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About Psi Chi

Psi Chi is the National Honor Society in Psychology, founded in 1929 for the purposes of encouraging, stimulating, and maintaining excellence in scholarship, and advancing the science of psychology. Membership is open to graduate and undergraduate men and women who are making the study of psychology one of their major interests and who meet the minimum qualifications. Psi Chi is a member of the Association of College Honor Societies (ACHS) and is an affiliate of the American Psychological Association (APA) and the American Psychological Society (APS). Psi Chi’s sister honor society is Psi Beta, the national honor society in psychology for community and junior colleges.

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1. The primary author of a submitted manuscript must be an undergraduate student who is a member of Psi Chi. Manuscripts from graduate students will be accepted only if the work was completed as an undergraduate student. Additional authors other than the primary author may include non-Psi Chi students as well as the faculty mentor or supervisor. Membership verification information for the primary author must be included.

2. Only original manuscripts (not published or accepted for publication elsewhere) will be accepted.

3. All manuscripts must be prepared according to the latest edition of the *Publication Manual of the American Psychological Association* (5th ed.).

4. To submit:

   a. Four copies of the complete manuscript. Near-letter-quality print is required on all copies. Should you desire a masked review, make sure that identifying names, affiliations, etc. appear only on the title page and nowhere else on the manuscript; i.e., manuscripts should be reasonably free of clues to the identity of the authors. Footnotes that identify the author(s) should appear on a separate page. You must request masked review.

   b. An e-mail address so that receipt of your manuscript can be acknowledged.

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Since the articles in this journal are primarily the work of undergraduate students, the reader should bear in mind that: (1) the papers are possibly less complex in design, scope, or sampling than professional publications and (2) the studies are not limited to significant findings. The basis for accepting papers for publication is the agreement among three professional reviewers that the project, hypothesis, and design are well researched and conceived for someone with an undergraduate level of competence and experience.

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Gender Role Tendencies and Personality Disorders

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Although many professionals have speculated that sex may be related to personality disorders, there is little research that has examined how gender roles may affect personality disorders. This study focused on whether gender role phenomena would be related to personality disorders. The results indicated that (a) expressiveness (i.e., psychological femininity) correlated negatively with 10 of the DSM–IV measures of personality disorder and (b) that instrumentality correlated negatively with borderline, avoidant, dependent, negativistic, and depressive personality disorder. Several aspects of the masculine role were also systematically related to paranoid, schizoid, narcissistic, avoidant, and dependent personality disorder. The discussion focuses on the implications and limitations of the present findings.

Personality disorders involve the cognitive, affective, interpersonal, and impulsive aspects of people’s personality. The behavior of people with personality disorders becomes inflexible and rigid (but not due to drug abuse or a medical condition). Personality disorder symptomatology also interferes with people’s social and occupational functioning, as described by the Diagnostic and Statistical Manual of Mental Disorders (4th ed. [DSM–IV]; American Psychiatric Association, 1994).

The DSM–IV describes 10 personality disorders and 2 more that are provisional in nature: paranoid personality disorder (being consumed with distrust and suspiciousness toward everyone and every situation), schizoid personality disorder (showing no real emotion or attachment to anything or anybody, including family), and schizotypal personality disorder (not really having close relationships, and also exhibiting eccentric qualities) are all considered Cluster A personality disorders. Cluster B personality disorders include: antisocial personality disorder (exhibiting a disregard for all rules and laws, accompanied by deceitful, reckless, and aggressive behavior), borderline personality disorder (exhibiting very intense and erratic emotions, behaviors, and relationships, which sometimes can be misperceived as suicidal even though the person is not), histrionic personality disorder (being very shallow, attention seeking, and needing to be the center of attention at all times), and narcissistic personality disorder (needing to be the center of attention, believing that oneself deserves to be the focus of others’ attention, and possessing a high self-image). Avoidant personality disorder (avoiding all social things, such as interpersonal relationships, socializing, and intimate involvement), dependent personality disorder (needing to be taken care of, having no responsibilities, and difficulty making even the smallest decisions for oneself), and obsessive–compulsive disorder (exhibiting an excessive preoccupation with all aspects of one’s life, including details, lists, and orderliness) are all Cluster C personality disorders. The two provisional personality disorders are depressive personality disorder (feeling rejection, unhappiness, and negative feelings about oneself) and passive–aggressive (or negativistic) personality disorder (having negative attitudes about most things in life, and thus adopting a passive resistance in virtually all social and occupational situations).

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The purpose of the present investigation was to examine the relation between personality disorders and several gender role tendencies in university students. Gender roles can involve society’s tendency to view men and women in a stereotypic fashion. Some of the literature indicates that gender role tendencies are multidimensional in nature (Bem, 1974; Block, 1973; Spence, 1993). Among the recently developed gender role measures is the Personality Attributes Questionnaire (PAQ; Spence, 1993). The PAQ is a self-report questionnaire that measures a person’s ideas about socially desirable, gender-differentiating traits (Spence & Helmreich, 1978). The PAQ contains two major scales, psychological masculinity and psychological femininity, each containing eight descriptions of general personality traits (Spence & Helmreich, 1978). The psychological masculinity items tend to be more characteristic of men than women (e.g., instrumentality, self-assertive, goal-oriented traits), but they are desirable for both sexes to a degree (Spence & Helmreich, 1980). The psychological femininity items (e.g., expressiveness, nurturing, and caring) tend to be more characteristic of women than of men (Spence & Helmreich, 1980). Spence (1993) found that the PAQ measures only the gender-related desirable instrumental and expressive traits.

More recently, Snell (1989) developed an instrument to measure different gender role tendencies, the Masculine Behavior Scale (MBS), a self-report questionnaire designed to measure four basic behavioral tendencies that occur more often in men than in women. The gender role behaviors assessed by the MBS are restrictive emotionality (i.e., the public restriction of one’s private feelings), success dedication (i.e., being excessively dedicated to pursuing success in one’s life), inhibited affection (i.e., inhibited feelings and affection about loved ones), and exaggerated self-reliance (i.e., the tendency to be preoccupied with being independent about one’s life; Snell, 1989). Snell found restrictive emotionality and inhibited affection were positively correlated with each other and that success dedication and exaggerated self-reliance were positively correlated with each other. Other results reported by Snell revealed that both men and women reported that they displayed behaviors similar to success dedication and exaggerated self-reliance, and that both men and women reported that restrictive emotionality and inhibited affection were less characteristic of them. Snell, Miller, Belk, Garcia-Falconi, and Hernandez-Sanchez (1989) found that men who tended to be more inhibited in the expression of their feelings of affection had more trouble discussing their emotions with their fathers and female therapists, whereas women who were more inhibited in expressing their affection had more trouble discussing their emotions with both male and female therapists.

In addition to the PAQ and the MBS, Glick and Fiske (1996) designed another self-report questionnaire instrument, the Ambivalent Sexism Inventory (ASI), to assess two gender role tendencies more specific to women’s issues: hostile sexism (i.e., prejudice toward women in a negative way) and benevolent sexism (i.e., viewing women in a positive, yet submissive way). Glick and Fiske found that men reported greater hostile and benevolent sexism than was reported by women.

Summary

The current investigation examined the relation between the DSM-IV personality disorders and several aspects of people’s gender roles, as measured by the PAQ (Spence, 1993), the MBS (Snell, 1989), and the ASI (Glick & Fiske, 1996). Previous research has indicated that personality disorder symptomatology varies according to gender (Golomb, Fava, Abraham, & Rosenbaum, 1995; Gove, 1978). Other researchers have demonstrated that personality disorder symptomatology can be measured through the use of questionnaire techniques (Hyler et al., 1988; Hyler, Skodol, Kellman, Oldham, & Rosnick, 1990; Johnson & Bornstein, 1992; Millon, 1983; Morey, Blashfield, Webb, & Jewell, 1988; Morey, Waugh, & Blashfield, 1985; Schotte, de Doncker, Vankerckhoven, Vertommen, & Cosyns, 1998; Wierzbicki & Gorman, 1995) and interview techniques (First et al., 1995; Hunt & Andrews, 1992). The present investigation used the Personality Diagnostic Questionnaire–4+ (PDQ–4+; Hyler, 1994) to assess personality disorder symptomatology. The PDQ–4+ includes the 10 DSM–IV personality disorders and the addition of negative and depressive personality disorders, which are provisional in nature (Hyler, 1994).

Hypotheses

We anticipated that those individuals who score higher on the PDQ–4+ measure of antisocial personality disorder (i.e., participants with greater antisocial personality disorder symptomatology) would be more likely to experience more sexist gender role tendencies, including (a) greater hostile sexism, which is measured by the ASI (Glick & Fiske, 1996), (b) less expressiveness, which is measured by the PAQ (Spence, 1993), and (c) greater inhibited affection, which is measured by the MBS (Snell, 1989). We based this prediction on the rationale that antisocial personality disorder occurs more often in men than in women, because men, more so than women, are...
raised to think for themselves and to keep their feelings and emotions inside, which leads them to act out without thinking about anybody but themselves (Grilo et al., 1996). While growing up, men are taught to inhibit their affection or tenderness toward people and family, because such behavior would be considered feminine. So, if men, more so than women, are exhibiting inhibited affection, then it would seem to suggest that antisocial personality disorder and inhibited affection would be positively associated with each other.

On the other hand, society often teaches women, more so than men, to be expressive and caring. According to the traditional stereotype, they are supposed to find a mate and take care of him more than themselves; thus, antisocial personality disorder is less common in women (Grilo et al., 1996). In addition, society usually assigns women just one major role in life, being a housewife, whereas society often assigns men two major roles in life, the head of the household and worker (Gove, 1978). Once again, men are raised to be relatively inexpressive in their feelings and emotions, and to be assertive and independent. Because women are raised to be more expressive than men and because antisocial disorder is less common in women, we anticipated that expressiveness and antisocial personality disorder would be negatively associated with each other. Another aspect of our prediction dealt with hostile sexism, defined as having negative attitudes toward women in general. In some rare cases men are raised to believe that women are good for nothing and, in extreme cases, that they should not exist at all. These men are obviously less able than other men to form close relationships with women or anybody else due to their hostility toward women. Also, because men are often raised to be independent, they often see very little use for women. Such a traditional gender role would seem to suggest that hostile sexism and antisocial personality disorder would be positively correlated with each other, because such men (i.e., those with hostile sexism) who are antisocial would be less likely than other men to form close relationships with or even see a use for women.

Method

Participants

The participants in the present research came from several lower division psychology courses at a small midwestern university. The sample consisted of 101 participants (49 men; 52 women) who were assessed during the fall of 1999. The participants volunteered to participate in the research projects as one way to partially fulfill requirements in their respective courses. Approximately 70% of the participants were lower division students (n = 71), and the rest were upper division students (n = 28) or else held some other academic standing (n = 2). Most of the sample were between 16 and 25 years of age (n = 90), and the others were older (n = 11). Most of the persons in the sample were European American (n = 85), and the majority of the remainder were African American (n = 8) and Hispanic (n = 5). Most of the sample reported that they had never been married (n = 90), and the others were either currently in their first marriage (n = 9) or divorced (n = 2). Most participants (n = 91) reported they had no children, and the rest had between one and three children (n = 10). The majority of the participants (n = 63) reported they had an annual family income of $20,000 or more, and the rest had incomes below $20,000 (n = 38).

Measures

Personality Diagnostic Questionnaire—4+ (PDQ–4+). The PDQ–4+ (Hyler, 1994) is a self-administered, forced-choice, true–false diagnostic instrument measuring all 12 DSM–IV Axis II personality disorders (Hyler, 1994). In responding to the PDQ–4+, the participants indicated how much the statement was generally true or generally false for them. We used a two-point true-and-false scale to collect data on the participants’ responses, with responses of true being scored 1, and responses of false being scored 0. Also, we computed scores on the 12 PDQ–4+ subscales by summing the participants’ responses to the items assigned to each subscale. Higher subscale scores corresponded to greater personality disorder symptomatology.

Reich, Yates, and Nduaguba (1989) reported evidence for the reliability of the PDQ–4+, and Hyler et al. (1990) found evidence that the PDQ showed adequate test–retest reliability for many of the DSM–III personality disorders. Hyler et al. also found evidence for the validity of the PDQ–4+, showing that the PDQ–R is an effective screening instrument for the accurate identification of personality disorders. Hunt and Andrews (1992) suggested that the PDQ–R reputation for overdiagnosing may be due to the fact that it is a self-report questionnaire, and that participants may be more likely to report their true feelings compared to being confronted face to face with the question. Trull and Larson (1994) found evidence for the validity of the PDQ–4+, showing that the PDQ–R was significantly correlated with scales similar to those of the Structured Clinical Interview for the DSM–III–R. This interview is a semistructured interview method designed to assess personality disorder symptomatology.
Ambivalent Sexism Inventory (ASI). The ASI (Glick & Fiske, 1996) measures two aspects of sexism: hostile sexism and benevolent sexism. Hostile sexism consists of (a) dominant paternalism (a tendency to view women as being not fully capable of adult responsibility), (b) competitive gender differentiation (a belief that only men have traits necessary to govern social institutions), and (c) heterosexual hostility (the belief that women use their sexuality to gain dominance over men). By contrast, benevolent sexism consists of (a) protective paternalism (a belief that women need to be protected by men because they are not fully competent), (b) complementary gender differentiation (a belief that women are very different from men, but possess many positive traits that complement those of men), and (c) heterosexual intimacy (a desire for psychological closeness with women).

Participant responses were measured on a 5-point Likert scale, with items being scored from 0 (strongly disagree) to 4 (strongly agree). In order to create subscale scores, we summed the items on each subscale. Higher positive scores thus correspond to greater hostile sexism and benevolent sexism, respectively.

Reliability scores for the ASI ranged from .83 to .92 (Glick & Fiske, 1996). Research showing that discrimination against African Americans is positively correlated with ambivalent sexism provides evidence for the discriminant validity of the ASI. Glick and Fiske (1996) found a positive correlation between the Recognition of Discrimination scale and the Hostile Sexism scale. It also has a weakly positive correlation with the Benevolent Sexism scale (the weak correlation was probably due to the subjectively positive nature of benevolent sexism).

Masculine Behavior Scale (MBS). Snell (1989) designed the MBS to measure four behavioral tendencies stereotypically imputed more to men than women: restrictive emotionality (an inability to display emotions in public), inhibited affection (an inhibition of affection toward loved ones), success dedication (an excessive dedication to the pursuit of success), and exaggerated self-reliance (a preoccupation with extreme self-reliance and control of one’s life). In responding to the MBS, the participants were asked in the instructions to indicate how much they agreed–disagreed with that statement. A 5-point Likert scale evaluated the participants’ responses, with each item scored from +2 (agree) to –2 (disagree). We computed subscale scores by summing the responses to the items assigned to each individual subscale. Negative (positive) scores indicated that the participants described themselves as not engaging (as engaging) in the stereotypically masculine behaviors measured by the MBS.

Snell (1989) provided evidence for the reliability and validity of the MBS. Internal reliabilities ranged from a low of .69 to a high of .89, and he reported a positive correlation between restrictive emotionality and the exaggerated self-reliance subscale.

Personal Attributes Questionnaire (PAQ). Spence (1993) designed the PAQ to measure the socially desirable aspects of instrumentality (defined as self-assertive traits judged to be more characteristic of men than of women) and expressiveness (defined as desirable, socially oriented traits judged to be more characteristic of women than of men). The PAQ consists of two scales, expressiveness and instrumentality (Dowson, 1992). The expressive scale is composed of self-assertive traits more characteristic of men than of women. By contrast, the instrumentality scale is composed of desirable, socially oriented expressive traits that were judged to be more characteristic of women than of men.

In responding to the PAQ, the participants chose an answer that best represents the type of person they think they are. Each question consisted of two opposing characteristics, with the letters A–E in between them. The letters formed a scale between two extremes (scored from 0–4). Participants chose a letter that described where they fall on the scale.

Spence and Helmreich (1978) reported that reliability for the PAQ subscales were .85, .82, and .78 for M, F, and M–F, respectively. Spence (1993) found that men and women differ on the two PAQ scales and on the two BSRI scales, men scoring higher than women on the I and M scales and lower on the E and F scales of these two instruments. Spence (1993) also reported evidence for the validity of the PAQ, showing that the PAQ assesses desirable instrumental and expressive traits.

Procedure

When the participants arrived at the testing room, a female experimenter briefly described the purpose of the study to them, and she asked them to read and sign an informed consent form. The experimenter guaranteed complete anonymity and assured participants that their responses would be kept in complete confidentiality. All participants who entered the testing room agreed to participate. Each participant then received a questionnaire booklet containing the various measures (in the same order as described above). Following the completion of the measures, the participants received a written debriefing form that explained the purpose of the study. The completion of the questionnaire booklet required approximately 25–65 min. The experimenter tested small groups of
TABLE 1
Correlations Between the Personality Diagnostic Questionnaire–4+ (PDQ–4+) and Both the Ambivalent Sexism Inventory (ASI) and the Personal Attributes Questionnaire (PAQ) Among University Undergraduates

<table>
<thead>
<tr>
<th>Personality disorders on the PDQ–4+</th>
<th>Gender role measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HS</td>
</tr>
<tr>
<td>Total PDQ–4+ score</td>
<td>.23*</td>
</tr>
</tbody>
</table>

**DSM–IV Cluster A personality disorders:**
- Paranoid personality disorder: .18* .24** .02 –.17*
- Schizoid personality disorder: .06 .20* –.10 –.32****
- Schizotypal personality disorder: .09 .17* –.01 .01

**DSM–IV Cluster B personality disorders:**
- Antisocial personality disorder: .16 .17* .09 –.24**
- Borderline personality disorder: .20* .17* –.26*** –.27***
- Histrionic personality disorder: .07 .05 –.12 .01
- Narcissistic personality disorder: .13 .13 .03 –.23**

**DSM–IV Cluster C personality disorders:**
- Avoidant personality disorder: .12 .04 –.53**** –.19*
- Dependent personality disorder: .13 .08 –.33**** –.24**
- Obsessive-compulsive personality disorder: .25** .01 –.07 .10

**DSM–IV Appendix B personality disorders:**
- Negativistic personality disorder: .10 .02 –.26*** –.30****
- Depressive personality disorder: .09 .01 –.35**** –.17*

*Note. $N = 101$. Higher scores on the PDQ–4+ correspond to greater amounts of the symptoms associated with each of the personality disorders measured by the PDQ–4+. Higher scores on the gender role measures correspond to greater hostile sexism (HS), benevolent sexism (BS), PAQ instrumentality (PAQ-I), and PAQ expressiveness (PAQ-E), respectively.

*p < .05. **p < .01. ***p < .005. ****p < .001.

up to 25 participants during each of the nine separate sessions.

Results

The following paragraphs present the results for the PDQ–4+ personality disorders, grouped according to each gender role measure. The correlations among the PDQ–4+ subscales and the gender role measures are presented in Table 1 (ASI and PAQ) and Table 2 (MBS).

Results for the ASI

An inspection of Table 1 indicates that hostile sexism correlated positively with paranoid personality disorder, $r(100) = .18, p < .040$, borderline personality disorder, $r(100) = .20, p < .023$, and obsessive–compulsive personality disorder, $r(100) = .25, p < .006$. Inspection of Table 1 shows that benevolent sexism correlated positively with paranoid personality disorder, $r(100) = .24, p < .009$, schizoid personality disorder, $r(100) = .20, p < .021$, schizotypal personality disorder, $r(100) = .17, p < .047$, antisocial personality disorder, $r(100) = .17, p < .049$, and borderline personality disorder, $r(100) = .17, p < .047$.

Results for the PAQ

An examination of Table 1 indicates that instrumentality correlated negatively with borderline personality disorder, $r(101) = -.26, p < .004$, avoidant personality disorder, $r(101) = -.53, p < .001$, depen-
TABLE 2

Correlations Between the Personality Diagnostic Questionnaire–4+ (PDQ–4+) and the Masculine Behavior Scale (MBS) Among University Undergraduates

<table>
<thead>
<tr>
<th>Personality disorders on the PDQ–4+</th>
<th>Gender role measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PDQ–4+ score</td>
<td>ESR</td>
</tr>
<tr>
<td></td>
<td>.14</td>
</tr>
</tbody>
</table>

**DSM–IV Cluster A personality disorders:**
- Paranoid personality disorder: .33****, .21*, .26***, .02
- Schizoid personality disorder: .09, .35****, .35****, .02
- Schizotypal personality disorder: .11, .18*, .14, .08

**DSM–IV Cluster B personality disorders:**
- Antisocial personality disorder: .01, .17*, .18*, .05
- Borderline personality disorder: .03, .12, .17*, .08
- Histrionic personality disorder: .12, −.13, −.02, .02
- Narcissistic personality disorder: .16, .23*, .24**, .08

**DSM–IV Cluster C personality disorders:**
- Avoidant personality disorder: −.09, .05, .26***, −.20*
- Dependent personality disorder: −.09, .07, .18*, −.21*
- Obsessive–compulsive personality disorder: .12, .06, .06, .06

**DSM–IV Appendix B personality disorders:**
- Negativistic personality disorder: .02, .14, .12, −.08
- Depressive personality disorder: .03, −.04, .18, −.08

Note. N = 101. Higher scores on the PDQ–4+ correspond to greater amounts of the symptoms associated with each of the personality disorders measured by the PDQ–4+. Higher scores on the MBS correspond to greater restrictive emotionality (RE), inhibited affect (IA), success dedication (SD), and exaggerated self-reliance (ESR), respectively.

*p < .05. **p < .1. ***p < .005. ****p < .001.

Results for the MBS

An inspection of Table 2 indicates that exaggerated self-reliance correlated positively with paranoid personality disorder, r(101) = .26, p < .001. As can be seen in Table 2, restrictive emotionality correlated positively with paranoid personality disorder, r(101) = .21, p < .001. Antisocial personality disorder, r(101) = .21, p < .001, schizoid personality disorder, r(101) = .35, p < .001, schizotypal personality disorder, r(101) = .18, p < .036, antisocial personality disorder, r(101) = .17, p < .041, and narcissistic personality disorder, r(101) = .23, p < .011. An examination of Table 2 also indicates that inhibited affect correlated positively with paranoid personality disorder, r(101) = .26, p < .001, schizoid personality disorder, r(101) = .35, p < .001, antisocial personality disorder, r(101) = .18, p < .001.
.038, borderline personality disorder, \( r(101) = .17, p < .040 \), narcissistic personality disorder, \( r(101) = .24, p < .008 \), avoidant personality disorder, \( r(101) = .26, p < .005 \), and dependent personality disorder, \( r(101) = .18, p < .034 \). Additionally, Table 2 shows that success dedication correlated negatively with avoidant personality disorder, \( r(101) = -.20, p < .022 \), and dependent personality disorder, \( r(101) = -.21, p < .017 \).

**Discussion**

We conducted the present study to investigate whether there would be a relation between several gender role tendencies and the DSM–IV personality disorders. More specifically, we anticipated that antisocial personality disorder would be positively associated with inhibited affection (i.e., an inability to show affection properly) and hostile sexism (i.e., hostile and negative attitudes toward women), and negatively associated with expressiveness (i.e., expressing oneself in a socially desirable caring way). The results supported all of these predictions, revealing that antisocial personality disorder symptoms were directly related to inhibited affection and hostile sexism, and inversely related to expressiveness.

The present research also revealed several additional results. For example, we found a positive association between exaggerated self-reliance and paranoid personality disorder. This finding might have occurred because one of the symptoms of paranoid personality disorder is that people who have these symptoms are reluctant to confide in others because they think that people are out to get them (American Psychiatric Association, 1994). In addition, we found a positive association between restrictive emotionality and paranoid, schizoid, schizotypal, antisocial, and narcissistic personality disorders. Such findings make sense, because people who are restrictive in their emotions might be that way because of paranoia (i.e., paranoid or schizotypal), because they do not want to be close to people (i.e., schizoid), because they feel everyone should adore them, not the other way around (i.e., narcissistic), or because they are often deceitful and unable to keep close relationships with people (i.e., antisocial). Other results revealed that inhibited affection was positively associated with paranoid, schizoid, antisocial, borderline, narcissistic, avoidant, and dependent personality disorders. These results could have occurred because people with these disorders probably have enormous difficulty expressing appropriate affection toward people. By contrast, we found an inverse association between success dedication and both avoidant and dependent personality disorders, perhaps because people with dependent and avoidant personality disorders often fail to seek out dedication to their own success. Such individuals would probably rather be more dependent on others for that success, or they may try to avoid being successful so they can avoid being in the spotlight.

In addition to the MBS, the present study examined whether any of the DSM–IV personality disorders would be related to the ASI subscales, hostile and benevolent sexism. Hostile sexism was positively associated with paranoid, borderline, and obsessive-compulsive personality disorders. One possible explanation for these findings is that people who are characterized by hostile sexism may think that women are the persons who are out to get them (i.e., paranoid), that women are the reason why there are no close, interpersonal relationships between people (i.e., borderline), or that women are the reason for why the world is such a disorderly place (i.e., obsessive-compulsive). By contrast, we found a direct relation between benevolent sexism and paranoid, schizoid, schizotypal, antisocial, and borderline personality disorders. These research findings could have occurred because people who feel the need to control others, so as to avoid being hurt themselves, may want to see people in more subservient roles (i.e., paranoid), cannot keep intimate relationships so they want women in more traditional roles (i.e., schizoid), hold some odd belief that women should be controlled and should have a more traditional role in society (i.e., schizotypal), cannot conform to society and want women in a more traditional role (i.e., antisocial), or feel they have no control over their life so they want others to have no control either (i.e., depressive).

Other results reported in this research were concerned with instrumentality (i.e., self-assertiveness) and expressiveness (i.e., compassion). We found an indirect association between instrumentality and borderline, avoidant, dependent, negativistic, and depressive personality disorders. Also, we found an indirect relation between expressiveness and paranoid, schizoid, antisocial, borderline, narcissistic, avoidant, dependent, negativistic, and depressive personality disorders. Paranoid personality disorder might have been inversely associated with expressiveness because people having these paranoid symptoms are delusional, which makes it hard for them to be caring toward others. Perhaps the reason we found an indirect association between schizoid personality disorder and expressiveness was because people with this disorder lack the desire to have close and intimate relationships, so they never really learn how to express themselves on an intimate level. By contrast, the reason we found antisocial personality disorder to be negatively associated with expressiveness was
probably because these antisocial people refuse to conform to society’s norms. Such individuals are rebellious and spend little time expressing compassion for others; they just exploit and use them (American Psychiatric Association, 1994). We also found an inverse association between borderline personality disorder and both instrumentality and expressiveness; perhaps people having this disorder are not really stable in their self-image, so they do not really show assertive traits or know how to express themselves in interpersonal interactions.

Several other unanticipated results emerged in the present research. For example, we found that narcissistic personality disorder correlated negatively with interpersonal expressiveness, perhaps because narcissistic people are so self-involved that they may not be very tolerant of others’ viewpoints; they hear only their own. This intolerance may make them incapable of expressing compassion to others, because they think they are always right. We also found a negative correlation between avoidant personality disorder and both instrumentality and expressiveness; people showing the symptoms of this disorder may not like the self-attention that is associated with assertiveness or the closeness associated with interpersonal tasks. Still other results revealed an inverse relation between dependent personality disorder and both instrumentality and expressiveness. Because people with this disorder need other people to help them, they may not able to be assertive or expressive by themselves. Additionally, we found an indirect association between negativistic personality disorder and both instrumentality and expressiveness, perhaps because people with these personality disorder symptoms are usually negative about everything. They are not inclined to put forth much effort on their activities because they automatically assume they will not like them, nor are they able to express themselves because of their negativity. Finally, we reported negative correlations between depressive personality disorder and both instrumentality and expressiveness; these findings are consistent with the notion that people with these personality disorder symptoms are usually inexpressive and unassertive because they lack the motivation to be assertive for themselves and to reach out to others in an interpersonal manner.

There are several possibilities for future research on the present topic. One possibility would be to replicate the present study with a more diverse group of people from a wider age range. Another possibility would be to conduct a study that specifically focuses on a particular personality disorder (e.g., antisocial personality disorder) and a particular gender role tendency (e.g., restrictive emotionality). For instance, such research could focus on two groups of participants, persons clinically diagnosed with antisocial personality disorder and persons with no clinical diagnosis of antisocial personality disorder. Such a research design would allow researchers to examine whether a relation might exist between antisocial personality disorder and restrictive emotionality among clients already diagnosed with this personality disorder. The present research represents a preliminary examination of the association between several gender role tendencies and the DSM–IV personality disorders.

References


Parental Factors Contributing to Narrative Skills Development in Preschool Children

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Loyola Marymount University

Narrative skills play a crucial role in the progression from preliteracy to full reading comprehension. However, factors contributing to the development of narrative skills are not fully understood. In this study we explored the relation of preschoolers’ home literacy environment to narrative skills. The narrative skills of 41 preschoolers were significantly correlated with several factors that are usually controllable by parents, including use of electronic reading-related toys, trips to the library, both the parent and child’s print exposure, television variables, and parent-child reading interactions. The results indicated that electronic reading-related toys may be important for the development of narrative skills, and that other variables, such as parent knowledge of children’s literature and self-reports of their children’s print exposure, may have lesser or negligible effects on narrative ability. The findings, especially those pertaining to electronics, are important to educators and parents alike as they may provide avenues for improving children’s narrative skills.

METALINGUISTIC SKILLS (AWARENESS OF LANGUAGE PROCESSES) account for a significant amount of the variance as predictors of early reading (Mason, 1992). Phoneme awareness, the ability to detect and manipulate individual speech sounds, is a primary metalinguistic skill. It is now well known that phoneme awareness is the strongest predictor of early reading achievement (Johnston, Anderson, & Holligan, 1996; Morais & Kolinsky, 1995). Despite the extensive knowledge regarding phoneme awareness, researchers know less about the contribution of other metalinguistic skills to early reading. Because researchers have determined that one of these skills, narrative ability (storytelling and production), is also strongly related to reading skills (Haden, Haine, & Fivush, 1997; Roth, Speece, Cooper, & De La Paz, 1996; Snow & Dickinson, 1990), we thought it important to explore factors that may contribute to the development of narrative skills in the preschool years.

Initial decoding skills, which are influenced by phoneme awareness, contribute early on to reading success (Mason, 1992). However, the relation between phoneme awareness and reading comprehension appears to be weak (Ehri, 1979), leading some researchers to propose that narrative skill may mediate the relation between early and later literacy skills (Roth et al., 1996; Westby, 1985). As reading comprehension becomes more important in later grades, the pivotal role of phoneme awareness may become secondary to the influence of narrative skills (Just & Carpenter, 1987; Roth et al., 1996; Weinberger, 1996). Because narrative skills become so important in later years, it is critical to understand factors that contribute to their development in the early years.

A well-researched source of early experiences that is known to be linked to literacy development is the home literacy environment, of which multiple facets appear to contribute to later reading abilities. Research clearly shows that differences in children’s acquired knowledge about books and reading at the time of school entry are predictive of their subsequent academic achievement in the early and later school years (Mason, Stewart, Peterman, & Dunning, 1992; Scarborough, 1989; Scarborough & Dobrich, 1994). Family literacy habits and parental attitudes toward literacy are also highly predictive of children’s success in learning (Scarborough & Dobrich, 1994), decoding of simple words, and reading comprehension at the end of third grade (Stewart, 1995). However, children’s language abilities in the preschool...
years may direct parental choices regarding their children’s literacy development, thereby influencing their reading comprehension scores in the later school years.

There are many aspects of the home environment that may be associated with the development of narrative skills. However, to date, researchers have not directly addressed this question and instead have tended to focus their attention on phonological awareness and reading. Aspects that influence later literacy development include having favorite books, letter knowledge, parents reading to children prior to school entry, access to home computers, and parents’ knowledge of literacy teaching in school (Weinberger, 1996). However, because the Weinberger (1996) study did not specifically investigate narrative abilities we do not know precisely how the home literacy environment affects narrative skills. Parental print exposure, an aspect of the home literacy environment, is also strongly related to children’s literacy development (Symons, Szuszkiewicz, & Bonnell, 1996). This factor includes opportunities for parents to enrich their own and their children’s print environment through subscriptions to newspapers, magazines, and journals, and by actively choosing to increase their exposure to books. Trips to the local library by parents and children may expose the children to a greater diversity in reading material and, perhaps, also lead to a higher frequency in book reading. The trips to the library are aspects of children’s reading development that are primarily controlled, directly or indirectly, by the parents. Similarly, the parents determine other aspects of a child’s reading development such as whether they use computer games, and how often they engage in book reading. Because there is enormous variability from child to child, and from home to school, in how storybook reading and other factors contribute to narrative skill development (Snow & Dickinson, 1990), it is important to determine which aspects of the home environment help to develop strong narrative skills.

One factor of particular interest is the role of computers. Several studies have shown significant benefits of computer programs for reading development and reading-related skills such as problem-solving and language development (Stewart, 1995; Torgesen & Barker, 1995). A meta-analysis of research studies on technology-based curricula at the elementary-school level showed that the use of personal and video game computers has significant positive effects on reading and language arts development (Blanchard & Stock, 1999). Specifically, computer games emphasizing reading-related skills facilitate the emerging literacy skills of kindergarten children (Reinking, McKenna, Labbo, & Kieffer, 1998). Several studies conducted on children at the preschool and first-grade levels have shown that computer-assisted instruction resulted in significant improvement of metalinguistic skills compared to traditional instruction with textbooks only (Erdner, Guy, & Bush, 1998; Hall, Hughes, & Filbert, 2000; Mioduser, Tur-Kaspa, & Leitner, 2000). Finally, dyslexic children also have shown gains in phonological coding and word recognition while working with specialized computer programs (Olson, Wise, & Rack, 1989). A common conclusion reached by researchers and practitioners has been to recommend integrating computers into the classroom as early as the preschool years (Scherer, 1989). These studies indicate a need to study the role of computers in early reading more carefully. In particular, we need to understand how computer programs might facilitate the development of narrative skills, a facet that is not yet well understood.

Computers may be effective in facilitating reading and language development for several reasons. First, they are a source of educational innovation by providing children with a different cognitive framework for learning than afforded by the traditional classroom setting. Second, children often report that activities involving computers are more enjoyable and exciting than rote, less interactive activities (Papert, 1975). Third, children tend to have longer attention spans when working with computers, and this increased attention span may allow them to become more emotionally and intellectually involved in the activity (Papert, 1975). The role of computers in the development of narrative skills specifically is still unknown, and this role was one of the main focal points of the present study.

The purpose of this study was to examine the aspects of the home environment involving parents that may contribute to the development of narrative skills. We examined the materials and activities parents encouraged their children to take part in, which ultimately lead to literacy development. Using information gathered about the children’s home literacy environment and a test of narrative ability, we analyzed the impact the home has on narrative skills development. We hypothesized that facets of the home environment that involve active participation of the parents in the children’s literacy, such as using home computers, parents reading to their children, the number of books available to children, and trips to the library would be associated with increased narrative development. In contrast, we hypothesized that aspects of home literacy involving less active participation by the parents, such as television viewing, would be less associated with narrative skills development.
Method

Participants

The participants were 41 children (18 boys and 23 girls) from three private preschools in the suburban Los Angeles area who were part of a larger study of early reading skills (see Foy & Mann, 2001). The middle-class children, who were from 4 to 6 years old at the time of the testing, spoke English as their primary language.

Materials

The Strong Narrative Assessment Procedure evaluated the narrative skills of the participants (Strong, 1998). In this standardized assessment, children listen to a story while following along in a wordless book with detailed pictures (Mayer, 1978a, 1978b). Comprehension was examined using standardized questions of content and inferences. An example of a comprehension question was “Why did the bees chase the dog?” and an example of an inference question was “Why did the dog run along beside the deer, barking at him?” (Strong, 1998, p. 137).

The children’s primary caregiver (the mother or father) completed a questionnaire that included questions about the children’s home literacy environment (Foy & Mann, in press). This information was used for an in-depth analysis of the literacy experiences of the children. These questions included the number of books in the home and the age at which the parents started reading with their children (see Table 1). In addition, the parents ranked their emphases during reading to their children from 1–10, with higher numbers indicating greater emphasis on a specific goal. Examples of such emphases included teaching their children to recognize and learn the letters of the alphabet and developing broad interests in lots of stories and types of literature. Finally, the parents completed two checklists of titles of children’s books and popular authors of children’s books (Senechal, LeFevre, Hudson, & Lawson, 1996). Both checklists contained 50% foils, listed on separate lines in random order. The foils for the titles were imaginary titles, whereas the foil names were generated from editorial lists of academic journals. The checklists were assumed to reflect the parents’ relative exposure to children’s literature. We corrected the scores on these questionnaires for guessing by subtracting the foil scores from the target scores. In order to simplify the statistical analyses, we first conducted principal component analysis with varimax rotation for each of the responses on the home literacy questionnaire. The analysis resulted in seven independent factors (see Table 1): Teaching Strategies, Parent Knowledge, Reading Frequency, Provides Opportunities, Recreational Television, Educational Television, and Late Start. These factors explained 78.22% of the variance for the items on the questionnaire.

Verbal intelligence and nonverbal intelligence were measured using the vocabulary and block design subscales of the Wechsler Preschool and Primary Scale of Intelligence (Wechsler, 1989). In the vocabulary test children give definitions for words of increasing difficulty, whereas in the object relations task (block design) children use bicolored blocks to copy designs within a time limit.

Design and Procedure

The children listened to two stories over headphones while following along using a wordless picture book. We used the first book, *A Boy, a Dog, and a Frog* (Mayer, 1978a), as a practice trial. The second story, which we used for the analysis, was *Frog, Where Are You?* (Mayer, 1978b). This book was presented to the children following the same procedure as the first. After listening to the story on headphones, the children immediately retold the story to a naïve listener, aided by looking at the book. The retelling was tape-recorded and later transcribed by two independent assistants. Interrater reliability was 98%. A third transcriber resolved disagreements (which constituted less than 1% of the utterances). Children received stickers to reward them for their participation in the study.

Scoring of Narrative Skills

The two independent raters analyzed the transcripts for clausal units (c-units), number of words per c-unit, and total number of words. A c-unit consists of a single clause within a sentence that constitutes one fragment of meaning (Strong, 1998). One c-unit contains a main clause with both a subject and a predicate, and any attached subordinate clauses. The total number of words measure was the average total words for the two narrative retellings. Words per c-unit in each child’s narrative were calculated as the total number of words per c-unit. We excluded from the analyses all false starts, revisions, filler words/phrases, and remarks that were unrelated to the story retelling.

Results

We examined the hypotheses with zero-order Pearson product–moment correlations between the home literacy factor scores and the narrative discourse measures. Subsequently, partial correlations removed the effects of age and IQ.

Zero-order correlations revealed that the Provides Opportunities, Parent Knowledge, and Educational
TV factors were the only factors related to narrative discourse measures (see Table 2). As shown in Table 1, the Provides Opportunities factor represents specific opportunities that parents provide for activities that are reading related such as arranging for several people to regularly read to the child, visiting libraries, making computer programs available to the children, and structuring their time so that they can engage in solitary reading. The Provides Opportunities factor was significantly correlated with the number of c-units in the narrative and the number of words in the narrative, explaining from 18% to 29% of the variance in these measures. When age and IQ were controlled in partial correlation analyses, the results were unchanged, indicating that the relation between Provides Opportunities and narrative discourse measures was independent of the children’s age and intelligence (see Table 2).
In order to explore our finding in more detail, we separately correlated the items contributing to the Provides Opportunities factor with the narrative discourse measures (see Table 3). This analysis revealed that two items on the Provides Opportunities factor were closely associated with narrative skills: frequency of library visits and time spent using reading-related computer programs. The frequency of getting library books for the child was significantly correlated with all three narrative discourse dimensions: the number of c-units in the narrative, the number of words per c-unit, and the number of words in the narrative. Partial correlations controlling for age, verbal IQ, and nonverbal IQ remained significant for both the number of c-units in the narrative, the number of words per c-unit, although age effects were related to narrative skills. Partial correlations controlling for age, verbal IQ, and nonverbal IQ were also significant for time the children spent on reading-related computer games. When age and IQ were controlled, time spent on the computer correlated significantly with number of c-units in the narrative, and with the number of words in the narrative.

As described in Table 1, the Parent Knowledge factor measures the extent to which parents perceive themselves as contributing to a literacy environment. It includes how many books that the parent reports the child has at home, how often during the week the parent reports that the child asks to be read to, and a children’s title and author checklist, which determines the parent’s familiarity with a wide selection of children’s literature. In contrast to the Provides Opportunities factor, the Parent Knowledge factor was negatively correlated with the number of c-units in the story in zero-order and partial correlations (see Table 2). Further analysis of items contributing to the Parent Knowledge factor score revealed that there was a trend for all items loading on this factor to be negatively associated with at least one narrative measure. However, significance was only achieved for the negative correlations between the parents’ report of the number of books the children have in the home and the number of c-units (see Table 4). Educational TV was also significantly negatively correlated with the number of words per c-unit, although age effects clearly contributed to this finding.

**Discussion**

In support of our hypotheses, we found that specific aspects of the home literacy environment were associated with narrative abilities in preschoolers. These aspects included opportunities that the parents specifically provided for exposure to reading-related experiences and parental reports of their children’s exposure to reading materials. The strategies that parents reported using for teaching reading, frequency of shared reading experiences, exposure to television (educational and recreational), and age at which shared reading experiences began were unrelated to narrative skills.
Our results show that parents’ active provision of some interactional reading-related activities is associated with stronger narrative skills in their children, explaining a moderate proportion of the variance. In particular, access to many diverse literature experiences through frequent library visits and to reading-related computer games appeared to be most strongly related to narrative abilities. Library visits are a direct reflection of the active commitment parents make toward their children’s reading development. This commitment was associated with stronger narrative skills on all dimensions analyzed. Children who

### Table 3

<table>
<thead>
<tr>
<th>Component</th>
<th>Narrative discourse measure</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Number of c-units</td>
</tr>
<tr>
<td></td>
<td>Zero-order</td>
</tr>
<tr>
<td>Number of different people that read to the child</td>
<td>−.15</td>
</tr>
<tr>
<td>Frequency of getting library books</td>
<td>0.49*</td>
</tr>
<tr>
<td>Time spent on reading-related computer games</td>
<td>.29</td>
</tr>
<tr>
<td>Frequency child engages in solitary reading</td>
<td>.21</td>
</tr>
</tbody>
</table>

*p < .05.

**p < .05 when age, verbal and nonverbal IQ are controlled.

### Table 4

<table>
<thead>
<tr>
<th>Component</th>
<th>Narrative discourse measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of c-units</td>
</tr>
<tr>
<td></td>
<td>Zero-order</td>
</tr>
<tr>
<td>How many books does your child have at home?</td>
<td>−.42*</td>
</tr>
<tr>
<td>How often during week does child ask to be read to?</td>
<td>−.05</td>
</tr>
<tr>
<td>Children’s Title Checklist</td>
<td>−.10</td>
</tr>
<tr>
<td>Children’s Author Checklist</td>
<td>−.35</td>
</tr>
</tbody>
</table>

*p < .05.

**p < .05 when controlled for age.
make frequent trips to the library are most likely exposed to a wide variety of books and literature that may be associated with the development of narrative abilities. This relation is supported by research that shows that exposing children to a wide variety of books is a strong contributor to the development of reading skills (Dickinson, de Temple, Hirschler, & Smith, 1992; Heath, 1982; Senechal et al., 1996).

In addition to exposure to shared reading experiences, we found that time spent using electronic reading toys such as computers was also directly associated with narrative performance. The relation was significant both in the number of c-units that the children produced, and also in the total number of words in the narrative. Narrative skills may be enhanced during exposure to computers because the children’s enjoyment may result in them engaging in the activity more often, and possibly attending more during the activity. The role that computers play in academic settings is now well recognized (for example, Miller & Chapman, 1983; Nieboer, 1983; Olson et al., 1989; Robeck & Wallace, 1990). Studies have shown that giving children access to computers allows them greater control and the opportunity to become both intellectually and emotionally involved (Papert, 1975). Research also has shown that active involvement by children, and a sense of control over the task on the computer, make computer materials highly effective in teaching reading skills (Strickland, Feeley, & Wepner, 1987). The advantages of fun activities involving electronic toys and computers may have important practical implications for educators. Although this embrace of technological aids for education has been extended to preschool classrooms (Psotka, 1982), our study is the first to show that computer experiences during the preschool period are associated with enhanced narrative skills. However, as with all correlational analyses, the causation of the relation cannot be inferred, and the stronger language abilities of these children may be what draw them toward activities involving computers in the first place. Further research is needed to determine the cause–effect relations between narrative skills and the use of reading-related computer games.

In direct contrast to our results for the Provides Opportunities factor, Parent Knowledge was negatively correlated with the number of c-units in the child’s narrative. A possible interpretation of this finding is that this factor may be a reflection of the parent’s perceived contribution to their child’s reading development rather than the actual time and effort invested. Parents who buy many books for their children but who do not actively participate in their children’s literacy experiences appear not to contribute to the development of their children’s narrative abilities. Another explanation for this result is that the items on the Parent Knowledge factor involve self-reports of behaviors that are valued highly in American culture (Scarborough & Dobrich, 1994), and thus may be subject to social desirability effects on the part of the parents. These items may be less reliable than other items on our questionnaire.

Future studies regarding narrative skills of preschool-aged children should focus on a more diverse sample of participants. Although the children in our study were of varying ethnic backgrounds, they did not represent a wide variety of socioeconomic backgrounds and were all enrolled in private preschools. Given the strong link found between socioeconomic factors and language and reading skills (Scarborough & Dobrich, 1994), it will be important to determine if our results can be generalized to other populations, or if they are specific to a middle-class population. Future studies should include children in public schools, with specific emphasis on acquiring a socio-economically diverse sample.

In addition, the results regarding computer-aided instruction and its positive impact on narrative skills should be further investigated. It will be important to determine whether the relation between computer access and narrative skills development is direct, or whether it is mediated by other factors such as vocabulary and morphology. It will also be important to determine which types of computer games or programs result in significant improvement in this metalinguistic skill. Variables such as exposure time and cost will greatly affect the feasibility of integrating them into the education of young children.

In summary, this study adds to evidence showing that the home literacy environment is associated with early reading development. This study also demonstrates that parents can facilitate their children’s narrative development, an important determinant of later reading achievement (e.g., Snow & Dickinson, 1990), by actively exposing their children to literacy experiences during the preschool years.

References
PARENTAL FACTORS CONTRIBUTING TO NARRATIVE SKILLS


Universities today are a multicultural environment, and cultural diversity can lead to both negative and positive consequences. Negative consequences may include dividing campus groups or causing conflict regarding curriculum (Ross, 1999), whereas positive consequences could be enhancing student awareness of other cultures and the retention of racial minority students (Ponterotto, Lewis, & Bullington, 1990). Examining the multicultural climate at a university can be challenging because there may be considerable differences among faculty, staff, and student perceptions and attitudes. By embracing a culturally diverse campus, however, the university may attract more minority students (Redmond, 1990) and faculty. Prior studies have shown that universities that do not address cultural diversity issues tend to have greater conflict and tension between racial groups (Altbach, 1991; Levin & McDevitt, 1993) than universities that do address these issues. Similarly, a culturally diverse student body can have a positive impact on students socializing with other students (Chang, 1999).

Globetti, Globetti, Brown, and Smith (1993) examined awareness and sensitivity toward minority students on a college campus in the South by developing a five-question social interaction index. They found that although majority and minority groups expressed similar degrees of diversity awareness, minority students expressed more multicultural sensitivity than majority students did. That is, majority and minority students had a good understanding of the difficulties a person might have “fitting in” to a campus subculture (awareness), but majority groups often lacked appreciation for other groups (sensitivity).

Interventions that can assist faculty, staff, and students in assessing attitudes toward ethnic diversity would be beneficial to a university. However, very little published research has examined the cultural diversity attitudes of students, faculty, and staff simultaneously. Because of the high rate of interactions among these three groups, it is important to look at the groups both individually and in comparison with each other. The relation between these select groups may be an influential one. For example, if professors share their views on ethnicity in class, it is possible that students in those classes will be influenced by

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this interaction, whether negatively or positively. If those professors are expressing views that the university does not wish to portray, this discrepancy could be an issue for students, staff members, and the greater university community.

Currently, universities are actively attempting to change current opinions about diversity. Most interventions try to increase communication and interactions between cultures (Pope-Davis & Ottavi, 1992). These goals are typically achieved through raising awareness, improving sensitivity toward different cultures, or enhancing intercultural communication (Carrell, 1997). Some universities have tried games, courses, or seminars to increase cultural awareness (Carrión, 1998; Chahin, 1993). Bruschke, Gartner, and Seiter (1993) used a simulation game to educate college students about culture shock and ethnocentrism. They reported that the simulation led students to be more favorable and motivated toward multicultural instruction, yet, ironically, it also increased ethnocentrism.

McClelland, Cogdal, Lease, and Londono-McConnell (1996) created a measure of attitudes about diversity. The Multicultural Assessment of Campus Programming Questionnaire is an instrument that asks students about (a) how they feel about the university’s commitment to diversity, (b) how they perceive majority and minority student relations on campus, and (c) if campus programming efforts increase the awareness and understanding of diversity. McClelland et al. (1996) found that faculty and staff perceived the institution as more culturally sensitive than did students. Sands (1998) found that undergraduate and graduate women support a culturally diverse student body more so than their male counterparts. Research by Qualls, Cox, and Schehr (1992) supported this finding.

The goal of this study was to create a measurement instrument to assess an institution’s cultural diversity climate. That is, what do students, faculty, and staff expect from the campus environment with respect to race relations? What role do the faculty play in teaching and talking about race relations on campus? How are the social activities on campus influenced by the racial makeup of the participants? How sensitive are staff members to the differences between the cultural majority and minority group students? What do students, faculty, and staff consider the advantages and disadvantages of cultural diversity? Such a measure could provide a baseline that university officials might use to evaluate longitudinal changes in attitudes toward cultural diversity. This measure would be one way to gauge the effectiveness of interventions.

### Method

#### Participants
Students enrolled in a General Psychology course (n = 577) at a large, western metropolitan university participated for course credit. The average age of the students was 22.91 (SD = 7.14); 53.5% were women and 46.5% were men. Faculty (n = 91) and staff (n = 138) members were solicited to participate via a campus mail system and e-mail. For faculty and staff, those persons receiving campus mail responded by campus mail (response rate of 54.5%), and those persons receiving an e-mail replied either by e-mail (response rate of 31.1%) or by completing the survey on a Web site (response rate of 19.7%). The average age of the faculty was 48.07 (SD = 9.13); 41.1% were women and 58.9% were men. The average age of the staff was 43.05 (SD = 10.40); 53.6% were women and 46.4% were men. The racial demographic characteristics of the students, faculty, and staff are presented in Table 1.

#### Materials
The Campus Diversity Questionnaire (CDQ) is an original instrument. It was created in accordance with standard test construction methods (see Anastasi

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Demographic Characteristics of the Sample</th>
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<tbody>
<tr>
<td>Group</td>
<td>Students</td>
</tr>
<tr>
<td>Number of participants&lt;sup&gt;a&lt;/sup&gt;</td>
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</tr>
<tr>
<td>Mean age (SD)</td>
<td>22.9 (7.1)</td>
</tr>
<tr>
<td>Percent female</td>
<td>53.5%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1.8%</td>
</tr>
<tr>
<td>African American/Black</td>
<td>0.9%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6.9%</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>87.5%</td>
</tr>
<tr>
<td>Asian American/Pacific Islander</td>
<td>2.7%</td>
</tr>
<tr>
<td>Minority Status</td>
<td></td>
</tr>
<tr>
<td>Majority</td>
<td>85.1%</td>
</tr>
<tr>
<td>Minority</td>
<td>14.9%</td>
</tr>
</tbody>
</table>

<sup>a</sup>Thirty-one participants did not select a group category.
& Urbina, 1997; Cohen, Swerdlik, & Smith, 1992, for details). A thorough review of the literature was conducted to ensure that items were selected and retained following the principles of content validity. The complete CDQ is presented in Table 2.

**TABLE 2**

<table>
<thead>
<tr>
<th>Question</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The campus environment is free from racial conflict.</td>
<td>3.08</td>
<td>0.93</td>
</tr>
<tr>
<td>2. Friendships are more likely to be determined by common interests rather than by race.</td>
<td>3.99</td>
<td>0.92</td>
</tr>
<tr>
<td>3. This institution should be doing more to promote diversity.</td>
<td>3.36</td>
<td>0.96</td>
</tr>
<tr>
<td>4. As far as I know, minorities feel comfortable at this institution.</td>
<td>3.53</td>
<td>0.77</td>
</tr>
<tr>
<td>5. Students, faculty, and staff at this institution are exposed to the history and culture of minority groups.</td>
<td>3.00</td>
<td>0.87</td>
</tr>
<tr>
<td>6. In general, the relationship between minority and majority students is a friendly one.</td>
<td>3.71</td>
<td>0.72</td>
</tr>
<tr>
<td>7. This institution should train the faculty and staff in multicultural sensitivity.</td>
<td>3.51</td>
<td>1.00</td>
</tr>
<tr>
<td>8. This institution should have a diversity plan.</td>
<td>3.45</td>
<td>0.98</td>
</tr>
<tr>
<td>9. This institution needs classes that emphasize multicultural diversity.</td>
<td>3.40</td>
<td>1.07</td>
</tr>
<tr>
<td>10. Recruitment of minority students is an institutional priority.</td>
<td>2.70</td>
<td>1.01</td>
</tr>
<tr>
<td>11. I have encountered racial discrimination on this campus.</td>
<td>1.97</td>
<td>1.16</td>
</tr>
<tr>
<td>12. I think that the core curriculum should require courses in multicultural diversity.</td>
<td>2.75</td>
<td>1.23</td>
</tr>
<tr>
<td>13. This institution provides a new student orientation that adequately addresses multicultural diversity.</td>
<td>2.91</td>
<td>0.73</td>
</tr>
<tr>
<td>14. Participation in most campus activities is racially segregated.</td>
<td>2.40</td>
<td>0.97</td>
</tr>
<tr>
<td>15. Hiring practices at this institution indicate that racial/ethnic barriers are gradually eroding.</td>
<td>3.16</td>
<td>0.67</td>
</tr>
<tr>
<td>16. Professors address multicultural issues in the classroom.</td>
<td>3.05</td>
<td>1.10</td>
</tr>
<tr>
<td>17. What are the benefits or advantages (if any) to diversity?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. What are the drawbacks or disadvantages (if any) to diversity?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Age _________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Gender (circle one):       Male     Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Race (circle all that apply):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian American/Pacific Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. University status (circle one):          Student      Faculty   Classified staff   Professional staff</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Questions 1–16 were answered on this scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. Data reported in this table were obtained from those participants who selected a group membership category ($n = 806$).
Results

Initial use of the CDQ appears promising. Indicators on psychometric properties such as validity and reliability are positive. However, the CDQ is particularly useful in detecting differences and relations among the 16 questions and the 2 open-ended questions with regard to personnel status (students, faculty, and staff) and minority–majority group membership.

The CDQ responses of 837 participants were subjected to factor analysis using a varimax rotation and minimum eigenvalue of 1.0. Using factor-loading scores greater than .50, three factors emerged, explaining 46.8% of the variance. The first factor that emerged was labeled Institutional Diversity, and this factor explained 27.1% of the variance. The items that load significantly on this factor (all positively) include questions 3, 7, 8, 9, 10, and 12 (see Table 2). These questions address institutional concerns about diversity, including questions about a diversity plan, training of faculty and staff, curriculum, and recruitment of minority students as an institutional priority.

The second factor that emerged was labeled Interpersonal Diversity, and this factor explained 11.6% of the variance. The items that load significantly on this factor (all positively except for Item 11) include questions 1, 2, 4, 6, and 11 (see Table 2). These questions tend to address more personal feelings about diversity on campus, as reflected in questions about personal conflict, discrimination, comfort, and friendships and relationships.

The third factor that emerged was labeled Instructional Diversity, and this factor explained 8.1% of the variance. The questions that load on this factor (all positively) include questions 5, 13, and 16 (see Table 2). These questions address the practices that take place in the classroom/instructional setting, such as the materials professors present; whether students, faculty, and staff are exposed to the history and the culture of minority groups; and the adequacy of student orientation addressing cultural diversity issues.

Split-half reliability was calculated for the 16 questions based on the Spearman-Brown formula (Cohen et al., 1992, pp. 150–152). Reliability was high between the two halves, with $r_{sh} = 0.91$.

Faculty–Student–Staff Differences

Using individual analyses of variance (ANOVs), significant differences emerged for five questions when examining the differences between faculty, students, and staff. Significant differences were calculated using Tukey’s honestly significant difference (HSD) procedure and are indicated with differing subscripts. There was a significant difference for “Friendships are more likely to be determined by common interests rather than by race,” $F(2, 785) = 11.81, p < .001$ ($M_{s: faculty} = 3.43$, $M_{s: students} = 3.99$, $M_{s: staff} = 3.35$). There was a significant difference for “As far as I know, minorities feel comfortable at this institution,” $F(2, 785) = 13.46, p < .001$ ($M_{s: faculty} = 2.92$, $M_{s: students} = 3.42$, $M_{s: staff} = 2.84$). There was a significant difference for “Recruitment of minority students is an institutional priority,” $F(2, 785) = 7.57, p < .01$ ($M_{s: faculty} = 3.46$, $M_{s: students} = 2.83$, $M_{s: staff} = 3.11$). There was a significant difference for “I have encountered racial discrimination on this campus,” $F(2, 85) = 9.54, p < .001$ ($M_{s: faculty} = 2.28$, $M_{s: students} = 2.16$, $M_{s: staff} = 3.11$). Finally, there was a significant difference for “Professors address multicultural issues in the classroom,” $F(2, 785) = 5.77, p < .01$ ($M_{s: faculty} = 3.37$, $M_{s: students} = 2.88$, $M_{s: staff} = 2.84$).

Students tend to have a positive outlook about campus climate, suggesting that friendships are driven by common interests rather than by race, that minorities feel comfortable, and that they have not experienced discrimination. Faculty members see recruitment of minority students as an institutional priority, and they think they address multicultural issues in the classroom (faculty members think so more than students or staff). Staff members agreed most with the statement about experiencing racial discrimination on campus. Clearly these perspectives are different, and the role one plays on a college campus dictates, to some extent, the perception of campus climate.

Minority Status Differences

Using ANOVAs, significant differences emerged for six questions when comparing majority status and minority status. There was a significant difference for “The campus environment is free from racial conflict,” $F(1, 785) = 6.32, p < .05$ ($M_{s: majority} = 3.07$, minority = 2.70). There was a significant difference for “As far as I know, minorities feel comfortable at this institution,” $F(1, 785) = 8.75, p < .01$ ($M_{s: majority} = 3.25$, minority = 2.87). There was a significant difference for “Students, faculty, and staff at this institution are exposed to the history and culture of minority groups,” $F(1, 785) = 4.26, p < .05$ ($M_{s: majority} = 3.06$, minority = 2.75). There was a significant difference
for “I have encountered racial discrimination on this campus,” \( F(1, 785) = 16.48, p < .001 \) (Ms: majority = 2.14, minority = 2.90). There was a significant difference for “Participation in most campus activities is racially segregated,” \( F(1, 785) = 9.63, p < .005 \) (Ms: majority = 2.44, minority = 2.90). There was a significant difference for “Hiring practices at this institution indicate that racial and ethnic barriers are gradually eroding,” \( F(1, 785) = 12.56, p < .001 \) (Ms: majority = 3.19, minority = 2.77).

**University Status \( \times \) Minority Status Interactions**

In examining the two-way ANOVA interactions, seven questions indicated significance. The means for the interaction are presented in Table 3. The following questions were significant: “Friendships are more likely to be determined by common interests rather than by race,” \( F(2, 785) = 3.90, p < .05 \); “This institution should be doing more to promote diversity,” \( F(2, 785) = 3.92, p < .05 \); “This institution should have a diversity plan,” \( F(2, 785) = 3.98, p < .05 \); “This institution needs classes that emphasize cultural diversity,” \( F(2, 785) = 6.85, p < .005 \); “I have encountered racial discrimination on this campus,” \( F(2, 785) = 3.35, p < .05 \); “Participation in most campus activities is racially segregated,” \( F(2, 785) = 3.05, p < .05 \); and “Professors address multicultural issues in the classroom,” \( F(2, 785) = 3.74, p < .05 \). Post hoc follow-up tests using Tukey’s HSD are presented with the means in Table 3.

**TABLE 3**

<table>
<thead>
<tr>
<th>Questions</th>
<th>University status</th>
<th>Minority status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Majority</td>
<td>Minority</td>
</tr>
<tr>
<td></td>
<td>Students</td>
<td>Faculty</td>
</tr>
<tr>
<td>Friendships are more likely to be determined by common interests rather</td>
<td>4.00_a</td>
<td>3.37_b</td>
</tr>
<tr>
<td>than by race.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This institution should be doing more to promote diversity.</td>
<td>3.37_b</td>
<td>3.53_b</td>
</tr>
<tr>
<td>This institution should have a diversity plan.</td>
<td>3.41_c</td>
<td>3.72_b</td>
</tr>
<tr>
<td>This institution needs classes that emphasize multicultural diversity.</td>
<td>3.85_b</td>
<td>3.15_c</td>
</tr>
<tr>
<td>I have encountered racial discrimination on this campus.</td>
<td>1.89_a</td>
<td>2.43_b</td>
</tr>
<tr>
<td>Participation in most campus activities is racially segregated.</td>
<td>2.34_a</td>
<td>2.72_c</td>
</tr>
<tr>
<td>Professors address multicultural issues in the classroom.</td>
<td>3.11_a</td>
<td>2.65_c</td>
</tr>
</tbody>
</table>

*Note.* Questions were answered on this scale: 1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree*. Tukey’s HSD post hoc analyses were conducted; means with differing subscripts are significantly different from one another.
Content Analysis

From the total number of responses to the open-ended questions \( (N = 358) \), 52.5% were students, 15.4% were faculty, and 32.1% were staff. The open-ended questions consisted of “What are the benefits or advantages (if any) to diversity?” and “What are the drawbacks or disadvantages (if any) to diversity?” Two raters independently coded responses, and interrater reliability exceeded 70%.

Content analysis revealed the overall top three advantages of diversity to be: (a) exposure to new ideas, viewpoints, and learning opportunities (31.3%), (b) increases awareness, appreciation, understanding, and acceptance of other cultures (19.4%), and (c) prevents ignorance and generates tolerance (9.8%). Interestingly, these top three advantages remained constant across students, faculty, and staff. The overall top three disadvantages that emerged were: (a) resistance from certain factions and individuals, and conflict instigated by factions resistant to diversity (12.4%), (b) affirmative action and special rights for minority groups (11.6%), and (c) increases tension and conflict between racial groups (10.3%) and overemphasis on diversity issues by the university (10.3%).

Discussion

In terms of ethnic background, there seem to be substantial differences between majority and minority group members with regard to the perception of campus cultural diversity. Majority group members appear to believe that the climate is acceptable and improving; they agreed, more so than minority group members, in believing that the campus is free from racial conflict, that minorities feel comfortable, that there is significant exposure to the history and culture of minority groups, and that racial and ethnic barriers are gradually eroding. In contrast, minority group members, more so than majority group members, agreed with statements such as “I have encountered racial discrimination on this campus” and “participation in most campus activities is racially segregated.” Clearly, group membership influences one’s perceptions of the diversity climate and race relations on campus.

Table 3 indicates that in almost all cases, differences between majority and minority staff members are a primary source for the significant interaction. For instance, large majority–minority differences emerge with the staff on questions about the determination of friendships, promotion of diversity at the institution, racial discrimination encounters, and racial segregation. Minority staff members tend to think that friendships are more determined by race than by common interests, that the institution should be doing more to promote diversity, that minority staff members have encountered more racial discrimination, and that participation in most campus activities is racially segregated. These types of dramatic differences in the perceptions of campus climate have not been observed often in prior research; campus officials using the CDQ may wish to include staff members in any measurement of campus climate to ensure the detection of these differences if they exist on other campuses. Indeed, multicultural programming may need to be targeted at more than just students, and programming for one group may have unintended effects on other groups.

The CDQ extends the current literature by specifically asking students, faculty, and staff what they perceive as the advantages and disadvantages of cultural diversity. The top three advantages were common across all three groups. All groups value the learning opportunities, understanding, and tolerance that a culturally diverse campus can provide. The top three disadvantages differed slightly between groups, although a common disadvantage to all three groups was resistance by certain factions and individuals. Here, the role played on campus is related to the perception of the important disadvantages to cultural diversity.

In answering the question about the need for a diversity plan, majority faculty agreed more than minority faculty, yet minority staff members agreed more with the need for a diversity plan than majority staff members. In response to the question concerning the need for classes emphasizing cultural diversity, majority faculty members agreed more than minority faculty members, but minority staff members agreed more than majority staff members. Based on the patterns observed throughout the entire study, minority staff members are more sensitive to, experience more, or report more discriminatory activities than the other groups and hence have greater calls for change. The majority group faculty also seem to hold this attitude. However, neither minority group faculty members nor majority group staff members see this need. One speculative explanation for this discrepancy may be that majority group staff members may not complain about the diversity climate because they are in the majority and see no need to do so. Conversely, minority group faculty members may be so familiar and desensitized to unfriendly diversity climates that they do not choose to report it (or perhaps the current climate is better than a previously worse climate). Because these conclusions are speculative, further investigation into the nature of the differences between majority and minority group faculty and staff members is warranted.
CULTURAL DIVERSITY ON CAMPUS □ Dillinger and Landrum

With regard to the interaction concerning professors addressing multicultural issues in the class, faculty members agreed more with this question than did staff or students, and minority group faculty members agreed even more than majority group faculty members. Both minority group students and minority group staff agreed less than either group of faculty members.

The idea of diversity, whether it be considered on the college campus or not, does not appear to be a unitary concept. In this study, three distinct types of diversity emerged. Institutional diversity is reflected in the planning, training, policies, and procedures that govern a university. Interpersonal diversity speaks to a student’s individual experience on a campus, his or her interactions with other students, and how friendships and relationships are made and maintained. Instructional diversity addresses those events that occur in the classroom or related settings—how professors treat diversity issues in the classroom, how cultural diversity is integrated into orientation activities, etc. Colleges and universities might find the CDQ useful in ascertaining current attitudes on campus about these three types of diversity.

The results of the CDQ are somewhat tentative because this measure was administered at only one university, thereby limiting external validity. Future research also could examine the ability of the CDQ to detect changes in attitudes over time. With a longitudinal study and repeated use of the CDQ, an institution may be able to track changes in one type of diversity independent of changes in other types (for example, see Blake, Saufley, Porter, & Melodia, 1990; Smith et al., 1997). A student affairs division might institute a new program to attract and retain minority students. Those students might rate that division more highly because of the efforts of student affairs (see Chahin, 1993). Additionally, intervention programs such as those programs alluded to could have differential effects on faculty, staff, and students, and those effects could be influenced further by that person’s racial group status. As the CDQ develops and accumulates evidence to further support its validity and reliability, it may become a sensitive enough instrument to detect changes to one type of diversity while other effects are held constant. This type of instrument would be especially helpful in quantifying the effectiveness of diversity programs and initiatives on college campuses, as well as detecting differences in different subpopulations of the campus community where they exist.

References


Y2K: Preparation or Paranoia?

The present study examined how self-esteem, locus of control, and interpersonal trust would predict Y2K-related behaviors and attitudes, including perceptions of the severity of the potential problem and steps taken to prepare for possible disruptions. Participants completed Rosenberg’s (1965) Self-Esteem Scale, Levenson’s (1981) Internality, Powerful Others, and Chance Scales, and Rotter’s (1967) Interpersonal Trust Scale. Participants also responded to 30 Y2K-related items developed specifically for this study, and identified Y2K-preparatory items they had purchased. The results revealed that chance and interpersonal trust predicted both future behaviors and social fear, whereas sex and interpersonal trust predicted personal concerns about Y2K-related disruptions. The present research offers insight into how people perceive uncertainty as well as how they act when faced with a pressing uncertainty.

Uncertainty is a part of life, whether we like to face it or not. The jitters of a visit to the doctor, the anxiety of being perched on the brink of war, the risk of playing the stock market, or the anticipation of waiting to see if the world’s computer systems might fail at the turn of the millennium are uncomfortable states, precisely because we don’t know with certainty what the outcome might be. How people cope with such uncertainty has received attention from a variety of researchers. For example, some people cope with uncertainty by putting their faith in others, relying on a high degree of interpersonal trust. Sorrentino, Holmes, Hanna, and Sharp (1995) found that a state of felt security, produced by trust in others, provided at least a temporary resolution to feelings of uncertainty. Some people may cope with uncertainty through reliance on their religious convictions, whereas other people believe they can find answers in science (van der Sijde, Tomic, & Snel, 1996). People also cope with uncertainty by “looking out for Number One”; for some people this belief means buying bottled water and canned foods, whereas for other people it means methodically stockpiling a munitions dump. Finally, some people cope with uncertainty by simply pretending it is not there, or by constructing favorable (but distorted) beliefs when faced with threatening information (Taylor & Armor, 1996). Such positive illusions may enable people to respond to personal tragedies or setbacks with cognitively adaptive efforts that enable them to retain their previous level of psychological functioning (Taylor, 1983; Taylor & Armor, 1996).

In this paper we examine some factors that predict people’s strategies for coping with the uncertainty of a known, global event. The so-called “Y2K crisis” that was predicted to occur with the change of the millennium represented an event that was highly publicized, was anticipated by many, and yet had a high degree of uncertainty associated with it. Estimates of the magnitude of the Y2K problem ranged from a few minor glitches to serious disruptions, including mass power outages, the collapse of banking systems, the risk of playing the stock market, and the anxiety of being perched on the brink of war.

Author note. Portions of this paper were presented at the 46th Annual Convention of the Southwestern Psychological Association, Dallas, TX, April 2000. We thank Traci Giuliano for her helpful comments and suggestions on an earlier draft of this manuscript. Address correspondence to Alan Swinkels, Department of Psychology, St. Edward’s University, 3001 South Congress Avenue, Austin, Texas 78704. Electronic mail may be sent to either starsponge@aol.com or alans@admin.stedwards.edu.
systems, or looting in the streets. In hindsight, of course, we know that the turn of the millennium produced more of a whimper than a bang. During the months prior to this event, however, we gathered information about people’s strategies for coping with this highly uncertain occurrence.

One approach to understanding how people react to uncertainty focuses on how people understand the causes of events. People who are high in causal uncertainty (Edwards, 1998) may not understand what makes people behave as they do, or they may not understand what actions lead to different kinds of outcomes. For example, a social perceiver might see someone’s aggressive behavior quite unambiguously, and yet remain uncertain about the origins of that behavior in the actor’s disposition, the situation, or some combination of both. The uncertainty resulting from the inability to understand the origins of behavior leads to a need to reduce that uncertainty.

The need to reduce uncertainty may result in deliberate information seeking (Weary & Edwards, 1994). Weary and Jacobson (1997) found there is a dispositional motive that may determine information-seeking behaviors. When expected to be held accountable for understanding an interviewee, participants selectively sought information that would best satisfy a motive to reduce uncertainty about a target’s personality, attitudes, and interests. This information seeking reduced the uncertainty about the causes of the interviewee’s likely behaviors. Edwards (1998) also studied the effects of causal uncertainty on the manner in which people make dispositional attributions. These studies revealed that higher causal uncertainty was associated with less attributional adjustment. In one such study, participants read about a target person’s behavior and situational information pertinent to that behavior. The higher the perceiver was in causal uncertainty, the less likely he or she was to adequately adjust for the effects of situational constraints on the target’s behavior.

Research on causal uncertainty reveals that people are invested in understanding the origin of events. During the Y2K crisis this was the case; people wanted to know what would cause a global computer network to crash. However, the uncertainty associated with the Y2K problem was derived primarily from the outcomes of the event rather than its causes. Most people were less concerned with the cause of the computer problem (i.e., what part of the machine’s internal circuitry might malfunction) than they were with how the consequences of the problem might affect them. In this regard, sources of uncertainty included what precautions one should take, or what effects the actions of others might produce. This kind of outcome uncertainty suggests different strategies for addressing the uncertainty of an impending event.

One way that an individual might cope with a lack of control over outcomes is to maintain the illusion of control. Moghaddam and Studer (1998) suggested that this effort may take several forms. For example, some people may overestimate the controllability of future events, whereas other people might cope with a personal failure by harboring the illusion that they had no control over the situation to begin with. The illusion of control may also be maintained by reconstructing events so that control in a failure situation is viewed positively rather than negatively. For example, corporations and individuals around the world initiated Y2K preparation efforts that, in hindsight, seem extreme and perhaps unnecessary. However, when catastrophe did not result at the turn of the millennium (as many had predicted), these individuals may have maintained their illusion of control by publicly stating that if such precautions had not been made there would have been far more serious outcomes.

People also may overestimate the amount of control they have over a situation that is fundamentally uncontrollable. Langer (1975) defined an illusion of control as “an expectancy of a personal success probability inappropriately higher than the objective probability would warrant” (p. 313). She demonstrated that when a chance situation approximates a skill situation, people behave as if they have control over the uncontrollable event. In one study, participants who selected their own lottery tickets expressed greater reluctance to surrender their tickets and requested a higher price to do so, compared to participants who had no choice in selecting their lottery tickets (Langer, 1975, Study 2). This situation was a clear case in which people thought they had more control over an impending situation than they actually did or ever could have. People’s preparations for the Y2K crisis may have mirrored this effect. By taking extreme precautions (e.g., buying electric generators, hoarding gold, stockpiling food and water) people may have been motivated by the illusion that they could exercise some control over the imminent situation.

The extent to which people may overestimate the amount of control they have over a situation may be based on the amount of information they have about similar situations. A highly knowledgeable gambler, for example, would probably approach a street-corner shell game from a different perspective than would a novice. Strategies for coping with an uncertain event, then, may be contingent on the amount of information available about that event or other similar events. In the case of the Y2K crisis, there was substantial information available, but some information may have
come from unreliable sources or may have been exaggerated in its urgency. By attending to unreliable, undiagnostic, or even false information about the presumed “Y2K crisis,” some people’s strategies for coping with this uncertain event may have reflected the impact of media influence or other forms of social influence.

Moscovici (1976) addressed outcome uncertainty with specific regard to social influence, and advanced two propositions to explain the relation between influence and uncertainty. First, the more uncertain an individual is, the easier it is to influence that person. Second, the more ambiguous the object of uncertainty, the greater a person’s need for influence, and the greater the actual influence. The ambiguity of the Y2K problem may explain how people were influenced regarding the extent of potential disruptions. A lack of concrete information or knowledge on the part of the general public may have contributed to the public’s acceptance of information by the media. It is not surprising that the media was a major influence on the public’s expectations about Y2K. Often sensationalistic, media reports seemed to foster a state of urgency by emphasizing the potential disastrous outcomes of the event and elevating the perceived need for personal preparation. Because Y2K was a unique historical event and could not be exactly compared to any past event, outcomes predicted by the media were able to range freely from minor inconveniences to worldwide calamity. The predictions of serious disruptions and potential mayhem seemed to bring a sense of concern about actions one should take or what actions, possibly aversive, others may take. The uncertainties of the potential outcomes resulted in preparatory behaviors that were indicative of fear or even paranoia.

The extent of these concerns, however, may also be affected by an individual’s personality traits. For example, a person’s degree of uncertainty about an event may be affected by dispositional levels of interpersonal trust. Although Rotter (1980) found that people high in trust are not more gullible than people low in trust, high and low trusters did differ in their willingness to trust strangers. High trusters were more willing to trust a stranger until there was evidence that the stranger should not be trusted, whereas low trusters were less trusting until there was evidence that the stranger could be trusted.

Other research suggests that personality traits contribute to the relation between uncertainty, beliefs in conspiracies, and social paranoia. A study by Abalakina-Paap, Stephan, Craig, and Gregory (1999) found that people with high levels of anomic, authoritarianism, and powerlessness (along with low levels of self-esteem) held beliefs in specific conspiracies. Moreover, high levels of hostility and an external locus of control, along with a low level of interpersonal trust, were related to attitudes toward the existence of conspiracies in general. As for social paranoia, Kramer (1998) presented a perspective that suggests that a hypervigilant appraisal of social information creates additional material that a paranoid perceiver can ruminate upon. This rumination helps to generate paranoid-like hypotheses that prompt greater scrutiny of the situation and especially of other persons’ behavior. For example, the hypervigilant person who notes that the mail carrier arrives a little later on Thursdays compared to the rest of the week may ruminate on that small bit of information until it expands into a full-blown suspicion of governmental surveillance.

The potential disruptions and crises that were predicted with the Y2K problem have raised questions about how people think and act when faced with uncertainty. Perhaps anticipation of the event caused people to fall victim to social paranoia, leading them to take unrealistic precautions. Moreover, people’s sense of control over the situation, along with trust in government, neighbors, and others, might have significantly impacted their fears and preparatory actions. The present study examined how the dimensions of interpersonal trust, locus of control, and self-esteem would predict Y2K-related behaviors and attitudes, including perceptions of the severity of the potential problem and steps taken to prepare for possible disruptions. We predicted that those persons high in interpersonal trust would be less likely to take preparatory measures compared to their low-trusting counterparts. We also predicted that various aspects of locus of control (internality, powerful others, and chance) would be related to Y2K preparations. Specifically, persons who scored higher in internality (i.e., the extent to which people believe that they have control over their own lives) should be less concerned about the Y2K issue compared to persons lower in internality. Meanwhile, persons scoring high on the locus of control dimensions of chance (i.e., that events are out of one’s control) and powerful others (i.e., that powerful others control the events of one’s life) would also indicate greater fear about potential Y2K problems, resulting in a strong desire to take precautions. Finally, we predicted that persons who scored higher in self-esteem would be less concerned about Y2K-related disruptions than persons lower in self-esteem. This prediction would be consistent with research (e.g., Taylor & Brown, 1988) that suggests most people possess unrealistically positive views of themselves, an exaggerated belief in their ability to control the environment, and a more favorable view of their own
future compared to others. In contrast, persons who are moderately depressed or low in self-esteem may show an absence of such enhancing illusions (Taylor & Brown, 1988).

### Method

**Participants**

Participants were 104 volunteers (56 men, 48 women) from the southwestern United States who completed several personality measures and responded to questions related to the Y2K issue during the months of August and September 1999. Sixty participants (48 men, 12 women, median age = 32) were employees at a semiconductor manufacturing facility, and the remaining 44 participants (8 men, 36 women, median age = 20) were university students. The semiconductor employees, who consisted of managers, engineers, technicians, and manufacturing personnel, were selected because of their presumed knowledge of Y2K-related issues, whereas the students represented a group presumed to have less technical familiarity with the Y2K problem. The semiconductor employees were not offered compensation for their participation, whereas the university students were given extra credit for their participation.

**Materials and Procedure**

Participants were given a set of measures assembled in a packet. First, participants provided demographic information, such as their age, sex, educational background, and average amount of time spent using a computer for work or recreation. Participants also completed the following personality measures: Levenson’s Internality, Powerful Others, and Chance Scales (Levenson, 1981), Rotter’s Interpersonal Trust Scale (Rotter, 1967), and Rosenberg’s Self-Esteem Scale (Rosenberg, 1965). We selected these scales because of their anticipated relation with measures of Y2K preparedness. All participants received the same order of questionnaires in the packet.

### Table 1: Items Purchased in Preparation for Possible Y2K-Related Disruptions

<table>
<thead>
<tr>
<th>Item purchased</th>
<th>Total sample (N = 104)</th>
<th>Semiconductors workers (n = 60)</th>
<th>Students (n = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes %</td>
<td>No %</td>
<td>Yes %</td>
</tr>
<tr>
<td>Batteries</td>
<td>36</td>
<td>35</td>
<td>65</td>
</tr>
<tr>
<td>Blankets</td>
<td>9</td>
<td>9</td>
<td>95</td>
</tr>
<tr>
<td>Bottled water</td>
<td>39</td>
<td>38</td>
<td>65</td>
</tr>
<tr>
<td>Camping stove</td>
<td>2</td>
<td>2</td>
<td>102</td>
</tr>
<tr>
<td>Candles</td>
<td>36</td>
<td>35</td>
<td>68</td>
</tr>
<tr>
<td>Canned or dried food</td>
<td>30</td>
<td>29</td>
<td>74</td>
</tr>
<tr>
<td>Firearms or ammunition</td>
<td>12</td>
<td>12</td>
<td>92</td>
</tr>
<tr>
<td>First-aid kit</td>
<td>18</td>
<td>17</td>
<td>86</td>
</tr>
<tr>
<td>Flashlight</td>
<td>25</td>
<td>24</td>
<td>79</td>
</tr>
<tr>
<td>Fuel (gasoline, propane, etc.)</td>
<td>15</td>
<td>14</td>
<td>89</td>
</tr>
<tr>
<td>Generator</td>
<td>5</td>
<td>5</td>
<td>99</td>
</tr>
<tr>
<td>Medications</td>
<td>19</td>
<td>18</td>
<td>85</td>
</tr>
<tr>
<td>Personal hygiene supplies</td>
<td>29</td>
<td>28</td>
<td>75</td>
</tr>
<tr>
<td>Precious metals</td>
<td>2</td>
<td>2</td>
<td>102</td>
</tr>
<tr>
<td>Safe</td>
<td>3</td>
<td>3</td>
<td>101</td>
</tr>
<tr>
<td>Shelter (built or purchased)</td>
<td>0</td>
<td>0</td>
<td>104</td>
</tr>
<tr>
<td>Survival kit</td>
<td>3</td>
<td>3</td>
<td>101</td>
</tr>
<tr>
<td>Y2K-compliant hardware</td>
<td>12</td>
<td>12</td>
<td>92</td>
</tr>
<tr>
<td>Y2K-compliant software</td>
<td>17</td>
<td>16</td>
<td>87</td>
</tr>
</tbody>
</table>

**Copyright 2002 by Psi Chi, The National Honor Society in Psychology (Vol. 7, No. 2, 75–84 / ISSN 1089–4156).**
Participants also responded to a questionnaire containing 30 Y2K-related items developed specifically for this study (see Appendix). Ten of these items focused on people’s thoughts, feelings, and concerns about the Y2K issue, such as “The Y2K computer bug is of great concern to me.” Another set of 10 items focused on personal preparedness for Y2K-related disruptions, such as “I am as prepared as I can be for the Y2K issue.” The remaining 10 items focused on social aspects of the Y2K issue, such as “There will be civil unrest, such as rioting and looting, because of Y2K.” Each of these 30 items was answered on a 6-point scale, with anchors at 1 (strongly disagree) and 6 (strongly agree).

The questionnaire concluded with three lists of Y2K preparatory items. In the first list, participants indicated which of several items they had purchased in preparation for Y2K-related disruptions. The items on this list were presented alphabetically and are shown in Table 1. Participants had the option of noting that they had purchased none of the items listed. They also had the option of adding up to six items to the list that they had purchased for this purpose. Next, participants viewed the same list of 19 items, but ranked the top 5 items that they felt were most important for preparing for any disruptions that might result from the Y2K problem, regardless of whether they had purchased an item. Finally, participants saw the same list of 19 items, and indicated which items they had purchased specifically for Y2K, but nonetheless planned to use even if no need arose from the effects of Y2K. These three lists allowed us to examine (a) people’s existing precautions for Y2K in the form of items purchased, (b) people’s perceptions of what would constitute necessary precautions, and (c) people’s reports of “saving face” should no disruptions arise. Participants completed the entire packet of questionnaires in approximately 15–20 min. After completion of the questionnaires, all participants were debriefed, probed for questions, reminded of the confidentiality of their responses, and thanked for their participation.

Results

We analyzed participants’ responses in several ways to address our questions of interest. First, we performed a factor analysis on the Y2K-related items developed for this study, to identify components of Y2K-related attitudes and behaviors. Next, we assessed people’s perceptions of preparedness by examining their responses to the three checklists presented in the study. Finally, we used the personality measures and demographic characteristics to predict preparatory actions for the presumed “Y2K crisis.” In each of these analyses, we combined the responses of both the semiconductor manufacturing workers and university students. We later analyzed the participants’ responses based on any occupational differences.

Factor Analysis and Reliability

A principal components analysis with varimax rotation was performed on the 30 Y2K-related items developed for this study, in order to confirm that our a priori categories of preparatory behaviors, personal concern, and social aspects were replicated in participants’ responses. This analysis suggested a three-component solution which accounted for 48% of the variance. The resulting three components were identified as personal concern/preparation (9 items, \( \alpha = .91 \)), future behaviors (5 items, \( \alpha = .86 \)), and social fear (4 items, \( \alpha = .73 \)). Reliability estimates were also computed for the Internality (\( \alpha = .50 \)), Powerful Others (\( \alpha = .73 \)), and Chance (\( \alpha = .70 \)) subscales of Levenson’s (1981) locus of control measure, for Rotter’s (1967) Interpersonal Trust Scale (\( \alpha = .70 \)), and for the Rosenberg (1965) Self-Esteem Scale (\( \alpha = .86 \)).1

Perceptions of Preparedness

Participants indicated which items in a list provided to them they had already purchased or had planned to purchase specifically in preparation for Y2K. As shown in Table 1, the most common items selected included bottled water, candles, batteries, canned or dried food, and personal hygiene supplies. Although it is reasonable to have these items on hand in the event of an emergency, several participants indicated more extreme choices. For example, 12% of the total sample indicated that they had purchased or planned to purchase firearms or ammunition, 17% indicated their plans to have a first-aid kit available, and 5% planned to have a generator at the ready.

When asked to rank what would be important to have on hand (regardless of their plans to purchase such an item), participants indicated that bottled water was considered most important, followed by canned or dried food, and Y2K-compliant software and hardware. Table 2 summarizes the number of participants who ranked each item in the top five positions. The selection of these items seems to be in line

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1These reliability estimates are comparable to those previously found for the same scales by other researchers. Levenson (1981) reported reliabilities of .51 for Internality, .72 for Powerful Others, and .73 for Chance; Robinson, Shaver, and Wrightsman (1991) reported a reliability estimate of .77 for Rotter’s (1967) Interpersonal Trust Scale; and Fleming and Courtney (1984) reported a reliability estimate of .88 for Rosenberg’s (1965) Self-Esteem Scale.
with many of the common concerns associated with the Y2K problem. In fact, the items selected by the majority of our respondents matched those recommended by national disaster agencies, such as the Federal Emergency Management Agency (FEMA) or the American Red Cross. For example, those agencies recommend water, canned food, clothing, blankets, and a first-aid kit, all of which were selected somewhere in the top five ranks given by our participants (American Red Cross, 1998; Federal Emergency Management Agency, 1998).

The final set of ratings indicated that the majority of the participants planned to use items that were purchased for possible Y2K-related disruptions even if no need arose. As shown in Table 3, most participants reported that they would find some other use for the batteries, canned or dried food, personal hygiene supplies, and other items they had purchased in preparation for the Y2K crisis. Some of the more extreme choices, although rarely selected, showed interesting trends. For example, 60% of participants who purchased fuel in preparation for Y2K reported no other use for that supply, 60% of those participants who purchased a generator intended to use it only for Y2K, and 50% of those participants who purchased first-aid kits reported no other use for them apart from Y2K preparation.

### Predicting Y2K Preparedness

We hypothesized that demographic characteristics and responses to the various personality scales would be related to reports of preparatory behaviors and attitudes of the participants, as measured by the personal concern/preparation, future behavior, and social fear composite scales identified by the factor analysis. We regressed responses to the demographic and personality measures on each of these composite measures. A stepwise regression revealed that responses to Levenson’s (1981) Chance scale (β = .35, t = 3.86, p = .0001) and Rotter’s (1967) Inter-

---

**TABLE 2**

<table>
<thead>
<tr>
<th>Item</th>
<th>Total sample (N = 104)</th>
<th>Semiconductor workers (n = 60)</th>
<th>Students (n = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batteries</td>
<td>1 5 10 12 9</td>
<td>0 4 4 7 6</td>
<td>1 1 6 5 3</td>
</tr>
<tr>
<td>Blankets</td>
<td>0 3 6 9 9</td>
<td>0 3 2 7 5</td>
<td>0 0 4 2 4</td>
</tr>
<tr>
<td>Bottled water</td>
<td>47 15 12 8 6</td>
<td>32 8 6 4 4</td>
<td>15 7 6 4 2</td>
</tr>
<tr>
<td>Camping stove</td>
<td>0 1 2 2 2</td>
<td>0 1 2 1 1</td>
<td>0 0 0 1 1</td>
</tr>
<tr>
<td>Candles</td>
<td>0 5 11 7 7</td>
<td>0 5 6 5 2</td>
<td>0 0 5 2 5</td>
</tr>
<tr>
<td>Canned or dried food</td>
<td>13 38 11 11 6</td>
<td>8 23 9 6 3</td>
<td>5 15 2 5 3</td>
</tr>
<tr>
<td>Firearms or ammunition</td>
<td>3 2 3 2 9</td>
<td>3 1 3 2 5</td>
<td>0 1 0 0 4</td>
</tr>
<tr>
<td>First-aid kit</td>
<td>0 4 8 6 5</td>
<td>0 1 5 2 1</td>
<td>0 3 3 4 4</td>
</tr>
<tr>
<td>Flashlight</td>
<td>4 1 3 5 16</td>
<td>3 1 3 1 9</td>
<td>1 0 0 4 7</td>
</tr>
<tr>
<td>Fuel (gasoline, propane, etc.)</td>
<td>3 6 7 6 3</td>
<td>2 4 6 5 3</td>
<td>1 2 1 1 0</td>
</tr>
<tr>
<td>Generator</td>
<td>4 0 1 4 6</td>
<td>0 0 0 3 3</td>
<td>4 0 1 1 3</td>
</tr>
<tr>
<td>Medications</td>
<td>4 2 9 8 8</td>
<td>2 1 5 5 4</td>
<td>2 1 4 3 4</td>
</tr>
<tr>
<td>Personal hygiene supplies</td>
<td>2 0 6 9 5</td>
<td>2 0 3 4 2</td>
<td>0 0 3 5 3</td>
</tr>
<tr>
<td>Precious metals</td>
<td>0 0 1 0 1</td>
<td>0 0 0 0 1</td>
<td>0 0 1 0 0</td>
</tr>
<tr>
<td>Safe</td>
<td>2 0 2 2 1</td>
<td>0 0 0 1 1</td>
<td>2 0 2 1 0</td>
</tr>
<tr>
<td>Shelter (built or purchased)</td>
<td>3 0 1 1 0</td>
<td>0 0 0 1 0</td>
<td>3 0 1 0 0</td>
</tr>
<tr>
<td>Survival kit</td>
<td>1 3 3 2 3</td>
<td>1 0 1 1 3</td>
<td>0 3 2 1 0</td>
</tr>
<tr>
<td>Y2K-compliant hardware</td>
<td>6 7 2 1 0</td>
<td>0 3 1 0 0</td>
<td>6 4 1 1 0</td>
</tr>
<tr>
<td>Y2K-compliant software</td>
<td>6 8 1 3 0</td>
<td>3 2 0 0 0</td>
<td>3 6 1 3 0</td>
</tr>
</tbody>
</table>
TABLE 3

Items Purchased for Possible Y2K-Related Disruptions, but to Be Used Nonetheless

<table>
<thead>
<tr>
<th>Item</th>
<th>Total sample (N = 104)</th>
<th>Semiconductor workers (n = 60)</th>
<th>Students (n = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batteries</td>
<td>36</td>
<td>28 8</td>
<td>20</td>
</tr>
<tr>
<td>Blankets</td>
<td>9</td>
<td>6 3</td>
<td>3</td>
</tr>
<tr>
<td>Bottled water</td>
<td>39</td>
<td>27 12</td>
<td>20</td>
</tr>
<tr>
<td>Camping stove</td>
<td>2</td>
<td>1 1</td>
<td>0</td>
</tr>
<tr>
<td>Candles</td>
<td>36</td>
<td>20 16</td>
<td>18</td>
</tr>
<tr>
<td>Canned or dried food</td>
<td>30</td>
<td>21 9</td>
<td>15</td>
</tr>
<tr>
<td>Firearms or ammunition</td>
<td>12</td>
<td>7 5</td>
<td>8</td>
</tr>
<tr>
<td>First-aid kit</td>
<td>18</td>
<td>9 9</td>
<td>8</td>
</tr>
<tr>
<td>Flashlight</td>
<td>25</td>
<td>16 9</td>
<td>9</td>
</tr>
<tr>
<td>Fuel (gasoline, propane, etc.)</td>
<td>15</td>
<td>6 9</td>
<td>9</td>
</tr>
<tr>
<td>Generator</td>
<td>5</td>
<td>2 3</td>
<td>2</td>
</tr>
<tr>
<td>Medications</td>
<td>19</td>
<td>12 7</td>
<td>7</td>
</tr>
<tr>
<td>Personal hygiene supplies</td>
<td>29</td>
<td>18 11</td>
<td>12</td>
</tr>
<tr>
<td>Precious metals</td>
<td>2</td>
<td>0 2</td>
<td>0</td>
</tr>
<tr>
<td>Safe</td>
<td>3</td>
<td>1 2</td>
<td>1</td>
</tr>
<tr>
<td>Shelter (built or purchased)</td>
<td>0</td>
<td>0 0</td>
<td>0</td>
</tr>
<tr>
<td>Survival kit</td>
<td>3</td>
<td>1 2</td>
<td>2</td>
</tr>
<tr>
<td>Y2K-compliant hardware</td>
<td>12</td>
<td>8 4</td>
<td>8</td>
</tr>
<tr>
<td>Y2K-compliant software</td>
<td>17</td>
<td>10 7</td>
<td>12</td>
</tr>
<tr>
<td>All items purchased will be used for Y2K only</td>
<td>4</td>
<td>4 0</td>
<td>0</td>
</tr>
</tbody>
</table>

personal Trust Scale ($\beta = -0.25$, $t = -2.77$, $p = .007$) were significantly related to the future behaviors component. Those respondents who scored higher on the chance scale or lower on interpersonal trust were more likely to report engaging in planning behavior for the future, such as plans to check up on relatives during the turn of the millennium or postponing major life decisions. Chance ($\beta = .32$, $t = 3.58$, $p = .001$) and interpersonal trust ($\beta = -0.28$, $t = -3.01$, $p = .003$) also showed the same pattern of relation with the social fear component. Finally, the participants’ sex ($\beta = .21$, $t = 2.26$, $p = .025$) and levels of interpersonal trust ($\beta = -0.33$, $t = -3.52$, $p = .001$) predicted responses to the personal concerns component. Specifically, women were more likely to report higher levels of personal concern, as were those participants low in interpersonal trust.

**Occupation Differences**

Finally, we compared the responses of the semiconductor manufacturing employees (i.e., the group presumed to have greater knowledge about the Y2K issue) to the responses of the university students (i.e., the group with less presumed Y2K knowledge), revealing some significant differences between the groups. Employees of the semiconductor facility were significantly older ($M = 33.8$) than the students ($M = 20.8$), $t(101) = 9.28$, $p = .0001$. Also, $95\%$ of the semiconductor workers reported using a computer every day, as did $73\%$ of the students. However, the semiconductor workers used a computer for work-related tasks significantly more ($M = 19$ hr per week) than did the students ($M = 9$ hr per week), $t(102) = 3.72$, $p = .0001$. The two groups of participants did not differ in their responses to the personality measures, with
two exceptions. The semiconductor workers scored higher ($M = 37.6$) on the Internality dimension of locus of control compared to the students ($M = 34.6$), $t(101) = 2.86, p = .005$. The semiconductor workers also scored higher in self-esteem ($M = 42.9$) compared to the student group ($M = 40.4$), $t(101) = 2.21, p = .029$. Finally, the two groups were similar in their selection and ranking of items purchased in preparation for potential Y2K-related disruptions. The distribution of items purchased by each of the two groups is shown in Tables 1 and 2.

**Discussion**

The present research offers insight into how people cope with a pressing uncertainty such as the Y2K crisis. The findings supported the hypotheses that certain personality dimensions (i.e., the locus of control dimensions of interpersonal trust and chance) are predictive of behavior and attitudes indicative of social fear and perhaps social paranoia. The results suggested that persons who were high on chance yet low in interpersonal trust had more fear and thus a desire to take precautions. These people do not feel that they have control over the outcomes of events and that they may not be able to rely on others. On the other hand, higher levels of trust in others resulted in less concern about the issue and thus a lesser need to take precautions. Interestingly, women showed more personal concern over the issue, indicating that they were more worried about how the event might affect them personally.

The participants’ selection and rankings of Y2K preparatory items demonstrated people’s perception of the extent of the impending problem. The common desire to have canned food and water available may reflect people’s worry about the loss of utilities (i.e., no electricity or water service). Food shortages, inability to use monetary systems, or perhaps an incapacity to move about after the event may also explain the desire to have these items at the ready. The indication of the importance of having Y2K-compliant software and hardware is not surprising, as these items may be considered the remedy for the root of problems that an individual expected to encounter.

The current study also showed a pattern between computer use and locus of control. Those participants who used a computer for work-related tasks more frequently than their low-use counterparts scored lower on the Chance subscale (Levenson, 1981). In addition, those participants who used a computer more frequently scored higher on Internality (Levenson, 1981) compared to those participants who used a computer less frequently. The high-computer-use group tended to be the older, employed semiconductor workers, who may have had a better understanding of the technological elements of the Y2K problem. They may have felt that any possible computer-related disturbances had less to do with chance and that they personally had at least some control over the problem.

The differences between the semiconductor workers and the students on the Internality dimension of locus of control and self-esteem are tempered, however, by the sex composition of the two groups. Among the semiconductor employees, 80% were men, whereas among the university students, 82% were women. Because the sex composition of the two groups closely mirrors the occupational status of the two groups, it is difficult to know whether the occupation differences seen in the present analyses are really that, or simply a function of the preexisting sex differences found between these two groups.

Our findings also indicated that some people seem to fall victim to social paranoia by taking more extreme precautions than others and by expressing greater worry over the issue. Although no one reported constructing a shelter and only a handful of respondents bought a generator, a subset of our respondents nonetheless expressed their concerns by purchasing firearms, first-aid kits, and a supply of fuel. These people may have had more fears about the Y2K issue and thus may have spent a greater amount of time, money, and needless worry in preparation for the event. It is important, however, to interpret these precautions in light of the level of sweeping, shared uncertainty related to this event. A substantial number of people in the United States (perhaps spurred by media reports) expected some level of disruption. In fact, if the outcome of the Y2K crisis had actually been that—a crisis—the extreme worry that these overly prepared people felt, and the extra precautions they made, would have seemed completely appropriate in hindsight.

Although direct measurements of illusions of control were beyond the scope of the present research, the researcher must consider the possibility of their effect on an individual’s Y2K-related behavior. For example, Langer (1975) suggested the possibility that some people may attempt to induce an illusion of control in controllable situations to prevent others from exercising real control. A problem arises when an increase in confidence results from the introduction of control-related but outcome-independent factors. This increase in confidence may motivate an individual to pursue more rather than less control. The governmental directions to take preparatory actions similar to those for natural disasters
may have been an attempt by the government to both assist and control the general public. The directions to purchase sensible items such as water, batteries, and canned food may have given the American public a general feeling of some control. However, this action may have induced an illusion of control which caused some individuals to seek out more control by taking on more extreme actions.

Some limitations in the present study remain, however. First, although the Y2K problem was an international event, we gathered responses from only a group of Americans. Had it been feasible to collect data from an international sample, a comparison of both the extremity of perceptions and the urgency of preparations across national groups would have shed more light on this global issue. In retrospect, given that the “Y2K crisis” produced few disruptions in most areas of the world, it’s doubtful that one group’s level of preparations would have been more successful than another’s in staving off Y2K-related problems. However, the extent of preparations in anticipation of the event would have made an interesting comparison. Second, our data are self-report in nature, leading to the possibility that people’s reports of what they would do in anticipation of a crisis may not match their actual behavior during the crisis. This limitation might have been addressed by surveying people in grocery or hardware stores as they made their Y2K purchases, or by conducting door-to-door interviews as the December 31, 1999, date drew nearer. The absence of these more elaborate measures tempers our present conclusions somewhat.

The Y2K situation, now a part of history, was a unique occurrence that in some way had an effect on all of modern society. Although there are many factors to consider when attempting to understand people’s attitudes and behavior under such circumstances, the present research has demonstrated an interesting relation between various personality dimensions and such behavior. Further research in this area may increase our understanding of decision making, mass behavior, and social influence. By gaining insights into social behavior under such circumstances, we can better predict people’s responses to anticipated crises.

References
APPENDIX

Items From the Y2K-Related Questionnaire

Items referring to personal feelings, thoughts, and concerns regarding the Y2K issue
I have a high level of knowledge about the Y2K computer bug issue.
I think the government is not telling the public enough about the Y2K issue.
I feel worried about the arrival of the year 2000 because of the computer bug issue.
I think the Y2K issue will cause a political, social, or cultural transformation in our society.
The Y2K issue is really nothing to be worried about.
I am more knowledgeable than my friends about the Y2K computer bug issue.
I think the concerns about Y2K expressed in the media are exaggerated.
I’m expecting to suffer some loss or disturbances due to the Y2K issue.
I feel worried about what is going to happen after New Year’s Eve because of the Y2K issue.
The Y2K computer bug is of great concern to me.

Items referring to personal preparedness regarding the Y2K issue
I am as prepared as I can be for the Y2K issue.
I feel that I am making more effort than others to be prepared for potential Y2K problems.
I feel that it is a good idea to work with my neighbors collectively to be prepared for any Y2K issues.
It is important that I take precautions to prepare for the potential Y2K computer crisis.
It is necessary to secure personal finances because of the Y2K issue (i.e., remove money from the bank or stock market).
I think that it is a good idea to avoid air travel on New Year’s Eve because of the Y2K issue.
I feel that others are not making enough effort to be prepared for Y2K.
I’m planning on checking up on family after New Year’s Eve.
In the closing months of 1999, I plan to avoid making any major life transitions such as moving or the addition or deletion of services.
I think that it is a good idea to have a firearm ready for self-protection in case of Y2K-related disturbances.

Items referring to social aspects of the Y2K issue
I feel that it does not matter what I do about the Y2K issue, it is out of my control.
Any problems that I may experience due to the Y2K issue are completely controlled by others.
There will be widespread panic resulting from the coming of Y2K.
The Y2K issue is society’s fault for being so dependent on computers.
I think that the general public is very uncertain about the severity of the possible Y2K problems.
The government has the Y2K issue under control.
I think that the Y2K problem will be an opportunity for some to commit crime.
I don’t feel that there is any need for me to panic if there are Y2K problems.
I’m not looking forward to next year because of the Y2K issues.
There will be civil unrest, such as looting and rioting, because of Y2K.
What’s in a Chad? Self-Monitoring and Presidential Voting Choices

Although a large body of literature is devoted to understanding voting behavior and voting trends, little of this research focuses on internal characteristics (such as personality traits) that may predict voting preferences. The current study assessed the relation between the self-monitoring personality characteristic and voting trends at 3 precincts during the 2000 presidential election. As predicted, individuals scoring high on the self-monitoring construct were significantly more likely to vote for Gore, whereas those scoring low on the self-monitoring construct overwhelmingly endorsed Bush. A potential model for predicting voting preferences based on the self-monitoring construct is explored.

CLEARLY THE 2000 PRESIDENTIAL ELECTION made voting behavior an issue of critical prominence. No other time in history has so much attention been paid to the “intention” of voters. What does a hanging chad mean? Can we determine from the way a chad is hanging that a voter intended to make a particular voting choice? These questions raise one of the more intriguing voting issues of interest to social scientists. What determines a person’s voting behavior? Why do some candidates rise to the top while others do not? What factors influence how the voters will perceive a candidate? What issues will sway voters in any given election? Without doubt there are both internal and external factors that determine the answers to these questions. Some of the variables studied include: (a) news coverage, (b) economic cues, (c) candidate gender, (d) investment versus consumption, (e) prenomination preferences, (f) degree of optimism conveyed in candidate’s primary nomination speech, and (g) personality characteristics such as self-monitoring. Before exploring the self-monitoring construct in more depth, a brief outline of these other lines of research will illustrate the need to assess both the internal and external factors that influence voting behavior.

Shah, Watts, Domke, Fan, and Fibson (1999) found that media coverage had a significant impact on presidential voting choices in the 1984, 1988, 1992, and 1996 presidential elections. In most of these elections, the incumbent received more media attention than the challengers. The nature of that coverage, however, differed dramatically. Whereas coverage of the challengers focused primarily on their campaigns and their personalities, the coverage of the incumbent focused heavily on perceived leadership performance. Oftentimes, this performance was measured by polls assessing the public’s “approval rating” of the incumbent. When this rating was low (as was the case for George Bush in 1992), the incumbent was defeated. When this rating was high (as was the case for Bill Clinton in 1996), the incumbent was reelected.

Although multiple lines of research support the hypothesis that national economic conditions predict presidential voting patterns (e.g., Campbell, 1992; Lewis-Beck & Rice, 1992), Hetherington (1996) discovered that media portrayals of economic conditions has a greater impact on voting choices than actual economic indicators such as the gross domestic product rate of growth or level of inflation. However, external concerns, alone, are not the only factors that influence voting behavior. Certain identification variables may also influence voting choices.

In one study, degree of “union identification” was studied as a potential predictor of voting behavior. Bruno (2000) found that identifying with a union was
associated with union-based voting. In other words, those individuals who more strongly identified with their union status were significantly more likely to vote for the presidential candidate unknowingly endorsed by their union. There are numerous reasons for this voting pattern, the most significant being that union identifiers tend to rely on their union for political information. Even though the union may not “actively” endorse one candidate over another, they certainly can determine what political information is available to union members.

Availability of information influences voting by the general public and not just union members (e.g., McDermott, 1997). Political scientists label some elections as “low-information” elections (e.g., McDermott, 1997). In other words there is not a lot of information available about the candidates. Although most of this research focuses on local elections such as that for city mayor, we believe it is relevant to a discussion of presidential elections. In recent elections there have been more than the two major party candidates from which to choose. As such, financial backing clearly becomes important because finances determine the degree to which unknown or non-Democratic or non-Republican candidates can disseminate information about themselves.

Low-information elections, sex of the candidate, and political orientation of the voters interact in interesting ways (McDermott, 1997). McDermott (1997) found that female Democratic candidates who are not well known are more likely to get elected than non-well-known male Democratic candidates among the liberal voters. On the other hand, non-well-known female Democratic candidates are less likely to get elected than non-well-known male Democratic candidates among conservative voters.

Another line of research has applied economic principles to voting behavior. This research attempts to answer the question as to whether voting is a form of investment (e.g., I have truly analyzed the candidates and am making what I believe to be a wise choice) or a form of consumption (e.g., I vote because I believe I can gain a lot by having this person elected). Guttman, Hilger, and Shachmurove (1994) suggested that the question of whether voting is a form of investment or consumption can be answered by assessing the degree to which choosing not to vote is a function of indifference or alienation. Despite individuals’ claims to the contrary, Guttman et al.’s (1994) research clearly indicates that turnout in elections is strongly influenced by the degree to which people believe the candidate can or cannot provide something (e.g., tax breaks, safety of social security) that voters believe will affect their pockets.

Osborne et al. (2000) predicted that self-monitoring level would influence voting choice during the 1996 presidential campaign. Specifically, they predicted that high self-monitors would be more likely to vote for the incumbent candidate (with few exceptions, the incumbent is the front-runner or, at a minimum, is rated as more “presidential” because he or she already occupies the office) whereas low self-monitors would be more likely to vote for the candidate who appeared to have the most internally consistent record. Indeed, they found that high self-monitors have a profound influence on the general election that follows. This research focused on hotly contested primary elections within a particular party. When the prenomination race was hotly contested, it tended to have a negative carryover effect on the general election. Specifically, this line of research showed that fiercely fought primary elections within a party lead to increased levels of nonvoting and an increase in defection (voting for the other party) in the general election.

Another example of external factors that influence voting behavior comes from the work of Seligman (1991). In this research, he discovered that the degree of optimism or pessimism of the candidates’ primary acceptance speeches predicted the eventual election winner. With only one exception, voters significantly endorsed the candidate with the more optimistic acceptance speech (Seligman, 1991).

What this brief review of the literature illustrates is the complex nature of voting behavior and voting choice. With the exception of the “consumption versus investment” research, however, the majority of this research has focused on factors external to the voter. Surely there are other internal characteristics that influence voting behavior. Osborne, Norman, Penticuff, and Robinson (2000) provided preliminary evidence to support the influence of personality characteristics on voting choice. This research addressed the relation between self-monitoring tendency and voting behavior during the 1996 presidential campaign. In brief, the self-monitoring construct assesses the degree to which a person monitors external or internal standards in deciding how to behave in a given situation (e.g., Snyder, 1987). Those persons who score at the high end of this instrument tend to assess situations and make behavioral decisions based on what others are doing. These individuals place a high degree of importance on being situationally successful. Low self-monitors, on the other hand, are more concerned with adhering to internal standards and values when deciding how to behave in a given situation (Snyder, 1987).

Southwell (1994) showed that hotly contested primary elections can also have a profound influence on the general election that follows. This research focused on hotly contested primary elections within a particular party. When the prenomination race was hotly contested, it tended to have a negative carryover effect on the general election. Specifically, this line of research showed that fiercely fought primary elections within a party lead to increased levels of nonvoting and an increase in defection (voting for the other party) in the general election.
tors overwhelmingly voted for Bill Clinton, whereas low self-monitors overwhelmingly voted for Bob Dole. These researchers hypothesized that high self-monitors voted for Clinton because he was the incumbent and he was projected to be an overwhelming winner. What vote would most likely be situationally successful (meaning a vote for the winner) than that? Dole’s campaign, however, stressed the consistency of his record and his many years of public life. Dole appeared to be quite predictable, which would appeal to low self-monitors who greatly value consistency.

The current study was an attempt to replicate the findings of Osborne et al. (2000). In addition, we were interested in how the data would compare given that the 2000 presidential campaign did not involve an incumbent running for reelection. We predicted that self-monitoring tendency would, once again, influence voting behavior. For high self-monitors the question as to who to vote for would appear to be one of “who is most likely to win.” On the other hand, low self-monitors would be most interested in which candidate would be the most consistent, or adhere to a set of values and stick to it.

Based on news media coverage and candidate “electability” (primarily a function of Gore’s closeness to the presidency, having served as vice president), we predicted that Gore would be more attractive to high self-monitors. The media certainly made it a point to indicate that Bush was consistent and “stuck” to his plans as governor of Texas. For this reason, we predicted he would be more palatable to low self-monitors who value consistency.

**Method**

After obtaining institutional review board approval for our study, we also approached those individuals who would be coordinating voting from three different precincts within the community (a small city in East Central Indiana). After explaining the project and that we would honor the 500-foot rule for approaching persons entering or leaving a polling place, we were granted permission to gather our voting data from all three precincts. The community itself is overwhelmingly Republican. To rectify the potential confound of polling predominantly Republican or Democratic precincts, we selected a precinct that was known to be predominantly Democratic, one that was known to be predominantly Republican, and one that was known to be Independent.

**Participants**

Researchers approached 60 persons leaving voting facilities during the 2000 presidential vote and asked them to volunteer to participate in our study. Of these 60 persons, 52 agreed to participate. Once the study was explained, willing participants signed our consent form. Those participants who signed the form were given a one-page instrument that included the 18-item self-monitoring scale (Snyder & Gangestad, 1986) with one additional question. This question simply asked, “Which candidate did you select for president of the United States?” The self-monitoring scale consists of 18 true–false statements that assess the degree to which the person monitors internal standards or situational factors when making a behavioral decision.

**Results**

Of the 60 persons asked to volunteer to participate in our study, eight declined. It is worth noting that the refusal rate (13%) was virtually evenly distributed across the three precincts. Of the eight individuals who declined to participate, three were from precinct “A,” three were from precinct “B,” and two were from precinct “C.”

Using a standard method for categorizing respondents as either high or low in self-monitoring (e.g., Snyder & Gangestad, 1986), we completed a frequency distribution for the 52 participants. Four participants were dropped from the data analysis because they voted for candidates other than Bush or Gore. Following standard procedures for creating high and low groups on the self-monitoring construct, we did a top third and bottom third split and eliminated those participants who scored in the middle third. By eliminating those individuals who scored 10, we created equal groups at the upper and lower ends of the distribution. We took the individuals scoring the highest (scores of 11 or higher = 20) and those scoring the lowest (scores of 9 or lower = 20) and entered them into the computations. Numbers were entered into a chi-square analysis in which one would expect the chance distribution between high and low self-monitors to be equal.

As predicted, significantly more of the low self-monitors voted for Bush than their high self-monitoring counterparts (14 vs. 5). At the same time, significantly more of the high self-monitors voted for Gore in comparison to their low self-monitoring counterparts (15 vs. 6), \( \chi^2(3, N = 40) = 8.20, p < .05 \). These results are depicted visually in Figure 1.

**Discussion**

The findings from this study appear to support the contention that personality variables may influence voting behavior. There are clear patterns in the voting tendencies of high and low self-monitors. Self-monitoring influences the kind of information that individuals will remember and how that information...
FIGURE 1

Number of individuals voting for Bush or Gore as a function of self-monitoring tendency.

will be used to categorize others (Weadick, Osborne, Penticuff, Young, & Norman, 1998). In addition, high and low self-monitors assign differing levels of importance to different kinds of information about self and others (e.g., Sampson, 1978). Snyder and Cantor (1980) found that high self-monitors are more likely to monitor situational contingencies (meaning they make choices based on what will make them situationally successful) whereas low self-monitors are more likely to think about an individual’s traits.

Using the combined suggestions from these studies, it makes sense to expect low self-monitors to make voting choices based on a candidate’s consistency (what are the candidate’s traits?) whereas high self-monitors want to cast a vote that will be situationally correct (in this case we define that as casting a vote for the front-runner or the incumbent).

Osborne et al. (2000) found that the self-monitoring personality characteristic did, indeed, predict voting for their sample of voters. The current study attempted to replicate that finding with one difference—there was not an incumbent candidate. Gore’s position as vice president should have placed some degree of “incumbent” stature on him. On the other hand, Texas Governor Bush was primarily an unknown when the campaign started.

Once again, we predicted that the emphasis on Bush’s consistency of record while governor of Texas would be especially appealing to voters who have the low self-monitoring personality construct. On the other hand, those individuals scoring high on this dimension should be particularly attracted to Gore’s “incumbent” status as vice president.

The current findings support the notion that personality characteristics may be important predictors of voting behavior. This result may be especially true in close elections, which, we would argue, is similar to McDermott’s (1997) findings that extraneous variables such as candidate sex become important when there is either little information upon which to cast one’s vote or there is no “clear” winner.

There are multiple reasons why a particular mindset might successfully prevail during a presidential election. One of those reasons certainly has to do with the success of the incumbent candidate. If the incumbent is popular, or the economy is strong, the probability of a chance upset by a lesser known candidate is extremely small. If, on the other hand, the candidate is not as well known, the candidate may need to stress consistency of record in order to convince voters that she or he is prepared for the job. As already demonstrated, this approach would be very appealing to the low self-monitors in the group.
Previous research addressed the manner in which low and high self-monitors filter information about self and others (e.g., Weadick et al., 1998). When high self-monitors process information about others, they focus more on physical appearance and potential for situational success. Low self-monitors, on the other hand, are more likely to focus on what is known about the individual’s personal characteristics. Applying these same filtering mechanisms to voting behavior, it appears that high self-monitors are more likely to vote based on physical appearance (which candidate looks more “presidential?”) or likelihood of winning the election (Weadick et al., 1998). On the other hand, low self-monitors appear to rely on prior record and media coverage of candidate record in order to make their voting choices.

The current study suggests that these processing strategies are also employed in close elections in which there is not an incumbent candidate. The model outlined by this study is fairly straightforward: High self-monitors focus on physical characteristics and potential for success in determining their voting choices; low self-monitors, however, are more swayed by consistency of record and media discussion of the candidate’s ability to follow through on issues (e.g., Weadick et al., 1998).

Future research should apply this model in situations in which both candidates are “unknown” or unassociated with the current president. Additionally, it would be important to determine if the model also predicts local and state elections when there is no national media coverage. One significant limitation of this research is a potential confound with political orientation. It is entirely possible that political orientation is highly correlated with self-monitoring and is the true driving force behind these findings. Although the current study did not address this issue, a version of this question was asked in a pilot study by Osborne and Young (1994). Forty high and 40 low self-monitors listed their political party affiliation. This affiliation was placed into a chi-square analysis. As expected, there were no significant differences in political party affiliation as a function of self-monitoring: \( \chi^2(3, N = 80) = 2.00, p = .572 \).

The aforementioned findings do lend support to the contention that these voting patterns are a function of self-monitoring tendency and not political orientation. It is possible, however, that degree of political orientation would be a more powerful test than simple political party affiliation. We intend to study this potential alternative explanation more fully by conducting a more straightforward study. Individuals assessed for self-monitoring scores will also rate their political orientation using a 7-point scale ranging from very conservative to very liberal. From the data already presented we strongly suspect that there will not be a significant connection between self-monitoring level and orientation score. This relation does, however, currently remain a potential alternative explanation.

Lastly, a comment should be made about the limitations of these findings. Voting patterns across the country are quite diverse. These findings are limited in generalizability until they are replicated in different parts of the country. It would also be wise to gather comparable results from both rural and urban precincts and also to assess for other characteristics that may potentially confound with self-monitoring to predict voting patterns (e.g., religious affiliation, attitude about abortion, or socioeconomic status). A critical question to consider is whether these findings can be replicated with a conservative incumbent. There may very well be interactions between political ideology, self-monitoring tendency, and voting behavior that can be explored in future elections.

References


Responsibility and Victim Character in a Rape Scenario Manipulating Alcohol and Victim Persona

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Sixty-four college students (72% women) read 1 of 4 date rape scenarios, in which researchers manipulated victim condition (sober vs. intoxicated) and persona (bold vs. conservative), and responded to a series of questions that measured judgments of responsibility and victim character. As predicted, participants held the intoxicated victim more responsible for the rape than the sober victim and viewed the bold victim as more responsible than the conservative victim. Respondents held the offender less responsible when he aggressed against an intoxicated victim than a sober one. Finally, participants judged the drunk and bold victim’s character least favorably. These findings indicate a continued need for education concerning judgments of rape victims.

Each year numerous college students are the victims of unwanted sexual contact. Harrington and Leitenberg (1994) found that 25% of female college students experienced unwanted sexual aggression involving physical violence or the threat of violence by an acquaintance after the age of 16. In another survey of 518 women, 34% reported unwanted sexual contact, 20% indicated attempted rape, and 10% recalled rape (Ward, Chapman, Cohn, White, & Williams, 1991). Similarly, Muehlenhard and Linton (1987) found that 15% of college women experienced rape. Researchers have suggested that the majority of acquaintance rapes go unreported (Koss, 1985), thus, these numbers likely underestimate the problem.

Alcohol is frequently a factor in rape situations. Nicholson et al. (1998) found that 80% of men who reported attempting but not successfully completing a rape, admitted that alcohol had been involved. Further, in a national sample of male college students, 42% of the men who committed sexual assault reported that the women they attacked were using alcohol at the time of the assault (Ullman, Karabatos, & Koss, 1999). In a sample of young single women who disclosed frequent alcohol use and sexual activity, 23% expressed the belief that their intoxication contributed to an incident of sexual assault because the men saw opportunities to aggress against impaired targets (Testa & Livingston, 1999). In some instances, the involvement of alcohol in acquaintance rape situations may account for why so few victims report sexual assaults. Victims may believe that they will be judged differently when intoxicated, a belief supported by the research (e.g., Richardson & Campbell, 1982; Stormo, Lang, & Stritzke, 1997).

Findings from several studies converge to indicate that intoxication affects (a) judgments of the victim and offender’s responsibility for a rape occurring and (b) perceptions of their characters. Richardson and Campbell (1982) were among the first to document that the victim’s intoxication altered how the

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research participants perceived her. In particular, her intoxication raised her level of perceived responsibility for the rape, whereas the offender’s intoxication somewhat lowered his perceived responsibility. Additionally, Richardson and Campbell found that intoxication on the part of the victim resulted in derogation of her character (respondents viewed her as less moral and more aggressive), but the offender’s intoxication did not alter judgments of his character.

More recently, Stormo et al. (1997) discovered that even moderate intoxication on the part of the victim increased judgments of her responsibility, whereas the perpetrator’s intoxication lowered his perceived responsibility. Finally, whereas Norris and Cubbins (1992) did not find that the victim and offender’s intoxication affected judgments about their respective responsibilities, they did find that participants evaluated the victim as somewhat more responsible for the rape when her attacker had been drinking. Likewise, participants viewed the victim as more likable and more responsive to the offender when he was intoxicated. In sum, then, judgments about the victim are influenced by both her behavior and that of her offender.

In addition to alcohol use, researchers have examined victim dress as an influence on the victim’s perceived responsibility (Cassidy & Hurrell, 1995; Workman & Freeburg, 1999). Cassidy and Hurrell (1995) presented to participants photographs of rape victims in varied attire. Participants judged the provocatively dressed victim to be more responsible for the rape than did participants who saw a photo of the conservatively dressed victim or who did not see a photo of the victim. In this same study, participants who saw the provocatively dressed victim tended to believe that the offender’s behavior was justified. Workman and Freeburg (1999) found similar results when they manipulated victim clothing. Perceivers assigned the victim more responsibility for the rape when she wore a short skirt than a long skirt.

In addition to intoxication, the evidence clearly indicates that manipulation of the victim’s manner as expressed by her attire influences perceptions about her in an acquaintance rape situation. We seek to replicate these findings in the present study. However, when people make judgments about rape victims, it seems likely they will take into account a complete image of the victim, beyond her dress, especially if the victim is known to them, as is likely to occur when date rape happens on a college campus. Because of this possibility, we manipulated a more complete picture of the victim’s persona by describing her either as conservative or as bold in dress, personality characteristics, and behavior. By presenting a more comprehensive view of the victim, the results of the study will be more applicable to understanding judgments made in the real world.

In sum, the present study further examines how a victim’s intoxication alters judgments about her, and it extends previous research by pairing intoxication with the manipulation of the victim’s persona (i.e., dress, personality, and manner). We predicted that participants would hold the intoxicated victim more responsible than the sober victim and would judge the bold victim as more responsible than the conservative victim. We also expected that the respondents would view the offender as less responsible when aggression against an intoxicated victim as compared to a sober victim and when assaulting a bold victim versus a conservative victim. Finally, we hypothesized that participants would judge the sober victim’s character more favorably than the intoxicated victim’s character and would rate the conservative victim’s character better than the bold victim’s character.

### Method

#### Participants

The study took place in a classroom setting where two researchers administered the research materials. The experiment began with one researcher giving a brief introduction and distributing two copies of the consent form to each participant. A researcher then read the form aloud and explained it in detail. The researchers encouraged the participants to sign one of the forms only if they felt comfortable with the content of the study. After the participants signed and returned the consent forms, the researchers randomly distributed to each participant one of four scenarios with an attached questionnaire. After the participants read the scenario and finished the questionnaire, the researchers collected the research materials. During the debriefing, participants learned the true purpose of the study, including the manipulation of the victim’s alcohol use and persona. The entire procedure took about 20 min.
Responsibility and Victim Character in a Rape Scenario  □ Ross, Kretchmar, and Lawrance

Materials

Each scenario was one page long and described a situation in which a man ("Luke") and a woman ("Anne"), who had gone on two previous dates, attended a college party together. After the party, they returned to Anne's apartment where Luke forced Anne to have intercourse, despite her resistance.

Within these scenarios, researchers manipulated the victim's level of intoxication (sober vs. drunk) and the victim's persona (conservative vs. bold) so that participants read a scenario in which the victim was either sober and conservative, sober and bold, drunk and conservative, or drunk and bold (see Appendix for examples). Throughout all four scenarios, the offender consumed two beers. In the sober condition, the victim drank only soda at the party. In the intoxicated condition, the victim drank five beers. The researchers manipulated the intoxicated condition further by replacing sober behaviors such as "walked" with "stumbled" and "sitting" with "slumped." In manipulating victim persona, the researchers gave a full description of both dress and manner. The scenarios described the reserved victim as wearing conservative clothing, such as slacks and a blouse, for the date and as having a small, close group of friends, and as someone who did not attend parties often, displayed nervousness on the date, and conversed occasionally with a person she knew at the party. To further emphasize her conservative mannerisms, the scenario depicted the offender greeting her at the door with a "quick kiss on her cheek." In contrast, the researchers portrayed the bold victim as wearing a black miniskirt and cropped top, which showed off her tattoo and belly-button ring. The description further stated that she had a large circle of friends, enjoyed attending parties and drinking, displayed no shyness toward the offender during the date, and conversed often with other people at the party. To accentuate her bold behavior, the researchers described the offender greeting her at the door with "a long kiss on the lips." None of the scenarios depicted the victim as demonstrating sexually provocative behavior. Prior to the study, the researchers conducted a pilot study that confirmed the effectiveness of the manipulations.

The questionnaire contained 28 statements to which the participants responded using a 6-point scale (1 = strongly disagree, 6 = strongly agree). These statements measured four dependent variables: offender responsibility, victim responsibility, situation responsibility, and victim character. The researchers measured each dependent variable by the average value calculated across the participants' responses to several statements and calculated interitem reliability for each dependent variable using Cronbach's alpha. Victim character consisted of 10 statements including "Anne displayed good judgment in the scenario" and "Anne has questionable morals" (α = .80). Victim responsibility included seven statements such as "Anne could have stopped the rape from occurring" and "Anne's friends would believe that the rape was her fault" (α = .77). Offender responsibility consisted of three statements including "Luke is responsible for the rape" and "Luke's behavior is excusable" (α = .69). The researchers eliminated three statements about offender responsibility due to low interitem reliability. Situation responsibility contained five statements such as "The situation (i.e., party) contributed to the occurrence of the rape" and "The situation (i.e., party) did not affect the outcome of the evening" (α = .83). Participants also completed five questions pertaining to their demographic characteristics, including age, sex, ethnicity, religion, and class year.

Results

The researchers tested the hypotheses using 2 (victim condition: intoxicated vs. sober) × 2 (victim persona: bold vs. conservative) analyses of variance and set the alpha level at .05 for all tests. Because not every participant completed all items on the questionnaire, certain analyses contain missing cases. We report the sample number for each analysis below.

Victim Responsibility

The first analysis examined the effects of victim condition and victim persona on victim responsibility (N = 64). As expected, a significant main effect for victim condition emerged, F(1, 60) = 14.97, p < .001, partial η² = .20. Participants held the intoxicated victim more responsible (M = 2.70, SD = .71) than the sober victim (M = 2.06, SD = .66). The main effect for victim persona was also significant, F(1, 60) = 7.80, p < .01, partial η² = .12. Participants viewed the bold victim as more responsible (M = 2.61, SD = .71) than the conservative victim (M = 2.15, SD = .74). The interaction effect was not significant.

Offender Responsibility

The next analysis examined the effects of victim condition and victim persona on offender responsibility (N = 64). Only one significant finding emerged: a main effect of victim condition, F(1, 60) = 5.10, p < .05, partial η² = .08. Participants held the offender as less responsible when he assaulted a drunk victim (M = 5.70, SD = .53) than when he assaulted a sober victim (M = 5.93, SD = .20).
The third analysis explored the effects of victim condition and victim persona on the responsibility of the situation ($N = 63$). The main effect for victim condition was significant, $F(1, 59) = 6.93$, $p < .05$, partial $\eta^2 = .11$. As expected, participants evaluated the situation as more responsible when the victim was intoxicated ($M = 3.41$, $SD = .88$) than when she was sober ($M = 2.77$, $SD = 1.11$). This main effect was qualified by the significant interaction effect, $F(1, 59) = 4.10$, $p < .05$, partial $\eta^2 = .07$. The participants rated the situation as more responsible when the victim was portrayed as drunk and conservative than when she was described as sober and conservative (see Table 1).

### Situation Responsibility

The final analysis tested the effects of the victim's condition and the victim's persona on judgments about her character ($N = 60$). The interaction effect of victim condition and victim persona was significant, $F(1, 56) = 8.24$, $p < .01$, partial $\eta^2 = .13$. The participants viewed the character of the drunk, bold victim as least favorable when compared to each of the other conditions (see Table 1). Not surprisingly, victim condition showed a significant main effect, $F(1, 56) = 14.01$, $p < .001$, partial $\eta^2 = .20$. Consistent with the hypothesis, participants judged the character of the sober victim more favorably ($M = 4.96$, $SD = .46$) than they judged the character of the drunk victim ($M = 4.34$, $SD = .97$). Finally, a significant main effect for victim persona also emerged, $F(1, 56) = 29.89$, $p < .001$, partial $\eta^2 = .34$. Predictably, participants rated the character of the conservative victim more highly ($M = 5.06$, $SD = .37$) than they rated the character of the bold victim ($M = 4.42$, $SD = .67$).

### Discussion

This study examined the judgments of responsibility and character by manipulating victim intoxication and victim persona; its hypotheses were largely supported. The present study's findings are consistent with those of earlier studies (e.g., Richardson & Campbell, 1982; Stormo et al., 1997), which also documented that a victim's intoxication negatively affected how she was viewed by others. Additionally, the present study found that differences in a victim's persona influenced attributions about her responsibility, and judgments made about her character.

Participants in the current study shifted more responsibility to the drunk victim, less responsibility to the offender when the victim was drunk, and more responsibility to the situation when the victim was drunk. Additionally, alcohol use by the victim resulted in lower ratings of her character. The participants may be responding to prevalent stereotypes about women who become intoxicated. Abbey (1991) reported that women who consume alcohol are viewed as more sexually available and, thus, perhaps as more responsible for the rape. Further, people may see intoxicated women as making themselves more vulnerable to sexual advances. Finally, Richardson and Campbell (1982) described Lerner's just world theory and suggested that participants may view the intoxicated vic-
tim more negatively than the sober victim as a way of minimizing the dissonance that occurs when bad events happen to innocent individuals.

Previous studies have documented judgments about the victim’s responsibility based solely on her appearance (Cassidy & Hurrell, 1995; Workman & Freeburg, 1999). Additionally, Workman and Freeburg (1999) found that 57% of college students agreed that it was fairly easy to determine a female’s personality characteristics by the way she dresses. The present study expanded the description of the victim to include appearance, personality, and behavior; this more complete description also influenced judgments the participants made about her. As predicted, respondents viewed the bold victim as more responsible for the rape than the conservative victim. Additionally, participants judged the intoxicated, bold victim less favorably in terms of character. Thus, the present study demonstrates that a rape victim portrayed as immodest in her appearance, as well as outgoing and confident, and who enjoys parties and drinking may be judged more harshly in terms of both responsibility and character by her peers. The assumptions that are made about people based on appearance and behavior are problematic. They have the potential to negatively impact people, such as rape victims, by creating stereotypes based on the victim’s outward presentation.

Whereas the results of the present study are consistent with previous research, manipulating a composite description of the victim both enhanced and limited the conclusions that we may draw. In creating this composite, the researchers essentially combined three variables, victim dress, personality, and manner, so that the research participants made judgments about a whole person, not an aspect of a person. We expect these findings to have greater ecological validity; in actual date rape situations, it is likely that the victim’s dress covaries with other aspects about her and that observers would take the entire image of the victim into account when making judgments. However, creating a composite variable does limit our ability to tease apart any single factor behind judgments made. That is, on the basis on these findings we cannot conclude whether it is the victim’s dress, personality, manner, or a combination of two or more of these factors that caused the participants to judge the victim differently. Nonetheless, because victim persona did influence judgments about her as expected, and these findings are consistent with those of studies manipulating just dress (Cassidy & Hurrell, 1995; Workman & Freeburg, 1999), we argue that altering any aspect of the victim’s persona is likely to yield similar findings. Future researchers might consider examining various elements of the victim’s persona individually and in alternative combinations.

The present study is further limited by the characteristics of its sample. Women predominately comprised the sample, which precluded analyses exploring sex differences. Previous studies have, in fact, found differences in perceptions between men and women in terms of judgments made about victims of acquaintance rape (Norris & Cubbins, 1992; Richardson & Campbell, 1982; Stormo et al., 1997). Therefore, future researchers might make an effort to recruit a larger, more balanced sample to further examine gender as a factor. Additionally, the present study generalizes primarily to Caucasian, Catholic, freshmen college students. The results are especially striking because this group, in particular, receives ongoing education about acquaintance rape and the circumstances surrounding it. Because most researchers examining acquaintance rape draw from college samples, future studies should examine other populations in order to determine how judgments concerning rape victims vary throughout society. Follow-up studies to determine whether perceptions change with increased awareness and more education would also be beneficial.

This study has demonstrated that alcohol use and victim persona are important factors in distributing responsibility and making judgments about character in acquaintance rape situations. Koss (1985) proposed that only 10 to 50% of rape incidents are reported. It is possible that this low reporting rate is partially due to the victim’s fear that she will be judged as partially responsible and that her character will be derogated, especially if she was intoxicated at the time of the assault. The present study adds an additional dimension by demonstrating that the dress and behavior of a victim also influence judgments; the more outgoing, immodest victim may believe that her behavior in some way contributed to the assault. The discrimination that occurs toward rape victims based on persona and intoxication level indicates a need for education about rape and responsibility. This education should be built around the idea that responsibility for a rape lies on the offender and not on the victim, regardless of the victim’s appearance, personality, or level of intoxication. Education on this topic may result in an increase of support provided for rape victims, which could allow more victims of rape to come forward without fear of judgment.

References


### APPENDIX

#### Scenarios

**Sober, Bold Scenario**

Anne is an attractive, 21-year-old college student who enjoys spending time with a large group of friends. She and her friends enjoy going to the movies and shopping. They like to attend parties frequently, but Anne usually doesn’t drink much at them.

One Friday night, Anne was getting ready for a date with Luke. She and Luke had been on two previous dates, and earlier that day, he invited her to go to a friend’s house party. She was thrilled about the date, and she had a great outfit picked out. She had decided on a black miniskirt and a white, crop-top, V-neck shirt that showed off her belly-button ring and the tattoo on her lower back. She chose to wear her favorite pair of black, chunky shoes with it. After she was ready, she talked to a friend on the phone while waiting for Luke to pick her up.

At 8:00, Luke arrived, greeted her with a long kiss on the lips, and they left for the party. They decided to walk to the party because it was only a few blocks. They held hands on the way, and talked comfortably. At the party, Anne started chatting with a group of people while Luke went to get a beer for himself and a soda for Anne. After awhile, Anne pulled Luke onto the dance floor and they danced together for a couple of songs. She enjoyed dancing with him and was disappointed when he said he was tired of dancing. Afterwards, Luke got himself a second beer while Anne talked to some more people. Luke returned and they spent the rest of the evening talking with friends and having a good time. After the party slowed down, Luke said he wanted to leave and she agreed.

Upon leaving the party, Luke took Anne’s hand and they casually walked back to her house. At the door, Anne turned to kiss him good night and Luke asked if he could come inside to use the bathroom. Anne agreed and let him in. She was sitting on the couch when he came out of the bathroom. He walked over and sat next to her. Luke found the remote control and turned on the television. Anne smiled happily at him and he gently put his arm around her shoulders. He then turned toward her and kissed her on the lips. Again, she smiled. Luke held Anne close to him and continued to kiss her on the mouth. After a few moments of intense kissing, Luke began to unbutton her blouse. Anne pushed his hand away and said “I’m not ready for that . . . please stop.” Ignoring her protests, Luke pushed her down on the couch and finished unbuttoning her blouse. Anne tried to push him away, saying “Luke, don’t!” Luke unbuttoned her pants and pulled them down. He began stroking her inner thigh and genital area, saying “Come on, Anne.” Anne began to struggle but failed to get even one arm free. Luke continued to kiss her, and with his hand, he slipped off her underwear. Crying, Anne protested: “Stop it!” Luke then managed to unzip his pants and pull them down. Lying on top of her, he pulled her legs apart and forced intercourse.
APPENDIX (cont.)

Scenarios

Drunk, Conservative Scenario

Anne is an attractive, 21-year-old college student who enjoys spending time with her close group of friends. She and her friends enjoy going to the movies and shopping. They don't attend parties very often, but Anne usually drinks at them when they go.

One Friday night, Anne was getting ready for a date with Luke. She and Luke had been on two previous dates, and earlier that day, he invited her to go to a friend's house party. She was nervous about the date, so she consulted her best friend about what to wear. They finally decided on a pair of black, flare pants and a white, tailored, button-up shirt with black, chunky shoes. After she was ready, she sat nervously waiting for Luke to pick her up.

At 8:00, Luke arrived and greeted her with a quick kiss on the cheek. She blushed in response, and they left for the party. They decided to walk to the party because it was only a few blocks. Anne wanted to hold Luke's hand, but was too shy to initiate it. At the party, Anne started chatting with a friend while Luke went to get a beer for himself and one for Anne. After awhile, Luke asked Anne if she wanted to dance and she accepted. She enjoyed dancing with him. She was less embarrassed than she normally would have been because the beers were affecting her. After they danced, Luke got himself a second and Anne a third beer while Anne talked to another friend. Luke returned and they spent the rest of the evening talking with friends, drinking, and having a good time. After the party slowed down, Luke said he wanted to leave and Anne agreed. By the end of the party, Anne drank five beers and Luke had two.

Upon leaving the party, Luke took her hand and he helped her as she stumbled back to her house. At the door, Anne turned to say good night and Luke asked if he could come inside to use the bathroom. Anne agreed and let him in. She was slumped on the couch when he came out of the bathroom. He walked over and sat next to her. Luke found the remote control and turned on the television. Anne smiled at him as he gently put his arm around her shoulders. He then turned toward her and kissed her on the lips. Again, she smiled. Luke held Anne close to him and continued to kiss her on the mouth. After a few moments of intense kissing, Luke began to unbutton her blouse. Anne pushed his hand away and said "I'm not ready for that . . . please stop." Ignoring her protests, Luke pushed her down on the couch and finished unbuttoning her blouse. Anne tried to push him away, saying "Luke, don't!" Luke unbuttoned her pants and pulled them down. He began stroking her inner thigh and genital area, saying "Come on, Anne." Anne began to struggle but failed to get even one arm free. Luke continued to kiss her, and with his hand, he slipped off her underwear. Crying, Anne protested: "Stop it!" Luke then managed to unzip his pants and pull them down. Lying on top of her, he pulled her legs apart and forced intercourse.
A unique relation exists between humor and psychology. The understanding of humor and its effects on human behavior and personality often interest many individuals in the field. For example, as early as 1905, Freud (1905/1960) wrote about two types of humor. The first type of humor, nontendentious, referred to innocent humor, which includes word play and substitution. For example, one person says to a noticeably quiet group member: “Are you going to let anyone else get a word in edgewise here?” (Kahn, 1989). The second type, tendentious humor, has a particular aim, and includes sexist humor (Ryan & Kanjorski, 1998). Sextist humor differs from sexual humor because sexual humor is simply humor that has sexual overtones or is sexual in nature. Sextist humor is humor that contains stereotypical or role-defined remarks. Sextist humor has found a niche in mainstream American society and thus makes it noteworthy of investigation.

Sexist Humor and Gender

Sexual humor elicits more enjoyable reactions when it targets the opposite sex of the person hearing the joke. For example, men find tendentious humor more enjoyable than do women (Chapman & Gadfield, 1976; Johnson, 1991; Love & Deckers, 1989). Subsequently, Love and Deckers (1989) found a sexual bias when investigating sexist jokes. They attributed this bias to women’s feelings of victimization. Love and Deckers found that men are possibly less aware of sexist content because men are less often the victim or target of a sexist joke. Men therefore may not fully understand why women do not appreciate sexist jokes. On the other hand, research indicates that women appear more reluctant than men to enjoy sexual humor specifically directed at men due to either masochism (Chapman & Gadfield, 1976) or the socialization processes of society (Cantor, 1976). This apparent sex difference can be partially accounted for by the explanations given to women concerning appropriate behavior (Cantor, 1976). Research shows that women seem “trained” to accept the subordinate role and thus find it easier to laugh at their own expense (Moore, Griffiths, & Payne, 1987). If women laugh at any sexist joke, then the joke may seem appropriate and funny, but by not laughing, women might be labeled as lacking a sense of humor (Ryan & Kanjorski, 1998). Sextist jokes may make women feel victimized.

Sexist Humor and Greek College Students

The current study investigated differences in perceived sexist humor. Male, (n = 29) and female, (n = 47) Greek and non-Greek students read 6 antifemale jokes and 6 antimale jokes. Students rated the perceived humor of each joke using a 5-point Likert-type scale. The researcher predicted that male Greeks would score higher on perceived humor of female-bashing sexist jokes when compared to the other groups. Results confirmed the latter notion. Male-bashing jokes resulted in no interaction or main effects. However, a main effect and an interaction occurred for both sex, $F(1, 75) = 12.74, p < .05$, and Greek status, $F(1, 75) = 8.03, p < .05$, when female-bashing jokes acted as the dependent variable. Male Greeks found the female-bashing jokes significantly funnier than did male and female non-Greeks and female Greeks.
Sexist Humor and Group Membership

In addition to sexist bias, Johnson (1991) uncovered the error of “group” bias. He noted that college students may not appear especially sensitive to, or tolerant of, the different students in the groups they encounter. College students may tend to associate with people of similar beliefs and backgrounds, and these associations may tend to reinforce the humor in finding other groups as the victims of sexual or aggressive humor.

Besides college students, researchers have investigated the dynamics between social groups and clusters of peers, and the way in which they use humor. Understanding how group dynamics and individuals’ perceptions of humor can come provide valuable information concerning the influences that the group exerts on the psyche or the mind of the individual members of the group. For example, one major finding is that organizations use humor to establish themselves, and then once established, they use humor to maintain their boundaries (Kahn, 1989). This type of humor, often called inside jokes, encompasses jokes that only members of a particular group find amusing. These inside jokes often help the group preserve its identity.

Sexist Humor and Greek Organizations

Prior research has focused on humor and Greek organizations in particular. Greek organizations include fraternities and sororities, with men belonging to fraternities and women belonging to sororities. Research suggests that members of Greek organizations form a better understanding of editorial satire (Gruner, 1989). The particular Greeks in Gruner’s (1989) study possessed the ability to deduce the meaning of political cartoons presented to them, or in other words, they often “get” the intended joke. The researcher also noted that a personality factor might be more common in those students who choose to become members of a Greek society (Gruner, 1989). This personality factor could be a tendency to think along stereotypical sex role beliefs, thus finding humor in sexist jokes.

The differences of perceived humor between Greek organizations and the general college population suggested a need for further study. The experimenter believed that male Greeks would find sexist jokes funnier than would female Greeks, female non-Greeks, and male non-Greeks. In order to test the hypothesis, the author conducted three tests on four groups: male Greeks, male non-Greeks, female Greeks, and female non-Greeks. Test 1 used scores on sexist jokes bashing both sexes as the dependent variable. Test 2 used scores on male-bashing jokes only as the dependent variable, and finally, Test 3 used scores on female-bashing jokes only as the dependent variable. After reviewing research that indicates men and members of Greek organizations favor sexist jokes and editorial satire, the author speculated that male Greeks would find sexist humor more amusing as compared to non-Greek men, Greek women, and non-Greek women.

Method

Participants

Forty-seven female (25 Greeks and 22 non-Greeks) and 29 male (11 Greeks and 18 non-Greeks) college students participated in the present study. Ages ranged from 18 to 23 (M = 20.25). Whites comprised 77% of the sample, whereas 14% were Black, and the rest were of various ethnicities. Freshmen accounted for 39% of the sample, 29% were sophomores, 18% juniors, and 13% seniors.

Materials

The survey contained 12 sexist jokes compiled by the author. Participants used a Likert-type scale developed by the author (1 = not very funny to 5 = very funny) to indicate how humorous they perceived each joke to be. The author classified six jokes as antifemale (e.g., “Why did the woman cross the road?” “Hey! What’s she doing out of the kitchen?”) and six additional jokes as antimale (e.g., “What’s the difference between government bonds and men?” “Bonds mature”). Each packet of jokes contained sheets, each of which had a joke on the front and the answer to the joke on the back. If the question was not a question-and-answer type of joke, the back of the paper was blank. The author administered a demographics sheet to participants on which they indicated their age, sex, classification in school, race, and membership in a fraternity or sorority.

Procedure

Twenty-seven women and 10 men who signed up to participate in a psychological experiment assembled in a classroom and comprised the first sample. After completing an informed consent form, participants completed the demographics sheet and the survey containing 12 Likert scales, 1 scale for each joke. After each student had read and rated each joke, the experimenter debriefed the students regarding the hypothesis.

The procedure differed slightly to obtain more male Greek students in the sample. The experimenter gave the informed consent, the demographics sheet, the joke packet, and debriefing form to various male members of Greek fraternities. Participi-
participants came from a variety of fraternities that gather in the same location on campus between classes. First, participants completed the informed consent and then the demographics sheet. Following the completion of these forms, the experimenter gave participants the survey containing the jokes. After the participants turned in the sheets, the debriefing session took place.

An assistant tested the female Greek members. The assistant went to a sorority meeting to conduct the survey, and to obtain the final 20 female Greek scores. She gave them the informed consent and demographics sheet; they filled it out and returned it to her. After participants filled out the demographics sheet, the assistant then explained the format of the survey (indicating that the question was on the front and the answer on the back) and explained how to rate the jokes, as the experimenter had done with the previous samples. After they had rated each joke, the assistant debriefed them.

**Results**

The experimenter conducted a 2 × 2 factorial analysis of variance (ANOVA) to analyze the data. First, the experimenter tested how the participants rated the 12 jokes. The jokes were then classified as male-bashing or female-bashing. The experimenter conducted ANOVAs on the dependent variables. When combining the antimal and antifemale jokes scores as the dependent variable, no main effect occurred for sex, $F(1, 75) = 12.74, p < .05$. However, a main effect took place for Greek status, $F(1, 75) = 4.54, p < .05$, (Greeks, $M = 39.78, SD = 6.47$; non-Greeks, $M = 36.60, SD = 9.31$). Overall, the Greek students rated the jokes as funnier than the non-Greek students did. No interaction occurred between sex and Greek status, $F(1, 75) = 2.71, p > .05$.

**Discussion**

The hypothesis that male Greeks would find sexist humor funnier compared to non-Greek men, Greek women, and non-Greek women was partially confirmed. Specifically, men and women belonging to a Greek organization found the sexist jokes funnier than those individuals not belonging to a fraternity or sorority. This result corroborates Gruner’s (1989) study in that Greeks found jokes funnier than did non-Greeks. Moreover, the Greeks found the female-bashing jokes funnier when compared to non-Greeks. In terms of sex, male Greeks and non-Greeks found the female-bashing jokes significantly funnier than did the female Greeks and non-Greeks. This research indicates that support does exist for the commonly held belief that men find sexist jokes funnier than

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Mean “Funny” Score by Gender and Greek Status</th>
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<tr>
<td>Material type</td>
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<tr>
<td>Male and female jokes</td>
<td>$M$ 42.82</td>
</tr>
<tr>
<td></td>
<td>$SD$ 7.52</td>
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<tr>
<td>Male jokes</td>
<td>$M$ 23</td>
</tr>
<tr>
<td></td>
<td>$SD$ 5.1</td>
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<tr>
<td>Female jokes</td>
<td>$M$ 23.27</td>
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<td>$SD$ 3.26</td>
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women do. The idea that male Greek organizations foster the idea of female inferiority might be a plausible explanation for this finding. Male bonding plays a large and crucial role in fraternities. Perhaps, as research has shown, their socialization process encourages the ideas of female inferiority, and these beliefs are revealed through research (Cantor, 1976).

Although past research (Johnson, 1991) has indicated that the sexes differ in humor preferences, with men finding more enjoyment in sexual humor (Johnson, 1991), significant support does not exist overall for such sex differences in sexist humor perceptions. It goes without saying that sex plays an important role in studying humor. Developments in humor research indicate that appreciation of sexist humor does depend on the sex of the victim and the sex of the evaluator (Love & Deckers, 1989). In general, women do not enjoy jokes seen as antifemale, and men do not enjoy jokes seen as antimale (Chapman & Gadfield, 1976). The dispositional theory of humor also indicates that women will enjoy antifemale jokes less than antimale jokes (Moore et al., 1987). Indicative of these prior findings, men found female-bashing jokes significantly funnier when compared to women. People, in general, seem to enjoy jokes more when the joke targets a member of the opposite sex as opposed to a person of the same sex, as the present results suggest. This segregation of groups of people in Greek organizations has possibly led Greek students, more so than non-Greeks, to find humor in sexist jokes, especially female-bashing jokes.

Future research could investigate the full effect sex has on sexist humor. In this study, the female-to-male ratio (47:29) possibly affected the results. Because a smaller number of men participated than women, the results may have produced different results for the male gender. It is possible that if the same number of men and women participated the results may not have been significantly significant. In order to obtain accurate data, the two sexes should be of equal numbers to delineate any differences or to statistically control for the differences in the male-to-female ratio.

Furthermore, this research was conducted with participants at a relatively small (11,000 students) East Texas university. The size and geographical location of this university possibly produced some limitations with regard to generalization to a population. Future research is needed to determine if the same results would occur on a larger campus in a different area of the country. For instance, would the same results occur at a large northeastern university?

In addition to numbers and geography, sex role beliefs may play a part in one’s preference for sexist humor. A sex role belief is a belief that a certain sex has a certain role. For example, women are often seen as playing the role of a homemaker, whereas the men play the role of breadwinner. Though times are changing, and therefore beliefs are changing, people who still believe in the traditional sex roles would seem more likely to find sexist jokes more humorous given that sexist jokes often play upon these sex role beliefs. This reasoning could also explain the lack of significant findings when the scores on the male-bashing jokes served as the dependent variable. Given that society conforms to the female-bashing jokes in their sex roles, they would not find male-bashing jokes humorous. These types of jokes would seem to go against the norm, and thus no humor could be found in them.

References
Sincere appreciation is expressed for the hard work on the part of the following individuals who served as reviewers for this issue. Without the assistance of such dedicated professionals, the *Psi Chi Journal* simply would not be able to function!

—Editor

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**Correction:**

The article by Sagles et al. on page 31 of the Spring 2002 issue of the *Psi Chi Journal of Undergraduate Research* should not have included an Author Note. The Author Note that appears on this page was inadvertently included from a previous issue.
Psi Chi Research Awards and Grants

Psi Chi annually sponsors national undergraduate and graduate research award competitions, as well as research awards for members submitting the best research for the regional and national paper/poster sessions. Members are encouraged to begin research papers early to submit for presentation at local, state, regional, or national conventions. Chapters are encouraged to provide an opportunity for members to rehearse their papers before an audience prior to presenting them at a convention.

In addition, Psi Chi also sponsors grant programs to fund student and faculty research. Psi Chi’s total award and grant programs now provide over $180,000 to members. Descriptions of the award/grant competitions follow. Further information and submission forms may be obtained from Psi Chi’s national website (www.psichi.org) or from the Psi Chi National Office, P.O. Box 709, Chattanooga, TN 37401-0709; telephone: (423) 756-2044; e-mail: psichi@psichi.org.

Guilford Awards

All Psi Chi undergraduate members are eligible to submit their research for the Psi Chi/J. P. Guilford Undergraduate Research Awards. Cash awards are $1,000 for first place, $650 for second place, and $350 for third place. In addition, all winners and their faculty research advisors receive award certificates. The abstracts of the winning papers, as well as photographs and brief biographies of the top three winners, are published in Eye on Psi Chi. The deadline for this award is May 1 (postmark).

Allyn & Bacon Awards

The Psi Chi/Allyn & Bacon Psychology Awards, sponsored by Allyn & Bacon Publishers, are open to all undergraduate Psi Chi members and are awarded to those who submit the best overall empirical research papers. The awards are $500 for first place, $300 for second place, and $200 for third place. In addition, all winners and their faculty research advisors receive award certificates. The abstracts of the winning papers, as well as photographs and brief biographies of the top three winners, are published in Eye on Psi Chi. The deadline for this award is May 1 (postmark).

Erlbaum Awards

The new Psi Chi/Erlbaum Awards in Cognitive Science, sponsored by publisher Lawrence Erlbaum Associates, Inc., are open to all Psi Chi undergraduate and graduate Psi Chi members and are awarded to those who submit the best overall empirical studies in the area of cognitive science. The awards are $500 for the first-place graduate student and $500 for the first-place undergraduate student. In addition, the winners and their faculty research advisors receive award certificates. The abstracts of the winning papers, as well as photographs and brief biographies of the top two winners, are published in Eye on Psi Chi. The deadline for this award is May 1 (postmark).

Newman Graduate Award

All psychology graduate students are eligible to submit their research for the Psi Chi/APA Edwin B. Newman Graduate Research Award. The winner receives the following: (1) travel expenses to attend the APA/Psi Chi National Convention to receive the award, (2) a three-year subscription to an APA journal of the winner’s choice, and (3) two engraved plaques, one for the winner and one for the winner’s psychology department as a permanent honor to the winner. In addition, the abstract of the winning paper, as well as a photograph and brief biography of the winner, is published in Eye on Psi Chi. This award is the only student research award presented during the prestigious APA/APF Awards ceremony at the APA/Psi Chi National Convention in August. The deadline for this award is February 1 (postmark).

Regional Research Awards

All Psi Chi members (undergraduate and graduate) are eligible to submit their research for the Regional Research Awards. Cash awards of $300 each are presented to students submitting the best research papers to Psi Chi sessions at regional conventions. The number of awards in each region will vary with the size of the regions; a total of 78 awards of $300 each are available for the 2002–03 year. Award monies are distributed at the conventions following the presentations. The Psi Chi regional vice-presidents each send a Call for Papers and a letter to the Psi Chi chapters in their respective regions during the fall.
These letters include information about the Regional Research Awards, the regional conventions, and submission deadlines for Psi Chi programs. Deadlines for submissions vary according to region and sometimes from year to year; check your fall regional mailing or the Psi Chi national website (www.psichi.org) for details.

**National Convention Research Awards**

All Psi Chi members (undergraduate and graduate) are eligible to submit their research for the National Convention Research Awards. Cash awards of $300 each are presented to students submitting the best research for Psi Chi sessions at the APA and APS national conventions. Up to eight awards are given: four for the APA Convention and four for the APS Convention. Award monies are distributed at the conventions following the presentations. A Call for Proposals is mailed to all chapters in the fall and is also available from the Psi Chi National Office and website (www.psichi.org). The deadline for submissions to the Psi Chi student sessions at both the APA and APS conventions is December 1 (postmark).

**Undergraduate Research Grants**

All undergraduate Psi Chi members are eligible to apply for these undergraduate research grants. The purpose of this program is to provide funds for members to defray the cost of conducting a research project. Applicants may request up to $1,500 for each project. A total of $45,000 has been allotted for this student grant program. The deadline for this grant program is October 1 (postmark).

**Summer Research Grants**

All undergraduate Psi Chi members are eligible to apply for these summer research grants (research must be conducted while still an undergraduate, not after graduation). The purpose of this program is to provide funds for members to conduct summer research at Level I or Level II research institutions. During the 2002–03 year, Psi Chi will award six grants of $3,500 (a stipend of $2,500 to the Psi Chi student plus $1,000 to the sponsoring faculty member at the research institution). The deadline for this grant program is March 30 (postmark).

**NSF–REU Grants**

All undergraduate Psi Chi members are eligible to apply for these summer research grants, which are offered by Psi Chi in conjunction with the Research Experiences for Undergraduates (REU) program sponsored by the National Science Foundation (NSF). The purpose of this program is to provide funds for members to conduct summer research at Level I or Level II research institutions that have been identified by NSF as REU sites. This research must be conducted while still an undergraduate, not after graduation. Psi Chi will award a total of six grants to fund Psi Chi members who qualify for an NSF–REU grant during the 2002–03 year. A total of $30,000 has been allotted for this grant program. The deadline for this grant program is spring 2003 (check Psi Chi website for further details—www.psichi.org).

**Faculty Advisor Research Grants**

All current faculty advisors and coadvisors who have served an active Psi Chi chapter for at least one year are eligible to apply for these faculty advisor research grants. The purpose of this program is to provide funds for advisors to defray the direct costs of conducting a research project (no stipends included). Two grants will be awarded annually within each of Psi Chi’s six regions, for a total of 12 grants. The maximum amount of each grant will be $2,000. The deadline for this grant program is June 1 (postmark).

**Hunt Research Awards**

All Psi Chi student and faculty members are eligible to apply for a Thelma Hunt Research Award. Up to three awards of $3,000 each are presented annually to enable members to complete empirical research that addresses a question directly related to Psi Chi, as posed by either (1) the Psi Chi National Council, or (2) the researcher submitting a proposal. Unlike other national Psi Chi award/grant programs, the Hunt Awards focus on research directly related to the mission of Psi Chi. The deadline for this award program is October 1 (postmark).

**Undergraduate Psychology Research Conference Grants**

The purpose of this program is to provide funds for local/regional undergraduate psychology research conferences. Funding is intended for conferences that will invite student research presenters from at least three schools in the area and will notify all Psi Chi chapters in the geographic area of the conference. Funding is not available for conferences intended for students from a single school. If a single school organizes the conference (and invites other schools), the school submitting an application must have a Psi Chi chapter. If a consortium of schools organizes the conference, at least one member of the consortium must have a Psi Chi chapter in order to be eligible to apply. The maximum grant for each conference is $1,000. The deadline for this grant program is December 1 (postmark).
Psi Chi Journal of Undergraduate Research

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The Psi Chi Journal of Undergraduate Research is a national, fully reviewed, quarterly journal dedicated to the publication of undergraduate student research. All active Psi Chi chapters receive one complimentary subscription to the journal. We encourage each chapter to see that an additional subscription is obtained for the school library and that other organizations and interested individuals are made aware of its availability. Every effort has been made to provide a high-quality publication and yet offer the journal at affordable subscription rates to ensure its availability to all interested students, faculty members, and institutions. Back issues and bulk orders for classroom use are also available.

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- Founded 1997
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