistic ignorance will be further explored. Participants will complete a full alienation scale (Dean, 1961), rather than a single item measure as in previous studies (e.g., Prentice & Miller, 1993). It is predicted that of Dean's three subscales (powerlessness, normlessness, and social isolation), social isolation will be most correlated with a state of pluralistic ignorance.

Method

Participants

On-campus participants. One hundred and sixty-five psychology students at the University of Northern Iowa (UNI), a medium-sized Midwestern university, participated in the study for course credit. The sample was 47% male and 93% Caucasian with an average age of 19.59 years (SD = 2.55). Sixty-one percent were freshmen, and 21% were sophomores (M semesters at UNI = 3.03, SD = 2.13). Ninety-eight percent were unmarried.

Online participants. One hundred people participated online, of which 30% of participants were male and 75% were Caucasian. The average participant was 26.71 years old (SD = 10.41). Twenty percent of participants identified themselves as nonstudents, and 22% were married. Due to a web coding error, data were not collected on country of origin or education level for 45% of online participants. Of the 55 participants for whom data were available, 58% were American and 42% were not American. Two percent of these participants had a doctoral degree, 30% had a Master's degree or some graduate education, 13% had a Bachelor's degree, and 56% had a high school diploma or some college. Sixty-one percent completed the study in its entirety. Participants completed the experiment voluntarily (no incentive was given for participation).

Materials

Pluralistic ignorance. This measure (Appendix A) consisted of 22 items about personal attitudes and behaviors, which participants answered for themselves, their best friend, the average UNI student (if s/he was an on-campus participant), and the average American adult (Prentice & Miller, 1993). The measure included items assessing participants' personal hygiene, relationships, exercise habits, alcohol and drug use, education and work, television viewing habits, and happiness. Questions 9 and 31 referred to UNI students in the on-campus version of the questionnaire, and therefore in the online version, these questions were reworded to ask about the average college student. About half of the measure (items 1-13) was constructed following the methods of Prentice and Miller (1993), using an 11-point scale ranging from *strongly disagree* to *strongly agree*. Two items (i.e., I am comfortable being around gay/lesbian/bisexual people, I am comfortable with the drinking habits of students at UNI) were used in previous studies (Bowen & Bourgeois, 2001; Prentice & Miller, 1993). The other half consisted of questions about the frequency of behaviors (e.g., showers per week, hours spent watching television per week).

Alienation measure. Dean's (1961) measure (Appendix B) has 24 items and consists of three subscales: powerlessness (9 items), normlessness (6 items), and social isolation (9 items). Participants rated each of the items on a Likert scale ranging from *strongly disagree* (-2) to *strongly agree* (+2). Sample items include "Sometimes I have the feeling that other people are using me" (powerlessness), "I often wonder what the meaning of life really is" (normlessness), and "Sometimes I feel all alone in the world" (social isolation). Split-half reliability of the overall measure was .78 (Dean, 1961). The subscales were significantly correlated with one another, providing evidence for the treatment of alienation as a unified measure, but enough independence exists between the scales to examine each subscale individually (Dean). Validity

of the scale was demonstrated via converging evidence with the total scale correlating about .30 with Srole's Anomia Scale and Nettler's (1957) Alienation Scale (Seeman, 1991). In this study, Cronbach's alpha was equal to .81 for overall alienation the on-campus sample and .83 for the online sample. Subscale Cronbach alphas for powerlessness, normlessness, and social isolation were .55, .65, and .66 on-campus and .72, .66, and .57 online.

Procedure

On-campus participants. On-campus participants arrived at a classroom in groups of 3-30 and gave informed consent to participate. Participants completed the measures in a random order in a mass testing session that contained other short questionnaires. Upon completion of all measures, participants were debriefed and dismissed.

Online participants. This study was linked to psychology websites (www.psychologicalscience.org, www.socialpsychology.org, vacognition.wjh.harvard.edu). Online participants gave electronic consent before participating. Participants first completed demographic information and then based on birth month were routed to one of six question orders (e.g., average American adult, self, best friend; best friend, average American adult, self) of the study. The alienation measure was always last. Upon completion of all measures, participants were electronically debriefed.

Results

Plan of Analysis

Degree of pluralistic ignorance was determined by comparing the mean rating for self to the mean rating of comparison other (average student for on-campus participants and average American adult for online participants) on each of the 22 items. In prior research (e.g. Prentice & Miller, 1993), average student was used as a comparison other for participants. The design of this

study made it necessary to find a different comparison other for the new sample of nonstudent participants. I chose to use average American adult (rather than another comparison other such as average local community member), because the online participants came from many different places. Thus, in order to have participants evaluate themselves against the same comparison other, it was necessary to have them compare to the more general average American. I did additional, more general analyses (using repeated measures ANOVAs) on each item individually to compare mean ratings of self to best friend, average student, and average American adult. Responses more than three standard deviations away from the mean were recoded as equal to the least or greatest non-outlying value in the set.

A total alienation variable was computed by summing across the 24 items of the alienation scale (items 5, 8, 11, 14, and 22 were reverse scored). Subscale variables were also computed. I calculated pluralistic ignorance for the correlational analyses by obtaining the absolute value the difference score of self minus comparison other. Pearson correlation coefficients were calculated for every item, converted to Fisher *z*-scores and averaged, and then the averages were converted back to correlation coefficients.

Pluralistic Ignorance

As expected, pluralistic ignorance was demonstrated for most items in both the student and nonstudent samples. Significant differences were obtained for the majority of items (86% significant on-campus, 63% significant online) using paired *t*-tests to compare responses for self versus comparison other (average UNI student for on-campus participants, average American adult for online participants; Table 1, Figure 1). I used the *t*-statistic to calculate effect sizes (Cohen's *d*), which were used to represent the strength of pluralistic ignorance across items. The items with the largest effects differed in the on-campus and online samples. On-campus, health-

related items tended to have the largest effect sizes, whereas online, television habits were largest.

Additional Analyses

To examine differences between self, best friend, average student (on-campus), and average American adult, I conducted a repeated measures ANOVA for each item separately, with target as a within-participants variable and gender as a between-participants variable. There was a main effect of target for 100% of items on-campus ($p < .001$ for all items, except for item 14, $p = .03$) and 68% of items online ($p < .03$; Table 2). Mean responses are displayed for on-campus participants in Figures 2 and 3 and for online participants in Figures 4 and 5.

There were significant gender x target interactions for items 4, 5, 6, 7, 8, 9, 11, 14, 15, 17, 20, and 22 on-campus and items 7, 9, 15, 17, 22 online (Table 2). After controlling for gender on-campus, significant main effects of target remained on all items for females and all items except 14 (number of fruits and vegetables eaten per day) and 17 (number of alcoholic drinks per week) for males. In the online sample, effects for items 7 (enjoy watching sports on television), 17, and 22 (days per week of sports television) were eliminated in males after controlling for gender, and in females, effects were eliminated for item 15 (number of showers per week). In females, controlling for gender enhanced effects on items 7, 17, and 22.

Alienation and Pluralistic Ignorance

Alienation and pluralistic ignorance were not significantly related in either sample. The subscales of alienation (powerlessness, normlessness, and social isolation) also did not correlate significantly with pluralistic ignorance (Table 3).

Discussion

Pluralistic Ignorance

The results of this study demonstrate that pluralistic ignorance extends to areas beyond those traditionally studied (e.g., alcohol, bystander effects) in pluralistic ignorance research. Pluralistic ignorance, the belief that others' attitudes are different from one's own in spite of identical behavior, exists in both students and nonstudents. In this study, pluralistic ignorance was demonstrated on the vast majority of items, including health behaviors, television habits, and subjective well-being, and the results suggest that pluralistic ignorance occurs to varying degrees for these different behaviors and attitudes.

The latter point suggests that researchers should look more closely at the possibility of moderation of pluralistic ignorance. It was hypothesized that issues that people are more motivated to conceal (e.g., attitudes about alcohol and drugs) would show a higher degree of pluralistic ignorance. The results from this study give preliminary support to this hypothesis. Specifically, pluralistic ignorance of attitudes about marijuana, alcohol, gays/lesbians/bisexuals, personal hygiene, and the importance of family was highly significant in both samples. All of these are private issues that people may not like to discuss or that people may disguise their true beliefs on when discussing them. However, there were also items that showed high pluralistic ignorance for which this concealability hypothesis makes less sense (e.g., the importance of education). Unfortunately, the design of this study allows only tentative conclusions to be drawn, but it does suggest that future research should look more closely at concealability.

It is interesting to note that the items for which the greatest degree of pluralistic ignorance was demonstrated differed in the on-campus and online samples. This finding may be due to differences in salience and/or importance on issues for students and nonstudents. For instance, because college is perceived in American culture as a time to let loose and have fun, alcohol and drug issues may be more salient and possibly more important to students than to

nonstudents. For nonstudents other issues may be more salient and/or more important (e.g., sports, television). Importance may moderate pluralistic ignorance, as individuals are more likely to rate themselves as extreme on issues that are important to them (Latané & Nowak, 1994). Thus, on important issues, a person might rate him or herself as extreme, rating his/her comparison other as more moderate. This idea would imply that the motivating factor behind pluralistic ignorance may not be "I am different from others" but rather "I care more about this issue than others."

In this study, nonstudents composed only 20% of the online sample. However, the online sample was significantly older than the on-campus sample (*M* difference = 7.12 years), and a higher percentage of participants were married in the online sample (21% versus 2%). Thus, although a majority of online participants were students, the data suggest that these students may have been different than the students in the on-campus sample (i.e., non-traditional students). Additionally, a significant proportion of online participants (42% of those for whom data were available) were non-American, and because of this, results of the online portion of the study should be interpreted with caution. However, a series of *t*-tests comparing self-other differences (pluralistic ignorance) found no significant differences in pluralistic ignorance for non-American and American participants for the vast majority of items (*t*'s$< \pm 1.55$, *p*'s$> .13$); a significant difference was found for only one of the items (hours worked per week; $t = 2.37$, $df = 32$, $p = .02$), and Americans were more pluralistically ignorant on this item than non-Americans. Finally, while on-campus participants compared themselves to another community member (i.e., the average student), online participants did not. Although online participants could have been asked to complete the pluralistic ignorance measure for an average person in each of their communities, it did not make sense to do so because participants would be comparing to many

different communities worldwide. Thus, it seemed to be more parallel with the on-campus methodology to have participants all compare to the same person (i.e., the average American adult), rather than to individual community members.

A significant interaction effect between target and gender occurred for some items in this study. The data suggest that gender moderated pluralistic ignorance for some items. But in almost all cases, this effect was not enough to eliminate the main effect of target, indicating that it was a difference in the degree to which pluralistic ignorance occurred, not whether it occurred at all. The two items (9 and 17) that concerned alcohol showed some of the largest gender differences. In both the on-campus and the online sample, main effect of target was eliminated in males on item 17 (number of alcoholic drinks per week) after controlling for gender, indicating that males believe that they drink the same number of drinks per week as their best friends, the average student, and the average American adult. In contrast, main effects for females were greatly enhanced on this item after controlling for gender. These findings replicate gender effects observed in other studies of pluralistic ignorance and alcohol (e.g., Prentice & Miller, 1993). These effects may be due to gender norms about alcohol, as men may be under more pressure than women to match their behavior with the perceived norm. College women may not be expected to drink as much or be as comfortable with alcohol as college men. In fact, Prentice and Miller found that over time, men change their drinking behavior to match the norm, whereas women do not.

Some of the differences between self and other observed in this study may be due (at least partially) to self enhancement effects, specifically to the better-than-average effect (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995). It has been well-established that people tend to evaluate themselves and their friends more favorably than comparison others (see Alicke &

Govorun, 2005, for review). Although many of the items in this study demonstrated this effect, some did not. For instance, the finding that students are generally less comfortable with alcohol than they perceive their peers to be could be considered self-degrading rather than self-enhancing. Because alcohol use may be the norm in college, those who do not use could be considered deviant. As a result, if students considered themselves better-than-average with regard to alcohol, they should rate themselves as more comfortable with alcohol than their peers, and we find that this does not seem to be the case (Bourgeois & Bowen, 2001; Prentice & Miller, 1993). Thus, although some of the self-other differences observed may be explained by the better-than-average effect, it does not explain all of the differences. Future studies could manipulate social desirability to tease the effects of these two explanations apart.

In some instances, pluralistic ignorance may serve the function of enhancing feelings of uniqueness. Optimal Distinctiveness Theory (Brewer, 1991) suggests that humans have an underlying need to feel unique from others in their social category, and it may be that pluralistic ignorance fulfills this need in some instances. People may maintain pluralistic ignorance (rather than reduce it by adjusting behavior to match the perceived norm) in order to sustain feelings of uniqueness. By this account, uniqueness would be a positive outcome of pluralistic ignorance, as opposed to the negative outcome of alienation. Perhaps the motivation to maintain uniqueness explains some of the durability of pluralistic ignorance, as well as limited success in attempts to reduce it (Schroeder & Prentice, 1998).

Alienation

This study failed to replicate Prentice and Miller's (1993) finding that alienation is correlated with pluralistic ignorance. Perhaps a relation between alienation and pluralistic ignorance does exist, but they may only be related locally. This study measured general (global)

alienation, rather than local alienation specific to disconnect from the college life as Prentice and Miller's study did. If alienation really is a result of pluralistic ignorance, then it makes sense that alienation would be a local effect; a person would only alienate him or herself from the specific community from which the person felt at odds (e.g., the college community). It is also possible that alienation is not related to pluralistic ignorance; prior findings may have been due to an experimental artifact. Prentice and Miller used a one-item measure (percentage of reunions that a participant expected to attend) that may or may not adequately gauge alienation. No other published studies seem to have since replicated Prentice and Miller's finding. Thus, further investigation is necessary.

Dean's (1961) subscales of alienation, including social isolation, also failed to correlate with pluralistic ignorance. As with overall alienation, it may be that social isolation is unrelated to pluralistic ignorance because the measure assessed global, rather than local, isolation. Low subscale reliabilities (α = .55 -.72) are another problem that limits the usefulness of this measure.

Study Limitations and Future Research

This study was limited in number of ways that may have affected the results. First, on-campus research was conducted with a relatively homogenous group of young, White, Midwestern students. As this study demonstrated, pluralistic ignorance can be affected by the nature of the sample, so future studies should compare different samples to determine the universality of pluralistic ignorance. Additionally, research over the Internet is always subject to sampling bias because only those who have access to the Internet are able to participate. Although the number of people who have Internet access is increasing rapidly, there are still some segments of the population that are likely to be left out of Internet samples. Higher socioeconomic status (SES) groups have more access to the Internet than lower SES groups

(Krantz & Dalal, 2000). In addition, this study was posted on select psychology websites, which likely excluded an even greater proportion of the population. Posting the study on more popular sites would help to alleviate this problem. Attrition was another problem that occurred in the Internet sample that may have affected the results. Thirty-nine percent of online participants quit the study at some point, in spite of the fact that measures typically took less than 10 minutes to complete. Future studies could remedy this problem by making Internet measures even shorter or offering an incentive for study completion.

Because I used different comparison individuals for the on-campus and online samples, conclusions regarding similarities and differences between the two samples should be interpreted with caution. To ensure that differences between on-campus and online samples were not due to differences in comparison other, I conducted *t*-tests comparing self to average American adult for the on-campus sample, and again, pluralistic ignorance was demonstrated. As with analyses conducted using average student as comparison other, items that showed the greatest pluralistic ignorance differed between the on-campus sample and the online sample. Thus, differing comparison others does not appear to affect results drastically; however, findings should still be interpreted with caution.

Due to the number of items and conditions (i.e., self, best friend, average student, average American) in this study, examining order effects was not practically feasible. Prior research (Prentice & Miller, 1993) has found that pluralistic ignorance is greater when the question about the average student appears first. Having the average student condition first may prime the category "average," which, according to optimal distinctiveness theory (Brewer, 1991), should motivate the individual to present him or herself as more unique. Conversely, priming average may make "average" more salient and more accessible, perhaps making it more likely that self

would be rated closer to average. Thus, the effect of question order is not clear. Others (e.g., Bourgeois & Bowen, 2001) have not found evidence for order effects. Future studies should not only control for order effects, but should more closely examine such effects, if they exist.

In order to consider moderation of pluralistic ignorance, future studies should measure concealment directly, perhaps by asking participants directly how willing they are to admit their true attitudes about the topics to their friends and peers. Due to the design of this study, it was impossible to determine directly whether concealment did, in fact, moderate pluralistic ignorance.

An experimental design instead of a correlational design would allow more specific conclusions to be drawn. For example, a researcher could manipulate whether or not participants talk about social norms and measure self-other differences both before and after such interaction. As mentioned previously, social desirability is another variable that could be manipulated. By controlling for social desirability, researchers would be able to ascertain the extent to which self-other differences are caused by pluralistic ignorance, exclusive of social desirability.

In this study, age differences were confounded with differences due to local (proximal) social influence. Increases in proximity lead to increased social influence (Cullum & Harton, in press; Latané, Liu, Nowak, Bonevento, & Zheng, 1995). Future studies could tease apart this difference by comparing samples from universities, adult communities (i.e., an organizational setting such as a large company), and the Internet. The first two samples would compare younger people and older people in situations where proximal social influence occurs. Comparing student Internet participants with other students and nonstudent Internet participants with other adults would allow the researcher to control for age and look specifically at effects due to local social influence.

Applying Pluralistic Ignorance

Previous attempts to reduce pluralistic ignorance (for the purpose of discouraging excessive drinking among college students) have had mixed success (Schroeder & Prentice, 1998). If a reliable method for reducing pluralistic ignorance could be found, these results could have practical significance. For instance, such a technique could be used in organizational settings to change the culture of the organization to be more productive by correcting misperceived norms (e.g., norms about truancy, tardiness, breaks). However, techniques like this are unlikely to be effective if people do not trust the source of the message. Universities nationwide have tried to correct false social norms in the fight against excessive drinking (often via marketing companies such as Most of Us). These attempts may have been unsuccessful because students may not believe that the information provided by the powers-that-be is true.

Conclusions and Implications

This study demonstrates that pluralistic ignorance is a broad, impactful construct and is unique in that it compares pluralistic ignorance across various behaviors and attitudes. The finding that pluralistic ignorance varies across behaviors is an important one because it suggests that pluralistic ignorance may be impacted by other variables (e.g., concealability, importance, and social desirability). Additionally, pluralistic ignorance occurred quite robustly in a nonstudent online sample, suggesting that perhaps proximal social influence is not necessary for pluralistic ignorance to occur.

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Table 1

Effect Sizes for Difference between Self and Comparison Other

On-Campus		Online	
Item	d	Item	d
8. Family is important	2.12**	22. Days/week of sports TV	-2.11**
5. Marijuana is ok	-2.07**	7. Enjoy sports on TV	-1.61**
1. Personal hygiene is important	1.98**	18. Hours of TV/week	-1.60**
19. Last 30 day marijuana use	-1.76**	4. Comfort with G/L/B	1.49**
12. Education is important	1.73**	16. Hours working/week	-1.39**
11. Work is important	1.54**	10. Happy more oft than not	1.39**
15. Number of showers/week	1.53**	12. Education is important	1.33**
10. Happy more oft than not	1.24**	13. Drug users are immoral	-1.30**
18. Hours of TV/week	-.96**	14. Fruits & vegetables/day	.97**
17. Alcoholic drinks/week	-.85**	8. Family is important	.86**
21. Number of close friends	.85**	1. Personal hygiene is important	.76**
4. Comfort with G/L/B	.84**	17. Alcoholic drinks/week	-.64*
6. Religiosity	.78**	15. Number of showers/week	.63*
9. Comfort with alcohol at UNI	-.75**	19. Last 30 day marijuana use	-.57*
2. Have a lot of free time	-.63**	11. Work is important	.29
22. Days/week of sports TV	-.54**	6. Religiosity	-.28
20. Hours of exercise/week	.41**	3. Have many close relationships	.23
14. Fruits & vegetables/day	.35*	21. Number of close friends	.19
3. Have many close relationships	.35*	5. Marijuana is ok	.14
16. Hours studying/week	.13	9. Comfort with alcohol in college	.14
13. Drug users are immoral	.08	20. Hours of exercise/week	.07
7. Enjoy sports on TV	.01	2. Have a lot of free time	-.03

Note: Comparison other is average UNI student for on-campus sample and average American adult for online sample.

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

Table 2

Differences Among Self, Best Friend, Average Student, and Average American Adult

Main Effect of Target	On-Campus	Online
Item	*F*	*F*
1. Personal hygiene is important	78.39**	6.16**
2. Have a lot of free time	10.26**	1.57
3. Have many close relationships	18.81**	7.34**
4. Comfort with G/L/B	43.73**	15.98**
5. Marijuana is ok	63.21**	.93
6. Religiosity	10.96**	1.45
7. Enjoy sports on TV	10.31**	15.13**
8. Family is important	80.27**	7.95**
9. Comfort with alcohol in college	12.85**	10.49**
10. Happy more oft than not	92.49**	21.77**
11. Work is important	35.95**	4.33*
12. Education is important	50.67**	10.62**
13. Drug users are immoral	16.46**	13.14**
14. Fruits & vegetables/day	3.03*	6.68**
15. Number of showers/week	48.88**	7.567**
16. Hours studying/week	1072.41**	13.01**
17. Alcoholic drinks/week	12.93**	.69
18. Hours of TV/week	14.47**	34.63**
19. Last 30 day marijuana use	60.11**	2.91
20. Hours of exercise/week	9.56**	.04
21. Number of close friends	50.23**	1.27
22. Days/week of sports TV	14.76**	24.18**

Target x Gender	On-Campus
Item	*F*
4	8.16**
5	3.36*
6	3.28*
7	16.31**
8	3.94**
9	14.14**
11	3.021*
14	3.71**
15	10.04**
17	12.70**
20	5.95**
22	29.25**

Target x Gender	Online
Item	*F*
7	3.36*
9	4.05*
15	7.10**
17	11.45**
22	12.41**

Note: For main effects, $df = 3$ for on-campus items; $df = 2$ for online items. For interaction effects, $df = 1$ for all items. Error df for within-participants comparisons ranged from 471 to 486 on-campus and 106 to 126 online.

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

Table 3

Average Correlations between Alienation and its Subscales and Pluralistic Ignorance

Scale/Subscale	On-Campus	Online
Alienation	.05	.04
Powerlessness	.01	.04
Normlessness	.02	.03
Social Isolation	.08	.03

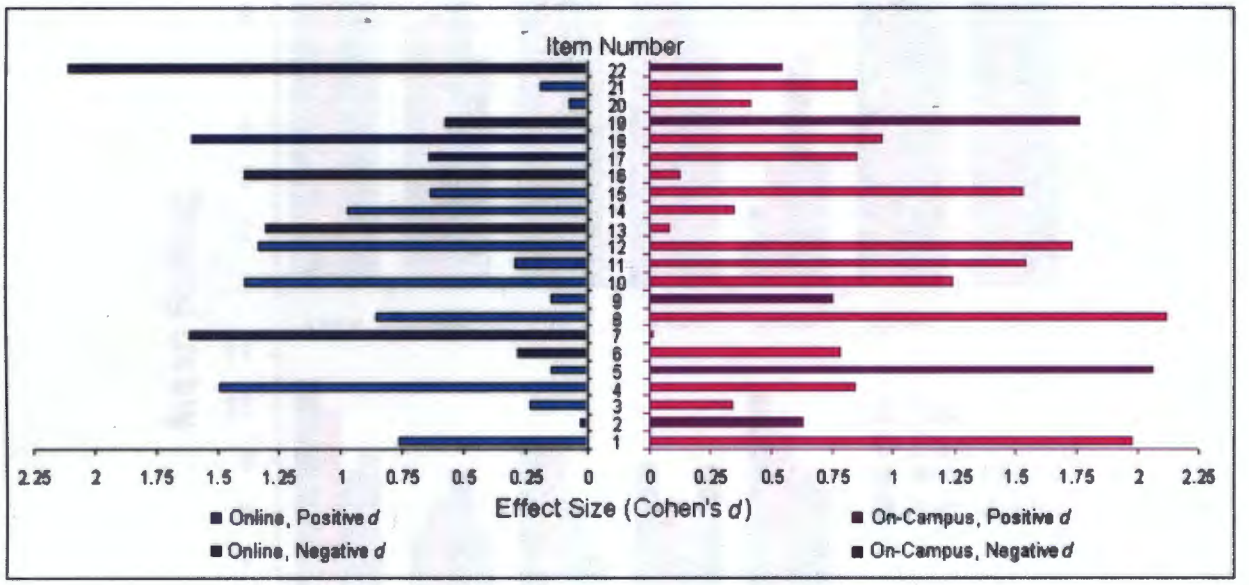
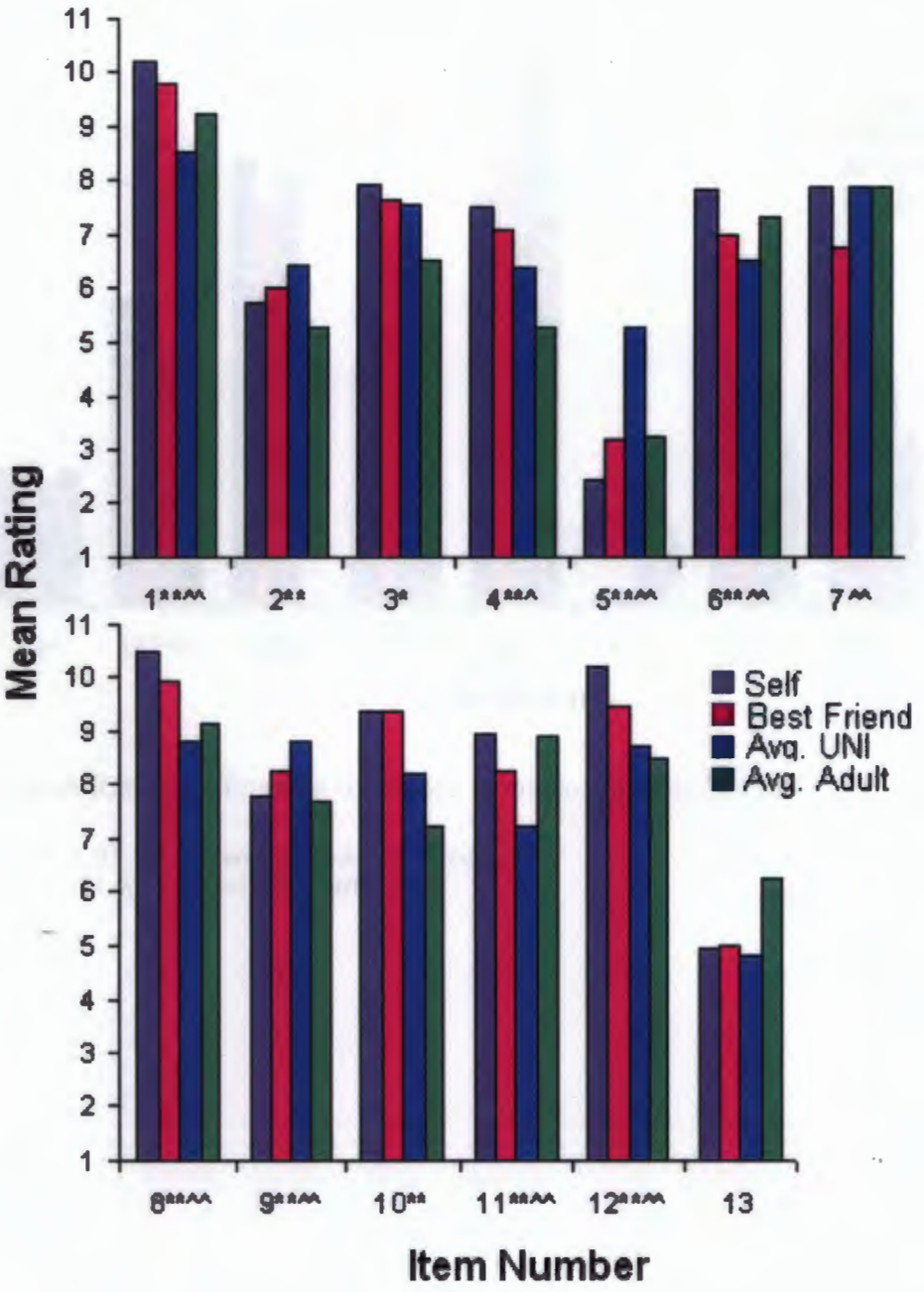


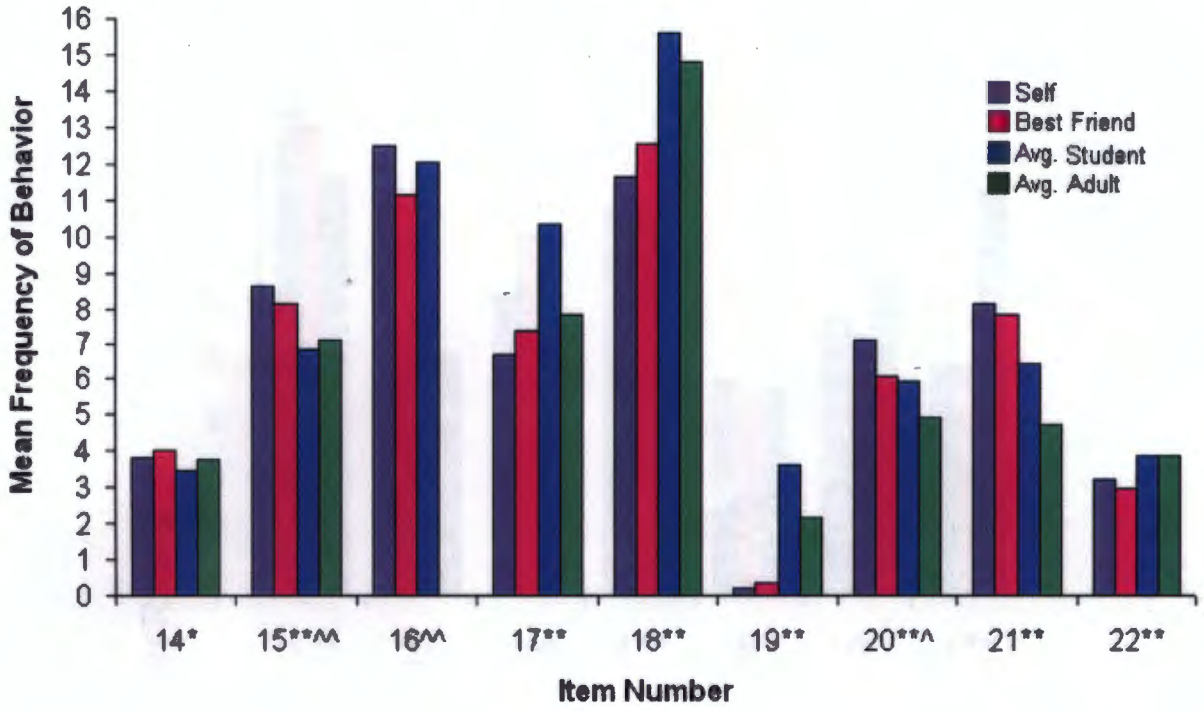
Figure 1. Effect size (Cohen's *d*) of self to comparison other difference for on-campus and online samples.

Note: Positive values indicate that self was rated higher than comparison other; negative values indicate the opposite.



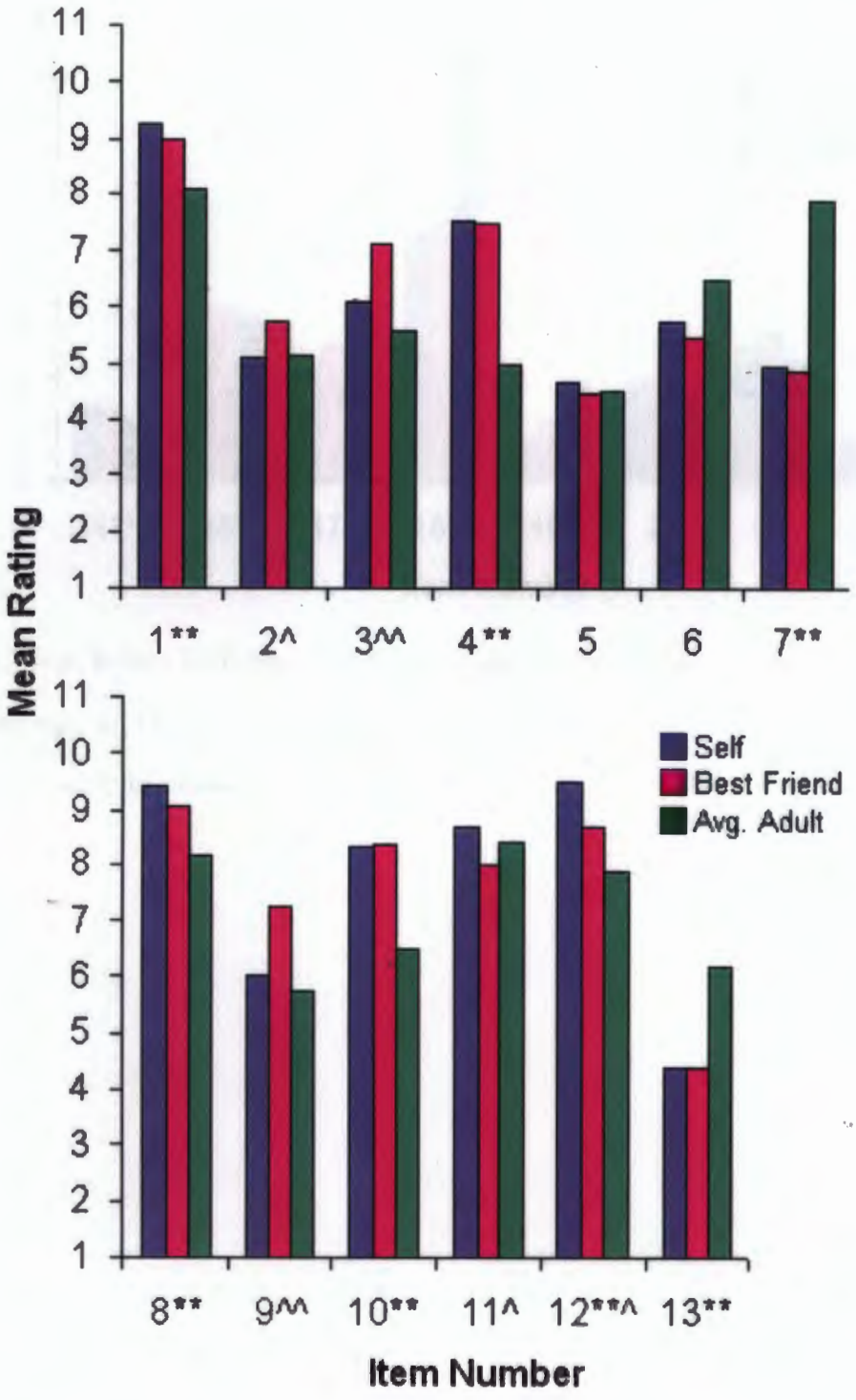
Figures 2-3. Mean Rating Differences by Person in an On-Campus Sample

Note: **p*< .05 ***p*< .01, for self-average student differences
^*p*<.05 ^^*p*<.01, for self-best friend differences



Figures 2-3. Mean Rating Differences by Person in an On-Campus Sample

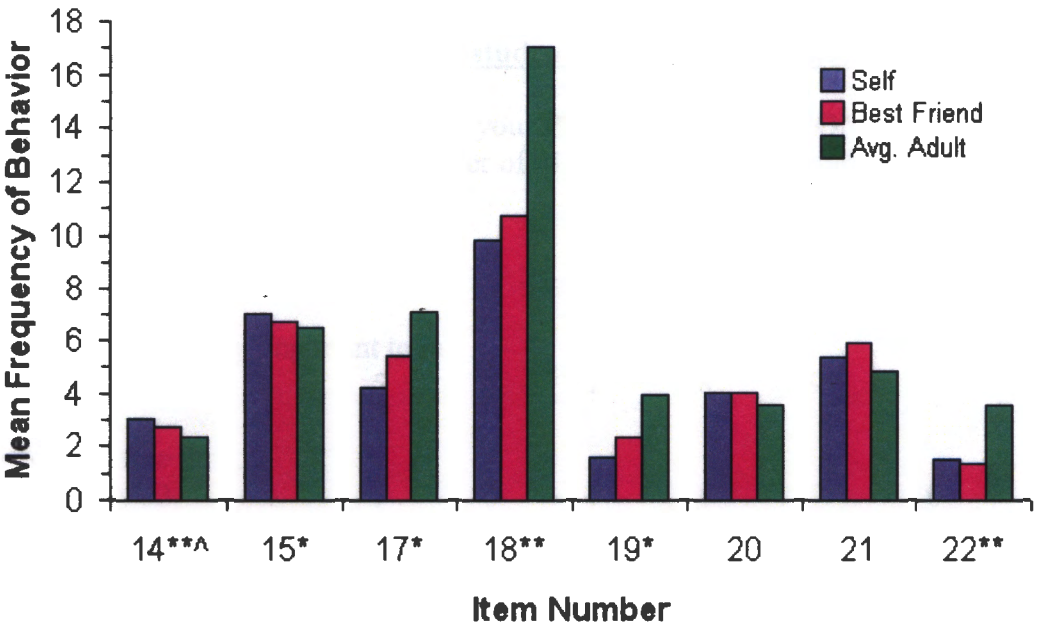
Note: *p< .05 **p< .01, for self-average student differences
^p<.05 ^^p<.01, for self-best friend differences



Figures 4-5. Mean Rating Differences by Person in an Online Sample

Note: *$p < .05$ **$p < .01$, for self-average American adult differences

^$p < .05$ ^^$p < .01$, for self-best friend differences



Figures 4-5. Mean Rating Differences by Person in an Online Sample

Note: *p< .05 **p< .01, for self-average American adult differences

^p<.05 ^^p<.01, for self-best friend differences

Appendix A

Attitudes in Student and Nonstudent Populations Questionnaire

Please rate the following statements based on your **PERSONAL OPINION**. An answer of "1" indicates strong disagreement, while an answer of "11" indicates strong agreement. Please circle only one choice.

1 2 3 4 5 6 7 8 9 10 11
Strongly Disagree Strongly Agree

1. Personal hygiene is very important to me.
   1 2 3 4 5 6 7 8 9 10 11

2. I have a lot of free time.
   1 2 3 4 5 6 7 8 9 10 11

3. I have many close personal relationships.
   1 2 3 4 5 6 7 8 9 10 11

4. I am comfortable being around gay/lesbian/bisexual people.
   1 2 3 4 5 6 7 8 9 10 11

5. I believe smoking marijuana on the weekends is okay.
   1 2 3 4 5 6 7 8 9 10 11

6. I am religious.
   1 2 3 4 5 6 7 8 9 10 11

7. I enjoy watching sports on television.
   1 2 3 4 5 6 7 8 9 10 11

8. My family is important to me.
   1 2 3 4 5 6 7 8 9 10 11

9. I am comfortable with the alcohol drinking habits of students at UNI.
   1 2 3 4 5 6 7 8 9 10 11

10. I am pleased with my life more days than I am not.
    1 2 3 4 5 6 7 8 9 10 11

11. My work is important to me.
    1 2 3 4 5 6 7 8 9 10 11

12. My education is important to me.
    1 2 3 4 5 6 7 8 9 10 11

13. I believe drug users are immoral people.
    1 2 3 4 5 6 7 8 9 10 11

Answer the following questions based on your **PERSONAL BEHAVIORS**.

14. On average, how many servings (e.g. 1 apple, 1 medium potato, ½ cup of broccoli) of fruits and vegetables do you eat PER DAY? (enter a whole number between 0 and 99)

    _____

15. About how many showers do you take PER WEEK? (enter a whole number between 0 and 99) _____

16. How many hours do you spend PER WEEK studying? (enter a whole number between 0 and 99) _____

17. About how many alcoholic beverages do you consume PER WEEK? (enter a whole number between 0 and 99) _____

18. How many hours PER WEEK do you spend watching television? (enter a whole number between 0 and 99) _____

19. On how many days of the last 30 days did you smoke marijuana? (enter a whole number between 0 and 30) _____

20. How many hours PER WEEK do you spend exercising? (enter a whole number between 0 and 99) _____

21. About how many people would you consider close friends? (enter a whole number between 0 and 99) _____

22. Typically, how many days of the week do you watch sports?
    Choose one: 0 1 2 3 4 5 6 7

Now we're going to ask you some questions about your **BEST SAME SEX FRIEND at UNI**.

What are your best friend's initials? _____

How old is your best friend? _____

Now rate the following statements based on the opinions of the person identified above. An answer of "1" indicates strong disagreement, while an answer of "11" indicates strong agreement. Please circle only one choice.

1 2 3 4 5 6 7 8 9 10 11
Strongly Disagree **Strongly Agree**

1. Personal hygiene is very important to my best friend.
   1 2 3 4 5 6 7 8 9 10 11

2. My best friend has a lot of free time.
   1 2 3 4 5 6 7 8 9 10 11

3. My best friend has many close personal relationships.
   1 2 3 4 5 6 7 8 9 10 11

4. My best friend is comfortable being around gay/lesbian/bisexual people.
   1 2 3 4 5 6 7 8 9 10 11

5. My best friend believes smoking marijuana on the weekends is okay.
   1 2 3 4 5 6 7 8 9 10 11

6. My best friend is religious.
   1 2 3 4 5 6 7 8 9 10 11

7. My best friend enjoys watching sports on television.
   1 2 3 4 5 6 7 8 9 10 11

8. Family is important to my best friend.
   1 2 3 4 5 6 7 8 9 10 11

9. My best friend is comfortable with the alcohol drinking habits of students at UNI.
   1 2 3 4 5 6 7 8 9 10 11

10. My best friend is pleased with his/her life more days than he/she is not.
    1 2 3 4 5 6 7 8 9 10 11

11. Work is important to my best friend.
    1 2 3 4 5 6 7 8 9 10 11

12. An education is important to my best friend.
    1 2 3 4 5 6 7 8 9 10 11

13. My best friend believes drug users are immoral people.
    1 2 3 4 5 6 7 8 9 10 11

Answer the following questions based on the behaviors of **YOUR BEST <u>SAME SEX</u> FRIEND <u>at UNI</u>**.

14. On average, how many servings (e.g. 1 apple, 1 medium potato, ½ cup of broccoli) of fruits and vegetables does your best friend eat PER DAY? (enter a whole number between 0 and 99) _____

15. About how many showers does your best friend take PER WEEK? (enter a whole number between 0 and 99) _____

16. How many hours does your best friend spend PER WEEK studying? (enter a whole number between 0 and 99) _____

17. About how many alcoholic beverages does your best friend consume per week? (enter a whole number between 0 and 99) _____

18. How many hours PER WEEK does your best friend spend watching television? (enter a whole number between 0 and 99) _____

19. On how many days of the last 30 days did your best friend smoke marijuana? (enter a whole number between 0 and 30) _____

20. How many hours PER WEEK does your best friend spend exercising? (enter a whole number between 0 and 99) _____

21. About how many people would your best friend consider close friends? (enter a whole number between 0 and 99) _____

22. Typically, how many days of the week does your best friend watch sports?
    Choose one: 0 1 2 3 4 5 6 7

Please rate the following statements based on the opinions of the **AVERAGE UNI STUDENT**. An answer of "1" indicates strong disagreement, while an answer of "11" indicates strong agreement. Please circle only one choice.

1 2 3 4 5 6 7 8 9 10 11
Strongly Disagree **Strongly Agree**

1. Personal hygiene is very important to the average UNI student.
   1 2 3 4 5 6 7 8 9 10 11

2. The average UNI student has a lot of free time.
   1 2 3 4 5 6 7 8 9 10 11

3. The average UNI student has many close personal relationships.
   1 2 3 4 5 6 7 8 9 10 11

4. The average UNI student is comfortable being around gay/lesbian/bisexual people.
   1 2 3 4 5 6 7 8 9 10 11

5. The average UNI student believes smoking marijuana on the weekends is okay.
   1 2 3 4 5 6 7 8 9 10 11

6. The average UNI student is religious.
   1 2 3 4 5 6 7 8 9 10 11

7. The average UNI student enjoys watching sports on television.
   1 2 3 4 5 6 7 8 9 10 11

8. Family is important to the average UNI student.
   1 2 3 4 5 6 7 8 9 10 11

9. The average UNI student is comfortable with the drinking habits of students at UNI.
   1 2 3 4 5 6 7 8 9 10 11

10. The average UNI student is pleased with his or her life more days than not.
    1 2 3 4 5 6 7 8 9 10 11

11. Work is important to the average UNI student.
    1 2 3 4 5 6 7 8 9 10 11

12. An education is important to the average UNI student.
    1 2 3 4 5 6 7 8 9 10 11

13. The average UNI student believes drug users are immoral people.
    1 2 3 4 5 6 7 8 9 10 11

Answer the following questions based on the behaviors of the **AVERAGE UNI STUDENT.**

14. On average, how many servings (e.g. 1 apple, 1 medium potato, ½ cup of broccoli) of fruits and vegetables does the average UNI student eat PER DAY? (enter a whole number between 0 and 99) _____

15. About how many showers does the average UNI student take PER WEEK? (enter a whole number between 0 and 99) _____

16. How many hours does the average UNI student spend PER WEEK studying? (enter a whole number between 0 and 99) _____

17. About how many alcoholic beverages does the average UNI student consume PER WEEK? (enter a whole number between 0 and 99) _____

18. How many hours PER WEEK does the average UNI student spend watching television? (enter a whole number between 0 and 99) _____

19. On how many days of the last 30 days did the average UNI student smoke marijuana? (enter a whole number between 0 and 30) _____

20. How many hours PER WEEK does the average UNI student spend exercising? (enter a whole number between 0 and 99) _____

21. About how many people would the average UNI student consider close friends? (enter a whole number between 0 and 99) _____

22. Typically, how many days of the week does the average UNI student watch sports?
Choose one: 0 1 2 3 4 5 6 7

Please rate the following statements based on the opinions of the **AVERAGE AMERICAN ADULT**. An answer of "1" indicates strong disagreement, while an answer of "11" indicates strong agreement. Please circle only one choice.

1 2 3 4 5 6 7 8 9 10 11
Strongly Disagree **Strongly Agree**

1. Personal hygiene is very important to the average American adult.
   1 2 3 4 5 6 7 8 9 10 11

2. The average American adult has a lot of free time.
   1 2 3 4 5 6 7 8 9 10 11

3. The average American adult has many close personal relationships.
   1 2 3 4 5 6 7 8 9 10 11

4. The average American adult is comfortable being around gay/lesbian/bisexual people.
   1 2 3 4 5 6 7 8 9 10 11

5. The average American adult believes smoking marijuana on the weekends is okay.
   1 2 3 4 5 6 7 8 9 10 11

6. The average American adult is religious.
   1 2 3 4 5 6 7 8 9 10 11

7. The average American adult enjoys watching sports on television.
   1 2 3 4 5 6 7 8 9 10 11

8. Family is important to the average American adult.
   1 2 3 4 5 6 7 8 9 10 11

9. The average American adult is comfortable with the drinking habits of other American adults.
   1 2 3 4 5 6 7 8 9 10 11

10. The average American adult is pleased with his or her life more days than not.
    1 2 3 4 5 6 7 8 9 10 11

11. Work is important to the average American adult.
    1 2 3 4 5 6 7 8 9 10 11

12. An education is important to the average American adult.
    1 2 3 4 5 6 7 8 9 10 11

13. The average American adult believes drug users are immoral people.
    1 2 3 4 5 6 7 8 9 10 11

Answer the following questions based on the behaviors of the **AVERAGE AMERICAN ADULT**.

14. On average, how many servings (e.g. 1 apple, 1 medium potato, ½ cup of broccoli) of fruits and vegetables does the average American adult eat PER DAY? (enter a whole number between 0 and 99) _____

15. About how many showers does the average American adult take PER WEEK? (enter a whole number between 0 and 99) _____

16. How many hours does the average American adult spend PER WEEK working? (enter a whole number between 0 and 99) _____

17. About how many alcoholic beverages does the average American adult consume PER WEEK? (enter a whole number between 0 and 99) _____

18. How many hours PER WEEK does the average American adult spend watching television? (enter a whole number between 0 and 99) _____

19. On how many days of the last 30 days did the average American smoke marijuana? (enter a whole number between 0 and 30) _____

20. How many hours PER WEEK does the average American spend exercising? (enter a whole number between 0 and 99) _____

21. About how many people would the average American adult consider close friends? (enter a whole number between 0 and 99) _____

22. Typically, how many days of the week does the average American adult watch sports?
    Choose one: 0 1 2 3 4 5 6 7

Appendix B

Alienation Scale (Dean, 1961).

Please rate the following statements based on your **PERSONAL OPINION**. An answer of "-2" indicates strong disagreement, while an answer of "+2" indicates strong agreement. Please circle only one choice.

-2	**-1**	**0**	**+1**	**+2**
Strongly Disagree				**Strongly Agree**

1. Sometimes I feel all alone in the world.
   -2 -1 0 +1 +2

2. I worry about the future facing today's children.
   -2 -1 0 +1 +2

3. I don't get invited out by friends as often as I'd like.
   -2 -1 0 +1 +2

4. The end often justifies the means.
   -2 -1 0 +1 +2

5. Most people today seldom feel lonely.
   -2 -1 0 +1 +2

6. Sometimes I have the feeling that other people are using me.
   -2 -1 0 +1 +2

7. People's ideas change so much that I wonder if we'll ever have anything to depend on.
   -2 -1 0 +1 +2

8. Real friends are as easy as ever to find.
   -2 -1 0 +1 +2

9. It is frightening to be responsible for the development of a little child.
   -2 -1 0 +1 +2

10. Everything is relative, and there just aren't any definite rules to live by.
    -2 -1 0 +1 +2

11. One can always find friends if s/he shows herself/himself as friendly.
    -2 -1 0 +1 +2

12. I often wonder what the meaning of life really is.
    -2 -1 0 +1 +2

-2	**-1**	**0**	**+1**	**+2**
Strongly Disagree				**Strongly Agree**

13. There is little or nothing I can do towards preventing a major war.
-2 -1 0 +1 +2

14. The world in which we live is basically a friendly place.
-2 -1 0 +1 +2

15. There are so many decisions that have to be made today that sometimes I could just "blow up."
-2 -1 0 +1 +2

16. The only thing one can be sure of today is that s/he can be sure of nothing.
-2 -1 0 +1 +2

17. There are few dependable ties between people anymore.
-2 -1 0 +1 +2

18. There is little chance for promotion on the job unless a person gets a break.
-2 -1 0 +1 +2

19. With so many religions abroad, one doesn't really know which to believe.
-2 -1 0 +1 +2

20. We're so regimented today that there's not much room for choice even in personal matters.
-2 -1 0 +1 +2

21. We are just so many cogs in the machinery of life (insignificant parts).
-2 -1 0 +1 +2

22. People are just naturally friendly and helpful.
-2 -1 0 +1 +2

23. The future looks very dismal.
-2 -1 0 +1 +2

24. I don't get to visit friends as often as I'd like.
-2 -1 0 +1 +2

Note: The powerlessness subscale consists of items 2, 6, 9, 13, 15, 18, 20, 21, and 23, the normlessness subscale consists of 4, 7, 10, 12, 16, and 19, and the social isolation subscale consists of the remaining items.