# Journal of Psychological Inquiry
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# Contents

## Articles

## Special Features

# Psychologically Speaking

# Acknowledgement - Reviewers

The following individuals reviewed manuscripts for this volume of the *Journal of Psychological Inquiry*.  We gratefully acknowledge their valuable contributions to the journal.

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# Acknowledgement - Institutions and Organizations

Cover Design

The creation of the graphic for the logo came about by thinking of how ideas are formed and what the process would look like if we could see into our brains. The sphere represents the brain, and the grey matter inside consists of all the thoughts in various stages of development. And finally, the white spotlight is one idea that formed into a reality to voice.

The entire logo is an example of creation in the earliest stages.

Cathy Solarana

Graphic Designer

# Acknowledgement - Psychology Students

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Creighton University
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1. Manuscripts must have an undergraduate as the primary author. Manuscripts by graduates will be accepted if the work was completed as an undergraduate. Graduate students or faculty may be co-authors if their role was one of teacher or mentor versus full fledged collaborator.

2. Manuscripts must (a) have come from students at institutions sponsoring the Great Plains Students' Psychology Convention and the *Journal of Psychological Inquiry* or (b) have been accepted for or presented at the meeting of the Great Plains Students' Psychology Convention, the Association for Psychological and Educational Research in Kansas, the Nebraska Psychological Society, the Arkansas Symposium for Psychology Students, or the ILLOWA Undergraduate Psychology Conference. The preceding conditions do not apply to manuscripts for the Special Features Section I or Special Features Section II.

3. Send original manuscripts only. Do not send manuscripts that have been accepted for publication or that have been published elsewhere.

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# Extraversion and Alcohol Expectancies:
# Relation to Alcohol Use Among College Students

## Ingrid Bayer
*Rockhurst University*

*Alcohol use among college students is potentially problematic. Factors related to alcohol consumption include extraversion and alcohol expectancies, specifically the expectation that alcohol use will increase social assertiveness. In this study, 138 students in undergraduate courses at a small, Midwestern university completed measures of extraversion, alcohol expectancies, and alcohol-related behavior in order to examine relations among them. There was no relationship between extraversion and alcohol expectancies; however, those two factors accounted for a significant amount of variance in alcohol use among college students. In addition, general frequency of alcohol consumption and gender comparisons revealed trends in alcohol use. Overall, findings supported previous research on college drinking patterns.*

After graduating from high school, many young adults continue their education in college. During that time, most students are eager to participate in a variety of so-called "typical" student activities such as going to classes, studying, making friends, and deciding what to do with the rest of their lives. One of college students' most common activities is alcohol use. Research results have shown that between 80% and 93% of undergraduate students have consumed alcohol at least once (Jalali, Jalali, Crocetti, & Turner, 1981; Johnston, O'Malley, & Bachman, 1984; both cited in Mann, Chassin, & Sher, 1987). In addition, Kuder and Madson (1976) suggested that alcohol use among college students occurs at many social activities, which implies that alcohol is available to students at various social events that they attend.

Why is it important to study alcohol use among college students? One reason is that alcohol consumption is quite prevalent on university campuses; the majority of students have had experience with alcohol use (Schall, Kemeny, & Maltzman, 1992). Furthermore, a significant minority of students appears to use alcohol excessively. For example, U. S. News and World Report cited a study done by the Harvard School of Public Health, which reported that 23% of sampled students were classified as frequent binge drinkers (Marcus, 2000). This finding raises the issue of potential alcohol abuse and the problems that it causes. Alcohol use remains a concern to college administrators, (Wechsler, Kelley, Weitzman, San Giovanni, & Seibring, 2000), because problems of alcohol abuse affect many more people than the drinkers. For instance, heavy drinking is associated with physical, academic, and legal problems (Wechsler, Lee, Kuo, & Lee, 2000). Research has found that students who are heavy drinkers report both less motivation to achieve academically and a dropout rate higher than that of alcohol abstainers (Moos, Moos, & Kulik, 1976). Furthermore, in the last few years, the media has highlighted cases in which college students have experienced alcohol-related deaths; one article reported 50 such deaths for 1998 and about 30 for 1999 (Murphy & Ly, 2000). The use and abuse of alcohol on college campuses raises potential legal problems for college administrators. Are they sufficiently protecting their students, especially students who are not yet 21 years old? Studying alcohol consumption among students may aid in increasing awareness of the effects of alcohol use and encouraging safe drinking.

One area of study involves identifying factors associated with alcohol consumption among college students. One hypothesis is that some people have a personality characteristic, such as extraversion, which increases the likelihood of alcohol use (Martsh & Miller, 1997). Another hypothesis suggests that individuals consume alcohol because they expect it to have positive effects on their social interactions (Brown, 1985; Christiansen, Smith, Roehling, & Goldman, 1989). The current study examined extraversion and alcohol expectancies as predictors of alcohol use among college students.

Research on extraversion as a predictor of alcohol use has yielded mixed findings. One well-established theory of personality, articulated by Eysenck (1967), suggests that introverts are more likely to use alcohol than extraverts. Eysenck proposed that people have an optimum level of cortical arousal that they wish to maintain. Extraverts experience relatively low levels of cortical arousal, and they want to increase that level. In other words, extraverts are often looking for ways to increase stimulation; thus, they tend to enjoy being around other people and engaging in social activities (Gray, 1999).

Conversely, introverts have high levels of arousal, and they desire to decrease those levels; thus, they tend to remove themselves from excess stimulation and prefer activities that are less arousing than those of their extraverted counterparts (Gray, 1999). Alcohol, a depressant that slows the activity of the central nervous system, could be a drink of choice for introverts more often than for extraverts. Although some researchers have supported Eysenck's theory (e.g., Tarnai & Young, 1983), others have found that, rather than introverts, extraverts seem to be the primary users of alcohol (Cook, Young, Taylor, & Bedford, 1998; Martsh & Miller, 1997; Moos et al., 1976; Schall et al., 1992).

There are two main reasons why the findings of some studies on alcohol use patterns have challenged Eysenck's contention that introverts are more likely to consume alcohol. One likely explanation relates to the use of clinical versus non-clinical samples. For instance, Tarnai and Young (1983), whose study supported Eysenck's theory, used adults from an alcohol treatment center as their participants. On the other hand, several studies that found a positive relation between extraversion and alcohol consumption used nonclinical samples. For example, Cook et al. (1998) sampled municipal employees (16-50+ years of age), and Martsh and Miller (1997) gathered participants from college psychology classes. Obviously, the two populations sampled in these studies were demographically very different from one another. Such dissimilar people might have different reasons for engaging in similar activity (e.g., alcohol use). For instance, it is possible that alcohol consumption in nonclinical samples, such as college students, might be tied more closely to social activities (e.g., alcohol is the main focus of a party or get-together) than alcohol consumption in clinical samples (e.g., alcoholics often drink in isolation). Consequently, there is no surprise that dissimilar populations consuming alcohol have different extraversion levels.

A second possible reason that studies have yielded discrepant findings regarding introversion or extraversion as predictors of alcohol consumption relates specifically to studies that have used college students as their samples. In college-aged populations, there is a greater likelihood that access to alcohol depends, at least in part, on an individual's desire for, and tolerance of, highly social situations. In fact, research has shown positive links between engaging in social situations and heavy drinking (Brown, 1985; Moos et al., 1976). There is a high probability that, among college students, the main users of alcoholic beverages would be extraverted, rather than introverted, because availability of the beverages may be greater for extraverts. Moreover, many college students are under the age of 21 years, and they might rely on older friends or siblings to provide alcohol for them. Extraverted college students are more likely to have a wider social network that would include older people. Although adults who consume alcohol may be extraverted, their access to alcohol does not depend on other people, and so there is an equally likelihood for them to be either introverted or extraverted.

In addition to extraversion, research findings also indicate a relationship between the expectancy of increased social assertiveness and alcohol use. The Alcohol Expectancy Model (Thombs, 1994) predicts this relationship. In this model, expectancy is defined as the "anticipation of a systematic relationship between events or objects in some upcoming situation" (Goldman, Brown, & Christiansen, 1987, p. 183, cited in Thombs, 1994, p. 121). Concerning alcohol use, people anticipate a relation between alcohol consumption and specific behavioral changes, such as increased social assertiveness and interactions (Brown, 1985). Furthermore, this model asserts that the behavior resulting from alcohol consumption is determined not only by the actual effects ethanol has on people's systems, but by what people expect about the effects of alcohol (Thombs, 1994). For instance, expectancies that have been tied to alcohol use include increased social assertiveness (Christiansen et al., 1989), social pleasure (Brown, 1985; Stice, Myers, & Brown, 1998), and tension reduction (Brooks, Walfish, Stenmark, & Canger, 1981). Based on this research, there seems to be a relation between the consumption of alcohol and expectancies of alcohol to affect social abilities positively.

Extraversion and alcohol expectancies as related to alcohol use were the focus of this study. The first hypothesis was that, because the likelihood of having a wide social network is associated with extraversion, there is a relation between extraversion and the expectancy of alcohol to increase social interactions positively. The second hypothesis was that together extraversion and expectancies of increased social assertiveness positively relate to alcohol use variables, specifically frequency of consumption and drunkenness.

This study also attempted to produce information about general drinking patterns among college students. These findings may be most relevant to school officials and others concerned with the drinking behaviors of students, especially those students who are living independently for the first time. Furthermore, this study also examined sex differences in drinking behavior.

## Method

### Participants

The sample consisted of students in undergraduate courses at a small, Midwestern university. Forty-four men and 93 women, plus 1 unknown person, participated in this study. All analyses except for sex difference included the data from the unknown individual. Participants ranged in age from 18-50 years old ($M = 20.7$, $SD = 3.58$). Several majors were represented: 35.5% majored in the physical sciences (e.g., biology and chemistry), 24.6% were in social sciences (psychology and sociology), 9.7% majored in business (e.g., accounting and marketing), and the remaining 30.2% majored in other fields.

### Materials

Each participant completed five questionnaires in random order. The General Demographics Questionnaire (GDQ) that the researcher constructed consisted of 12 questions assessing participant's age, sex, major, religion, relationship status, organization involvement, volunteer status, and work status. The Alcohol Demographics Questionnaire (ADQ) that the researcher also constructed had 15 questions that assessed various aspects of alcohol use, such as how often, where, and with whom participants consumed alcohol, how often they attended parties where alcohol was served, and how often participants got drunk. Throughout the questionnaire, the terms "drunk," "almost drunk," and "tipsy" referred to subjective determinations of intoxication, rather than measured rates of actual inebriation (e.g., ounces of alcohol consumed multiplied by body mass index). The rationale behind this format was that obtaining an accurate measure of actual intoxication would be very difficult.

The Eysenck Personality Questionnaire-Revised (EPQ-R) is a 100-item, dichotomously scored test designed to assess the personality traits of extraversion, neuroticism, and psychoticism, as well as response style (Eysenck & Eysenck, 1994). This study only used the 22 extraversion scale items, however, participants completed the entire questionnaire to maintain the scale's reliability and validity. The EPQ-R Manual reports the means and standard deviations of the extraversion sub-scale scores as follows: men ($M = 14.90$, $SD = 4.74$); women ($M = 14.44$, $SD = 4.90$) (Eysenck & Eysenck, 1994).

The Alcohol Expectancy Questionnaire (AEQ) consists of 90 questions assessing a person's expectancies regarding the effects of alcohol (Brown, Christiansen, &

Goldman, 1987). A person does not need experience with alcohol to complete the AEQ; it simply measures a person's belief about alcohol's effects. The questionnaire is dichotomously scored, and the items load on one of six factors related to perceived effects of alcohol consumption: global positive changes; sexual enhancement; social and physical pleasure; the reduction of tension; aggression and arousal; and social assertion. This study only used the 10 social assertion questions, although participants completed the entire AEQ to maintain the instrument's validity and reliability.

### Procedures

Each participant completed one packet of questionnaires consisting of one copy of the consent form and each of the four measures. The consent form was first, followed by the EPQ-R, the ADQ, the AEQ, and the GDQ. The last sheet allowed participants to indicate if they did not want their answers used. No participants marked this sheet.

Several instructors gave permission to have data collected in their undergraduate courses. There was one communications class, three chemistry labs, and three psychology classes. A brief session before collecting data informed participants about the research project, how to complete the questionnaires, and assured them about confidentiality, anonymity, and the right to decline participation. After the information session, students received, completed, and returned questionnaires. A small percentage of the participants (about 7%, $n = 9$) completed the questionnaires outside of the classroom because of insufficient class time.

## Results

### Analyses of Primary Hypotheses

This study examined two hypotheses. The first hypothesis was that extraversion would be significantly related to the expectation that alcohol would increase social assertiveness. The evidence did not support this hypothesis. The correlation between scores on the extraversion sub-scale of the EPQ and the social assertiveness sub-scale of the AEQ was not significant, $r(132) = -0.08$, ns.

The second hypothesis predicted that extraversion and expectations of alcohol to increase social assertiveness were related to drinking behavior. Analyses revealed a significant relationship between both extraversion and alcohol expectancies, separately, and alcohol consump-

tion for students who had used alcohol at least once since entering college. First, correlations between the extraversion subscale of the EPQ and number of times per week participants consumed alcohol, $r$ (119) = .41, $p$ < .001, and number of times per week participants got drunk, $r$ (119) = .37, $p$ < .001, were both significant. Second, scores on the social assertiveness subscale of the AEQ were significantly correlated with number of times per week participants consumed alcohol, $r$ (117) = .36, $p$ < .001, and number of times per week participants got drunk, $r$ (117) = .37, $p$ < .001.

Together these variables explained a significant amount of variation in drinking behavior. Multiple regression analyses determined the amount of variance in drinking behavior explained by both extraversion and social assertiveness. The first regression analysis used scores on the extraversion subscale of the EPQ and scores on the social assertiveness subscale of the AEQ as predictors of the number of times per week participants consumed alcohol. This analysis revealed that nearly 30% of the variance in weekly drinking was accounted for by both extraversion and social assertiveness, $R^2$ = .29. The second regression analysis used the same two predictors, with number of times per week participants were drunk as the criterion variable. The combination of extraversion and social assertiveness subscale scores again explained nearly 30% of the variance in weekly drunkenness, $R^2$ = .27.

## Further Analyses

The majority of participants were extraverted; the means and standard deviations for the sample were as follows: men ($M$ = 17.12, $SD$ = 4.41); women ($M$ = 16.58, $SD$ = 4.18). These scores were significantly higher than the EPQ-R normative data for both men, $z$ = 3.07, $p$ < .01, and women, $z$ = 4.21, $p$ < .001.

Most participants (87.7%, $n$ = 121) had consumed alcohol at least once during their college years, and slightly over three-fourths (76.8%, $n$ = 106) had been drunk at least once. Of those who reported having consumed alcohol during their college years, almost one fourth (22.3%, $n$ = 27) reported drinking less than 1 day per week during the academic year. However, over half (67.0%, $n$ = 81) indicated that they consumed alcohol between 1 and 3 days per week during the academic year. With regard to whether participants reported weekly drunkenness, nearly half (44.6%, $n$ = 54) indicated that they did not get drunk in a normal week during the academic year; on the other hand, a significant minority (14.1%, $n$ = 17) reported getting drunk between 3 and 5

days in the average week. Table 1 depicts weekly drinking and drunkenness among participants under age 21 years old and those ages 21 years old and over. Furthermore, over half (51.6%, $n$ = 62) of participants indicated that when they do drink alcohol, they typically drink enough to feel "drunk" or "almost drunk."

Table 1

*Weekly Drinking and Drunkenness Among Students Who Had Consumed Alcohol At Least Once During College (N = 121)*

| Days/Week | Under 21 Years Old | 21 Years and Older | Total |
|---|---|---|---|
| | Weekly Drinking (Percent of Students) | | |
| 0 | 23.1 | 20.0 | 22.3 |
| 1 | 20.9 | 26.7 | 22.3 |
| 2 | 17.6 | 16.7 | 17.4 |
| 3 | 27.5 | 26.7 | 27.3 |
| 4-5 | 8.8 | 10.0 | 9.1 |
| 6-7 | 2.2 | | 1.7 |
| | Weekly Drunkenness (Percent of Students) | | |
| 0 | 42.9 | 50.0 | 44.6 |
| 1 | 18.7 | 23.3 | 19.8 |
| 2 | 23.1 | 16.7 | 21.5 |
| 3 | 14.3 | 6.7 | 12.4 |
| 4-5 | 1.1 | 3.3 | 1.7 |
| 6-7 | | | |

Participants who consumed alcohol during college drank in a variety of settings. The most common places reported were off-campus parties (72.7%, $n$ = 88), on-campus parties (63.6%, $n$ = 77), the participant's place of residence (64.5%, $n$ = 78), and bars (51.2%, $n$ = 62). This last finding was of particular interest, because of the 62 participants who reported drinking at bars, 37 (59.7%) were under the age of 21. Nearly half of all participants surveyed (46.7%, $n$ = 64) reported attending parties at least one day per week where alcohol was served; however, a large majority (82.5%, $n$ = 113) indicated that when they attended such parties, they felt comfortable not using alcohol if they preferred not to drink. Virtually every participant who used alcohol did so with friends (99.2%, $n$ = 120), followed by family (39.7%, $n$ = 48) and co-workers (22.3%, $n$ = 27). A small percentage of traditional-aged college students (9.9%, $n$ = 12) also reported

consuming alcohol alone. Finally, participants who used alcohol indicated that their drinks of choice included mixed drinks (76.9%, $n = 93$) and beer (76.0%, $n = 92$).

Among participants who consumed alcohol since entering college, sex differences occurred in frequency of drinking per week, as well as drunkenness per week. First, men consumed alcohol more days per week ($M = 2.61$, $SD = 1.34$) than women ($M = 1.51$, $SD = 1.27$), $t$ (118) $= 4.29$, $p < .001$. Second, men also reported being drunk more days per week ($M = 1.58$, $SD = 1.16$) than women ($M = .86$, $SD = 1.08$), $t$ (118) $= 3.31$, $p < .001$. Finally, one fourth (25%, $n = 9$) of the men consumed alcohol more than 3 days per week, whereas significantly fewer women did (4.8%, $n = 4$), $X^2$ (1, $N = 137$) $= 9.075$, $p = .003$.

## Discussion

Extraversion and alcohol expectancies as related to each other and to alcohol use were the focus of this study. The results of statistical analysis did not support the first hypothesis that extraversion and alcohol expectancies would be positively correlated. There are several explanations for this result. First, there was a restricted number ($N = 10$) of social assertiveness questions. In addition, participants answered the questions using a dichotomous format, which allowed for only limited responses. Researchers examining alcohol expectancies may wish to use a measure that employs both more items and a continuous scale for responses. Second, there was a large number of extraverted participants but relatively few introverted individuals. With such a limited number of introverts describing their alcohol expectancies, the correlation between extraversion and specific scores on the AEQ may have been artificially suppressed. Finally, although sociability may be related to extraversion, perhaps the expectation of alcohol to increase social assertiveness is not. For instance, a sample of extraverts might consider themselves sociable. However, a portion of this sample may believe that alcohol makes them more socially assertive, whereas other participants might think they are socially assertive without the use of alcohol, and that alcohol has no effect on this characteristic. Future research might address this issue by further examining participants' perceived changes in social interactions when they consume alcohol. Such an exploration might yield useful information with regard to extraverts' beliefs about the impact of alcohol on their social assertiveness skills.

The data supported the second hypothesis that taken together extraversion and alcohol expectancies would be related to alcohol use, suggesting that extraversion and social assertiveness expectancies together predicted frequency and amount of weekly drinking and drunkenness. Those two variables explained almost one third of the variation in alcohol consumption, which indicates that college students who are both extraverted and believe alcohol will increase social assertiveness are likely candidates for alcohol use during college. In addition, findings indicate that extraversion and expectancies of social assertiveness separately relate to high levels of alcohol consumption. These findings support previous research, which has shown that extraversion (e.g., Martsh & Miller, 1997) and alcohol expectancies (Christiansen et al., 1989) are correlated with alcohol use. Future research may examine this relationship in more detail, perhaps focusing on introverts, because the majority of the participants in this study were extraverted. A comparison of introverts' and extraverts' alcohol expectancies would be helpful in determining whether or why differences in alcohol use exist between these two groups.

Drinking behavior among participants varied considerably. About 88% of participants had consumed alcohol at least once since entering college, which is consistent with previous research findings on the prevalence of alcohol use among college students (Schall et al., 1992). One fourth of the participants who had used alcohol since starting college indicated they did not consume alcohol at all in a normal week during the academic year, and one half reported that they never got drunk during a regular week. However, 1 in 10 participants reported drinking at least 4 times per school week, and 14% indicated they got drunk several times per week. This finding is comparable to, if not slightly lower than, alcohol consumption levels reported in other articles (e.g., Marcus, 2000). Overall, almost all participants who consumed alcohol indicated they typically did so in a social setting, which supports previous findings that social interactions are related to alcohol use (Moos et al., 1976). One particularly noteworthy finding was that of the 91 participants under the age of 21 years of age who consumed alcohol, 41% indicated that they had consumed alcohol in bars. This number implies that minors may not have difficulties obtaining alcohol in bars, and suggests a lax checking of identification or refusal of service to underage individuals.

This study found several sex differences in drinking behavior. Men consumed alcohol both more frequently and in greater quantities than women, which is comparable to other findings (Presley & Meilman, 1992, as cited in Schwartz, 2000). These differences may result from a variety of factors. For instance, frequent alcohol use is often seen as being more "sex-role appropriate" for men

than women (Moos et al., 1976, p. 359), which may lead more men than women to consume alcohol. In addition, research has shown that men tend to consume alcohol in order to promote social interchanges, whereas women mainly drink to decrease emotional stress or pain (Thombs, Beck, & Mahoney, 1993). That heavy alcohol consumption is related to both extraversion and engaging in social situations, at least among college students (e.g., Moos et al., 1976), may explain why men, who use alcohol to advance social interactions, drink more often and in greater amounts than women.

Although the results of this study yielded useful data, there were also some limitations. First, the demographics of the sample were somewhat limited. Because more than two-thirds of the participants were women, men might not have been adequately represented. In addition, more than three-quarters of the sample was under the age of 21 years, which resulted in a relatively low proportion of participants who could legally consume alcohol. A greater representation of sex and age groups would permit greater generalize to the college population. Second, self-report measures may not adequately identifying drinking behavior because participants are more likely to misrepresent themselves on self-report questionnaires, especially when asked about sensitive issues such as the amount of alcohol consumed, to avoid appearing socially atypical or undesirable. Future research may wish to use a social desirability scale or examine techniques of data collection other than self-report, such as peer reports, naturalistic observations, physiological measures, or a combination of different approaches. Finally, because this study used only college students, the results may not generalize to the wider population of young adults.

Overall, the results of this study indicate there are factors that predict alcohol consumption among college students. Such research can aid in the developing programs that encourage individuals to engage in safe drinking behaviors. For example, programs specifically tailored to college-age drinkers should take into account that alcohol consumption occurs in a social context and is used to enhance social assertiveness. Thus, interventions that combat expectations of alcohol use could be effective. These techniques might be similar to those used by recent anti-smoking campaigns, which have targeted and challenged perceptions that students' peers approve of smoking. Furthermore, teaching students about the actual effects of ethanol (versus expected effects), as well as uncovering the underlying reasons why they wish to use alcohol for assumed effects, may lead to a reduction in frequency of alcohol consumption. Finally, developing programs for individuals who exhibit signs of alcohol abuse (such as getting drunk frequently and/or drinking alone) may decrease the risk of problems associated with unsafe alcohol consumption.

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# Effect of Massage and Informal Touch on Body-Dissatisfaction, Anxiety, and Obsessive-Compulsiveness

## Angela Larery
*Missouri Southern State College*

*Research findings have implicated touch therapy in the successful treatment of many psychological disorders (Field, 1996; Field, 1998). However, past research has neither examined the impact of touch on the body image construct nor has it evaluated the effect of less formal touch. In this study, 20 college women were administered body-dissatisfaction, anxiety, and obsessive-compulsive scales prior to and following participation in casual touch or formal touch (massage). There was a marginal increase in body-area satisfaction (BAS) for the massage group and a marginal decrease in BAS for the casual touch group. There was also a significant increase in obsessive-compulsiveness for both groups. Implications of this study suggest that formal types of touch are more effective than casual types.*

The notion of self-image is central to all components of identity. The perception each of us holds about our own capabilities and limitations, both mental and physical, forms the foundation upon which all other facets of personality emerge. As a multidimensional construct, this image consists of physiological, emotional, and cognitive interpretations. The sum of these interpretations results in several distinct constructs, one of which is "body image." One definition of body image is the mental perception a person has of his or her own body an attitudinal distinction between the physical appearance of an individual and the perceptual interpretation of his or her body size (Brown, Cash, & Mikulka, 1990).

A multitude of factors, which include cognitive growth, sociocultural attitudes, and physical stimulation, govern body image. According to Brundage and Bradwell (1991), all stimuli that affect body image can be categorized into three distinct categories: perceptual experiences, affective/ emotional experiences (known as the experiential pool), and topological experiences. Of these, it appears that the topological facet, which is related to superficial tactile stimulation, appears to have the most immediate and global effect upon the self-image construct (Morris, 1971).

The importance of physical stimulation, known more commonly as touch, has been a diverse and burgeoning field since Bowlby presented his theory on attachment (Bowlby, 1965). He contended that infants and young children require physical stimulation from their caretakers to develop feelings of self-worth and adequacy. Research has shown that infants who are deprived of social, emotional, and physical stimulation provided by a primary caretaker manifest signs of stunted growth and cognitive development (Bowlby). Results from more recent studies have supported the hypothesis that physical touch and therapeutic stroking are essential in communicating feelings of nurturance and support (Chapman & Chapman, 1983), as well as contributing to improved physical health (Morris, 1971), in both infants and adults. Touch has also served to help establish self-identity in adolescence (Crain, 1992; Morris, 1971). Research findings have indicated that as an individual progresses through puberty the importance of the attachment-bond with the primary caretaker decreases, while at the same time, the attachment-bond with peers assumes a pivotal role (Bernstein, as cited in Cash & Pruzinsky, 1990; Bowlby, 1965; Crain, 1992). Researchers have contended that feedback from peers is critical in initializing self-concept in adolescence (Bernstein, as cited in Cash & Pruzinsky; Crain). That is, the verbal and behavioral response(s) others exhibit toward an individual result in validation or invalidation of a given behavior (Bernstein, as cited in Cash & Pruzinsky). Thus, the rowdy hitting and playful punching that is characteristic of male adolescents, as well as the physically affectionate behavior displayed by their female counterparts, are both evidence of the powerful influence that physical touch plays in communicating our approval or disapproval of another's self-identity.

Furthermore, research results have shown that the need for physical touch, as well as other verbal and non-verbal feedback, remains constant for body image into adulthood (Bowlby, 1965; Morris, 1971). As Morris pointed out, in times of fear or distress, individuals of all ages seek out physical contact through embraces or hand-holding. In addition to fulfilling the basic need for feelings of acceptance and security, touch has also signified emotional understanding and empathy in adulthood (Colt, 1997; Morris). Touch allows us to communicate

emotions that might otherwise remain unspoken, such as the intense feelings of grief when a loved one has died.

Finally, evidence demonstrates that touch influences both physiological and psychological aspects of the self (Leutwyler, 1998). Prolonged touching, typically in the form of massage therapy, lowers blood pressure, increase circulation, and decrease heart rate (Claire, 1995; Colt, 1997). In a study by Field (1996), individuals who were consistently touched showed an increase in self-esteem, self-awareness, and mental alertness. Within recent years, the application of therapeutic touch has grown to include treatment of major depression, anxiety disorders, chronic pain, and fibromyalgia, as well as anorexia nervosa (Field; Field, 1998).

The precise mechanism by which therapeutic touch positively influences an individual, however, is unknown. Some researchers (e.g., Colt, 1997; Field, 1996) contend that the physiological stimulation produced by touch results in altered levels of certain neurochemicals related to stress, such as norepinephrine and cortisol. These alterations translate into stronger feelings of self-worth and well-being. Furthermore, formalized touch (such as massage) enhances lymphatic system functioning and cytotoxic capacity, as well as improves circulation, all of which contribute to a generally improved state of well being (Colt; Field). Other researchers (e.g., Claire, 1995; Smith, Clance, & Imes, 1998) argued that the benefits of touch arise from the emotional context of the nurturing relationship in which physical contact is established. Claire further held that all touch is not equal; therapeutic touch is a specialized technique in which many components related to tactile stimulation, such as pressure and specific types of stroking, as well as environmental cues, are carefully controlled. Thus, we can infer that therapeutic touch may influence psychological constructs first, which then account for the subsequent physiological improvements.

Although the therapeutic benefits of touch have received some investigators' attention, no researchers have yet compared the psychological effects of formalized types of touch, such as massage therapy, with more casual, day-to-day contact. Furthermore, despite the abundance of literature that alludes to the many facets of identity, which can and are influenced by touch, no study has exclusively examined the role of touch in fostering a positive body image.

Therefore, the present research investigated the role of touch as a mediator of body image, investigating differences between informal touch and formal touch in improving body image. Based on the findings of previous studies involving touch therapy, I hypothesized that formal touch would produce greater improvements in body-satisfaction levels because of the interaction of physiological stimulation and an emotionally-nurturing environment (Claire, 1995; Field, 1996; Smith et. al., 1998). There was an expectation that the informal touch group's body-satisfaction scores would be relatively unaffected or possibly decrease. I also hypothesized that physical contact would have a direct effect upon the body image construct, independent of any decreases in anxiety levels. This study also intended to establish whether negative body image and obsessive-compulsiveness are related as suggested by Phillips et al. (1997), who argued that extreme levels of body dissatisfaction, such as those associated with Body Dysmorphic Disorder, were clinically related to obsessive compulsive disorders. Thus, based on previous research, I hypothesized that individuals who received formalized touch (massage therapy) would show greater improvements in levels of anxiety and obsessive-compulsiveness, whereas individuals who receive informal touch would show either an increase in anxiety and obsessive-compulsiveness or no change in scores.

## Method

### Participants

This study used only women because they generally manifest greater body dissatisfaction than men (Feingold & Mazzella, 1998). Recruitment from a pool of freshmen enrolled in an introductory psychology course yielded a total of 71 participants; each received extra credit that varied in value depending on the instructor. The participants ranged in age from 18 to 44 years of age and were primarily Caucasian. Following administration of the three inventories, all students were invited to participate in the second portion of the study. Twenty individuals initially volunteered to participate in the second portion of the study and were given $10 each for their participation in all four sessions.

### Materials

Identification of individual levels of body dissatisfaction relied on a modified version of the Multidimensional Body-Self Relations Questionnaire (MBSRQ) (Cash & Pruzinsky, 1990). The MBSRQ is a 69-item questionnaire used to evaluate individuals on overall body image and weight preoccupation. Relevent subscales were appearance evaluation, appearance orientation, body areas satisfaction, subjective weight, and weight/fat preoccupation. The illness orientation and

health evaluation subscales were omitted because of their subjective relevance to physical appearance (Rosen & Reiter, 1996). The first 27 items were a series of statements regarding subjective impressions about weight and appearance. Responses to a five point Likert scale (1 = *definitely disagree* and 5 = *definitely agree*), indicated participants' level of agreement with each statement. The next three items were forced choice questions that pertained to attitudes participants had about her body and weight. The final nine items measured body satisfaction levels of specific body regions (e.g., upper body, facial features, and lower body.), using the same five point Likert scale as used for the first 27 items.

The Trait Anxiety scale evaluated individual anxiety levels related to the coping style and personality characteristics of participants. The trait-anxiety scale was a 20-item survey containing statements related to behaviors characteristic of chronic anxiety, such as chronic fatigue, muscle tension, and hyperarousal (Spielberger, Gorsuch, & Lushene, 1968). Each statement was followed by four answer choices indicating the frequency with which the individual experienced the stated symptomology. The numeric value assigned to each answer was consistent throughout the survey with the exception of items 1, 6, 7, 10, 13, 16, and 19, which were reversed scored. For the standard scale, scores ranged from 1 (*almost never*) to 4 (*almost always*). The Obsessive-Compulsive Inventory consisted of 22 true/false items that measured the frequency of recurrent thoughts, repetitive behaviors, and ritualistic checking in addition to other behaviors characteristic of obsessive-compulsiveness (Gibb, Best, Bailey, & Lambert, 1983).

### Experimental Design

The experimental design was a 2 x 2 mixed factorial with a between-subject independent variable of type of touch (formal vs. informal). A repeated measure of pre-test and post-test scores was used to analyze within-subject differences.

### Procedure

*Pre-treatment session.* Students sat in a small, quiet college classroom containing seven chairs, a table, and a podium. Each student had a minimum of three seats apart from other participants to ensure privacy. Students were informed that there were no anticipated risks and were advised of their right to withdraw. During this initial screening, debriefing consisted of information about the general purpose of the study and notification about where they could locate the results after completing the experi-

ment. Participants were left alone to complete the MBSRQ, the trait anxiety scale, and the obsessive-compulsive inventory.

All but three students, who were eliminated because of prior acquaintance with the researcher, were invited to participate in the second portion of the study. Twenty students agreed to commit to the four sessions and were randomly assigned to one of two groups.

*Treatment sessions 1- 4.* Students in the formal touch group (*n* = 10) each received four 10 min upper-body massages to the neck/upper shoulder region from a licensed professional massage therapist during a two-week period. Students in the control group (*n* = 10) also participated in four 10 min sessions during a two-week period; however, during those sessions, participants experienced informal touching (i.e., random nontherapeutic contacts between the researcher and particpants in the same region as the massage group). Students in both groups remained fully clothed during the four sessions.

While seated in an office chair, participants were tested on various sensory perceptions relating to tactile stimulation such as the two-point threshold phenomena, object recognition, and perception of temperature extremes. Each individual was asked to identify the temperature, texture, and degree of dullness/sharpness of heated and refrigerated paper clips and water vials, as well as a tuning fork. In addition, participants estimated the distance between two objects of similar texture (e.g., two paper clips, two Q-tips, etc.) when touched in one of six regions: upper right (approximately 1-2 in. above right scapula), upper left (1-2 in. above left scapula), lower right (1-2 in. below scapula), lower left (1-2 in. below scapula), proximal spine (between thoracic vertebras 2 and 6), and distal spine (near the trapezious muscle). In both groups, classical music was played to facilitate relaxation.

Following the four touch sessions, participants were re-administered the MBSRQ, the trait anxiety scale, and the obsessive-compulsive inventory. At the conclusion of the experiment, full disclosure of the details of this study was made available to all participants.

## Results

Scores for all five subscales on the MBSRQ, in addition to the scores from the anxiety and obsessive-compulsive scales, were computed. The reliability alphas (Cronbach) were as follows: appearance evaluation (.23); appearance orientation (.06); body-areas satisfaction

(.49); subjective weight (.77); obsessive-compulsiveness (.46); and anxiety (.66).

Each of the scales was analyzed separately using an analysis of variance. An ANOVA for body-area satisfaction revealed an interaction between the type of touch and the pre- and post-test sessions [$F$ (1, 19) = 7.18, $p$ = .019]. Further analysis of simple effects revealed an increase that approached significance between the pre ($M$ = 2.86, $SD$ = .73) and post-treatment ($M$ = 3.24, $SD$ = 1.01) scores for the massage group [$F$ (1,10) = 4.0, $p$ = .066]. The informal group showed a decrease that also approached significance between the pre ($M$ = 3.44, $SD$ = .93) and post-test ($M$ = 2.93, $SD$ = .41) scores [$F$ (1, 7) = 2.8, $p$ = .088].

An ANOVA of obsessive-compulsive scores revealed a significant difference between the pre- and post-test sessions [$F$ (1, 17) = 14.6, $p$ = .002]. Participants in both groups showed an increase in obsessive-compulsive behaviors and attitudes from the pre-treatment ($M$ = 12.7) to the post-treatment ($M$ = 17.2). None of the other analyses of variance were statistically significant.

## Discussion

The findings demonstrated mixed support for the hypothesis that individuals who received formalized touch would show greater improvements in body area satisfaction (BAS). Although individuals in the massage group showed a trend toward improvement in body area satisfaction, their overall appearance orientation, which is indicative of overall body image satisfaction, did not change significantly. The students in the informal group showed a decrease in body area satisfaction with no significant change in appearance orientation. Possibly, the increase in the massage group's BAS scores resulted from the therapeutic context of the touch sessions, but further improvements in appearance orientation, a more global measure of body-satisfaction, were hindered by pre-existing levels of touch avoidance and tactile deprivation. This contention is corroborated by the findings of many researchers in the field of therapeutic touch (e.g. Field, Hernandez-Reif, Quintino, Schanberg, & Kuhn, 1998; Hunter & Struve, 1998; Jones & Brown, 1996), who assert that individuals not accustomed to being touched on a frequent basis may show a temporary increase in anxiety and touch avoidance when exposed to massage therapy. This reaction is compounded by the fact that individuals with a negative body image often have been deprived of tactile nurturance (Gupta, Gupta, Schork, & Watteel, 1995; Krueger, as cited in Cash & Pruzinsky,

1990; Smith et. al., 1998). Perhaps individuals with negative body images may manifest a temporary increase in fat-anxiety and overall body-dissatisfaction during early sessions of touch therapy.

Contrary to the findings of other researchers (e.g. Claire, 1995; Field, 1996; Field et. al, 1998; Jones & Brown, 1996; Leutwyler, 1998; and Smith et. al., 1998), the findings from this study did not indicate a strong relationship between physical touch and body image. However, these findings alone are insufficient to conclude that touch has no influence on the self image. The implications for touch as an adjunct therapy for treatment of eating disorders and other body image distortions remain promising. As Bernstein (as cited in Cash & Pruzinsky, 1990) pointed out, "the body image … embraces [the] view of ourselves, not only physically, but also physiologically, sociologically, and psychologically (p. 133)." Because body image is a multidimensional construct, investigators may have to address each facet of body image using a variety of treatment modalities to produce significant changes. Hunter and Struve (1998) argued that an adequate treatment protocol ought to include experiential approaches in addition to the more traditional psychotherapeutic techniques such as behavior management and cognitive restructuring. The current study did indicate, however, that formalized types of touch, such as massage therapy, tend to be more effective in positively influencing mental constructs than informalized, casual types of touch.

However, ascertaining the true impact that touch had on body image in this study was difficult because of the low reliability levels for the instruments. Despite a reported Cronbach alpha level of .86 for the MBSRQ (Cash & Pruzinsky, 1990), analyses of the data in this study revealed low reliability levels. The obsessive-compulsive scale revealed similarly low reliability alpha levels in spite of reported values consistent with other standardized obsessive-compulsive scales (Gibb et. al., 1983).

Another limitation is that changes in body image are unlikely to occur during a short time period; the four 10 min sessions in this study may not have been of sufficient duration. Although some research indicates that the benefits of touch are evident in as short as 10 min (e.g. Claire; Field, 1996), most research that has attempted to alter cognitive/mental structures has used periods of six weeks or longer (Claire, 1995; Field, 1993; Field, 1998; Field et. al., 1998). Furthermore, in almost all of the studies that actively employed touch therapy as an indepen-

dent variable, the frequency and intensity of touch sessions was much greater than that used in this study. Because of economic and temporal constraints, the present research was unable to extend the touch therapy sessions beyond the original two-week period.

Contrary to the hypothesis that individuals who received formalized touch would show decreases in anxiety and obsessive-compulsiveness, analysis revealed no significant change in anxiety and an increase in the mean obsessive-compulsive score. Some research (e.g. Field et. al., 1998) indicates that preliminary sessions of touch therapy may result in increased self-awareness, which could lead to an increased focus on appearance and grooming. These findings may also be attributed to the short time span in which participants received touch. Possibly, more intensive sessions at a higher frequency rate might be needed to effect a significant difference in more complex constructs such as body image.

A recommendation for future research is the inclusion of analysis of the effect of gender on individual experiences of touch therapy; neither the gender of the touch-initiator nor the touch-recipient was fully explored in this study. Based on findings by Feingold and Mazzella (1998), women were used exclusively in this study because they generally manifest greater body dissatisfaction than men. However, as Kertay and Reviere (as cited in Cash & Pruzinsky, 1990) pointed out, the male-female, male-male, and female-female dyads are unique and result in distinct interpersonal dynamics. The context in which a male therapist/researcher touches his female client on the shoulder or arm might be viewed as sexual; conversely, if the both therapist and client were the same gender, then touch might be considered socially acceptable.

Another suggestion is the importance of other nonverbal behaviors such as eye contact, vocal intonations, and the ease with which an individual initiates contact with the person be evaluated. Lewis, Derlega, Shankar, & Cochard (1997) contend that some nonverbal behaviors act as a covariate to touch; thus, the benefits of touch may not result specifically from the physiological stimulation but from the sum of all nonverbal behaviors.

The results of this study indicate that body image is a dynamic construct that responds favorably to tactile stimulation within a nurturing setting. The benefits of touch arise from the interaction of both physiological stimulation and the emotional context in which physical contact is initiated. Thus, formalized types of touch in which both physical and psychological stimuli are employed are more effective in positively influencing mental constructs than informal, casual touch. What is not evident at this time, however, is the length and intensity of therapeutic touch needed to substantially alter a negative body image.

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# Cross-Cultural Study of
# Pace of Life on Two Campuses

## Amanda Lynn Witte

*Nebraska Wesleyan University*

*This study extended research on cross-cultural differences in pace of life to college campuses. Pedestrian walking speed and the incidence of wearing watches were measured on campuses in the United States (n = 77) and in Malta (n = 79). Statistical analysis revealed that participants in the United States had a faster mean walking speed than those in Malta. There was no significant difference in incidence of personal watches between cultures. This study partially supported the hypothesis that students in the United States have a faster pace of life than students in Malta. Implications extend to easing international travelers' culture shock and to improving international relations.*

Pace of life is an important topic of study because it may help predict cultural differences in attitudes toward and perceptions of time (Levine & West, 1980). Pace of life is linked to heart disease, a serious health issue (Levine & Bartlett, 1984) and may play a role in industrial and organizational psychology (Landy, 1991). Previous research has examined the pace of life from three different perspectives. Several studies have concentrated on differences and similarities in pace of life between urban and rural communities (Bowerman, 1973). Some researchers examined cross-cultural differences in pace of life (Bornstein, 1979). Other researchers concentrated on the concept of type A and B personalities and their pace of life (Levine & Bartlett). This study most closely resembles studies that concentrate on cross-cultural differences in pace of life by investigating the behavior on college campuses in different cultures.

All three ways of approaching the pace of life look for the same characteristics (i.e., a hurried lifestyle, punctuality, and the need to use every moment to achieve something). Evidence for these characteristics can be found in such behaviors as socialization, work speed, movement speed, awareness, concern for clock time, and attitudes and perceptions of time (Levine & West, 1980). What differentiates the three approaches is where investigators conduct their studies. The literature review will examine urban verses rural studies, cross-cultural studies and Types A and B personality studies to provide the background and rationale for the present investigation.

The phenomenon of the big city, with its distinct way of life, has given rise to projects examining differences in pace of life between urban and rural settings. Big cities generally have a faster pace of life than smaller towns (Amato, 1983; Bowerman, 1973; Lowin, Hottes, Sandler & Bornstein, 1971). Lowin, et al. performed a pace of life study comparing the metropolitan areas of Washington, DC, Baltimore, Boston, Chicago, New York, and Philadelphia to towns of fewer than 8,000 persons. The researchers observed several activities in each site: (a) a post office clerk's speed in fulfilling a standard order; (b) the waiting time between the moment when a car stops at a fuel pump and the moment at which the attendant makes an inquiry of the driver; (c) the time it takes a bank teller to change 5 10-dollar bills into 50 1-dollar bills; (d) the walking speed of pedestrians; (e) the time it takes to fill a cigarette purchase request at a drugstore; and (f) the accuracy of personal watches and estimation of the time of day. The results indicated that activities in large cities were faster than rural areas in all cases except currency exchange. Several outside factors, such as pre-counted packets of bills and whether or not the teller counted the incoming bills, were relevant in the currency exchange activity. There seemed to be no urban to rural difference in time sensitivity. Finally, there was no significant difference in the accuracy of time reporting between urban and rural participants.

Socialization practices are another way that investigators have studied pace of life. Amato (1983) reported many differences between urban and rural communities concerning kinship and social interaction. He cited theories that claimed that urbanization led to less friendly behavior, and he discussed several studies in which citizens of large cities were found to be less friendly (less likely to return eye contact, shake hands, etc.) than rural citizens. Amato's research included studies on quality of interpersonal interactions between locals, quality of tourist-host contacts, and measures of the pace of life.

To conduct the pace of life study, Amato (1983) measured walking speed of pedestrians over 15 m, time

required to purchase betel nut (a common local item) in a marketplace, and the time it took shopkeepers to give change in European-style shops. He performed these measurements in Port Moresby, the largest city in New Guinea, and compared them to data collected in two smaller towns of approximately 20,000 people each. He found that walking speed in the largest city was significantly faster than in the smaller towns, and there were no significant differences between the smaller towns. The betel nut purchase measurement showed that Port Moresby, the large city, was significantly faster than one of the smaller towns, and the difference between the smaller towns was not significant. Only the giving change measurement revealed no significant differences among the different sized cities. Amato concluded that his findings were evidence for the theory that larger cities have a faster pace of life than rural areas.

Marketplace interactions can also reflect pace of life between cultures. A faster pace of life might be associated with fewer interactions between buyer and seller and a slower pace of life with more interactions. Amato (1983) looked for talking and smiling between buyer and seller and rated them on a scale of one to three. He found that the attitude was more positive between buyers and sellers in the smaller communities. A third study investigated the helpfulness of locals to a "lost tourist," finding that all three sites had fairly friendly behavior and quite a bit of smiling. Amato suggested that this behavior was because tourists have a special place in New Guinea's culture and, therefore, receive special treatment.

Bowerman (1973) studied the difference between crowded and uncrowded walking conditions in urban and rural settings in relation to pace of life. The crowded condition was the dense crowd on a street outside a ballpark just after a baseball game. The uncrowded condition was the same street one half-hour after the end of the game when the crowd had dispersed. In uncrowded conditions, he found a normal walking speed of about 6 s for six sidewalk squares. Few people exceeded this pace, but several went slower. Going faster breaks the norm and requires running. Going slower than the norm, however, does not require breaking social or physical constraints, and many people did go slower than the norm. Bowerman tried to explain at least one aspect of the differences between urban and rural pace of life; moving too slowly in a crowd causes a push from the people behind and inhibits the whole system. Going faster than the norm however, does not slow down the system, and if an individual is willing to do the extra weaving and maneuvering, going faster than the norm is acceptable.

Bornstein (1979) focused on cross-cultural differences to study another aspect of pace of life. He measured walking speed of pedestrians in cities of three different countries, the United States, Scotland, and Ireland. Bornstein found a correlation between population of the cities and walking speed; the larger the city the faster the walkers' speed. These data suggest size of a population, regardless of country, is the best predictor of walking speed. Bornstein, however, studied only one city in the United States (Seattle), two in Scotland, and three in Ireland. Studies of more cities within each country may shed more light on his conclusion.

Other researchers (Levine & West, 1980) also looked for cross-cultural differences in pace of life. They studied cities of nearly equal size, one in the United States and one in Brazil. In each city, they measured the accuracy of public clocks, accuracy of personal watches, and accuracy of time estimation. They found that U.S. bank clocks were significantly more accurate than those in Brazil, that personal watches were significantly more accurate in the United States than in Brazil, and U.S. participants were significantly more accurate in estimating the time of day than were the Brazilians.

Levine and West (1980) also employed a six-part questionnaire to ask participants to rate how often they were usually late for appointments or meetings and social gatherings or dates. Brazilians reported themselves late in both categories significantly more often than Americans. The second part of the questionnaire recorded notions about late and early and asked what time the respondents would arrive at an event, and what time they thought the average U.S./Brazilian person would arrive. Finally, the questionnaire asked if a person they were expecting was late, after what period of time would they conclude that the person was not going to come. Part three requested attributions for tardiness (their fault or outside influences). Part four explored feelings of regret for being late, and part five asked for global impressions of a person who is always, occasionally, or never late. Part six asked participants to rate the importance of punctuality. Levine and West found that Brazilians were (a) generally more flexible in their notions of time than U.S. participants, (b) Brazilians had more difficulty keeping track of accurate time, and (c) that U.S. participants valued punctuality and saw it as a mark of success more often than Brazilians. The results of this study indicated that in action and attitude people in the United States had a faster lifestyle regardless of city size.

Levine and Bartlett (1984) found results similar to those of Levine and West (1980) in a study that incorpo-

rated the Type A personality concept and its relation to heart disease (e.g., Friedman & Ulmer, 1984) into a cross-cultural pace of life study. They used a questionnaire to assess Type A personality tendencies and a second questionnaire to study attitudes and behavior concerning punctuality and lateness. Type A scores were positively related to blaming one's own lateness on external factors and to the tendency to rate punctuality as an important quality in a friend and in a businessperson. Type A and B personalities were also related to perception of time and pace of life. One aspect of pace of life is the perception of how quickly or slowly time passes. For example the drive to use time to achieve something (a Type A trait) can cause people to perceive the passage of time differently (more slowly) than people who lead a slower paced lifestyle.

Levine and Bartlett (1984) compared three pace of life measurements in cities of two sizes (large and medium) in the United States, Japan, Taiwan, Indonesia, Italy, and England, to each country's level of death from coronary heart disease. Based on accuracy of public clocks, pedestrian walking speed, and time required for a postal worker to fulfill a standard request for stamps, Japan had the fastest and Italy the slowest pace of life. These results were compared to deaths from coronary heart disease for only the United States, Japan, England and Italy because there were no available data on heart disease for Taiwan and Indonesia. For the Western countries, pace of life was related to the incidence of coronary heart disease deaths. Italy had the lowest incidence of coronary heart disease. England and the United States had similar results in the pace of life studies and similar levels of coronary heart disease. Japan, however, had a lower incidence of heart disease but the highest pace of life measurements compared to all the western countries. The authors suggested different diets as an explanation for seemingly contradictory findings and concluded that the concept of Type A personality may have cross-cultural limitations.

Burnam, Pennebaker, and Glass (1975) also investigated differences between Type A and Type B personalities. Based on questionnaire scores, participants were divided into two groups. In the first procedure, participants received a technical paper to read and were asked to indicate when they thought one min had elapsed. Type A individuals tended to signal the passage of one min sooner than did Type B individuals. Both groups were equally inaccurate in estimation of one min, but in opposite directions. This finding suggested that Type A individuals were more impatient and experienced time as passing more slowly than did Type B individuals. This

personality trait is one of many variables that contributes to the pace of life that people follow.

After the time estimation measurement, Burnam et al. (1975) asked participants to solve simple arithmetic problems mentally and record their answers. Half the participants were told they had no time limit but would be timed (no-deadline condition), whereas the other half were told they had a time limit (deadline condition). In both conditions, the experimenter stopped the participants after five min. The difference in problems attempted was not significantly different between Type A and Type B individuals in the deadline condition, but Type A individuals attempted significantly more problems than type B individuals in the no-deadline condition. This finding supports the belief that time passes more slowly for Type A. Finally, Type A participants achieved more than Type B participants in the same amount of time.

Thus, there are pace of life differences between countries for urban and rural communities and personality types. Interest in the cross-cultural difference prompted the present research. This study compared the pace of life at a small Midwestern American university, situated in an urban setting, to that of a mid-sized university in an urban setting on the island of Malta. Two measures of pace of life were walking speed and incidence of personal watches. Levine (1997) found that Italy, like Malta a southern European country, had slower walking speeds than the United States. I hypothesized that because students in the United States would be more driven by time and would be more concerned with time in general than students in Malta, they would walk faster, as other cross-cultural studies have indicated (Levine & West, 1980). This concern with time may also be evidenced by wearing watches because people who are worried about punctuality and achievements under time constraints, I reasoned, would more likely wear watches.

## Method

### Participants

Participants were 156 randomly selected pedestrians, 77 U.S. students, and 79 Maltese students, in central areas of two campuses. The university in the United States was a private, Midwestern school with about 1,600 students in a city of about 200,000. The university in Malta was a public college with about 5,000 students on a Mediterranean island with a population of about 600,000. Participants on both campuses were predominantly students whose ages were estimated as in the range

of 18 to 25 years of age. Every third pedestrian entering the observation area was observed and recorded. There were an equal number of men and women.

## Research Design

With nationality and gender as independent variables and walking speed and incidence of wristwatch wearing as dependent variables, two 2 x 2 between-subjects designs were used. The study employed two procedures.

*Procedure 1.* The walking speed of men and women was timed over a distance of 15 m, approximately the same distance used by Levine and West (1980). An observer on each campus took the measurements. All timing was done on clear warm days with normal class schedules between 9:00 A.M. and 4:00 P.M., which included varying degrees of uncrowdedness. The locations were open, flat, unobstructed, and uncrowded enough not to interfere with walking speeds.

The observers began timing when the participant's foot crossed a predetermined marked line and stopped when the participant's foot crossed a second line at the end of 15 m. Timing occurred for every third person who crossed the line, alone, without observable physical handicaps, and unencumbered.

*Procedure 2.* The incidence of personal watches was measured in a manner similar to the walking speed measurements. Every third person who crossed a marked line was inspected to determine whether or not they were wearing a personal watch. People whose wrists were covered or otherwise not visible were not included. All measurements were done at locations frequented by a variety of students on warm days when students were likely to be wearing short sleeves.

## Results

For purposes of statistical analysis, walking speed measurements were treated as score data analyzed using two-way analysis of variance (ANOVA), using gender and nationality as independent variables. Incidence of wristwatches, was analyzed using a chi-square test (Linton & Gallo, 1975). Analysis revealed a significant mean difference in walking speed between the two universities, $F$ (1, 153)= 817.51, $p <$. 05. Table 1 contains mean walking speeds and standard deviations. The U.S. students had a faster walking speed than did those in Malta, and men and women walked at about the same speed within each country. Although U.S. students were somewhat more likely to wear watches, chi square analysis revealed no significant difference in the incidence of

wristwatches between the cultures, $X^2$ (1) = 1.00, $p >$. 05. Sixty percent of U.S. men, 54.8% of U.S. women, 43.6% of Maltese men, and 52.5% of Maltese women wore personal watches.

Table 1
*Walking Speed of Students in Malta and the United States*

| Gender | Mean | | Standard Deviation | |
|---|---|---|---|---|
| | Malta | United States | Malta | United States |
| Men | 27.58 | 10.86 | 3.58 | 6.04 |
| Women | 27.67 | 10.05 | 3.28 | 1.01 |

*Note.* Times indicate the number of seconds taken to walk 15 m. Higher numbers indicate slower speeds.

## Discussion

As suggested by previous research, U.S. versus Maltese students walked faster on campus suggesting a greater concern with time and being prompt. These data were consistent with previous research findings of cross-cultural differences in pace of life and were consistent with reports that Americans moves faster than residents in other countries (Levine & West, 1980). The present results support the notion that this faster pace of life also occurs cross-culturally on college campuses.

The prediction that U.S. students would wear more watches than students in Malta was not supported. However, inspection of the percentages shows that there was a difference between the countries in the expected direction of the hypothesis. Students from the United States were somewhat more likely to wear wristwatches than were students from Malta. Lowin et al. (1971) measured the accuracy of personal watches, but no studies have examined the incidence of watches as a measurement of pace of life, and perhaps such a measure is not a good indicator of a lifestyle concerned with time. Other factors such as fashion, for example, may affect the number of people wearing watches.

Findings from this study have given partial support to the belief that the United States has a different pace of life than other cultures, just as Levine and West (1980) found when they compared the United States to Brazil and as Levine and Bartlett (1984) discovered in their multiple country investigation. The present study indi-

cates that college campuses may be included in cross-cultural comparisons of pace of life.

There are limitations in this study, to the extent that the locations were chosen for convenience and that there were differences between the locations other than culture (e.g., size and affiliation of the universities). Future research could further investigate this topic using other measures for pace of life, such as behaviorally anchored rating scales (Landy, 1991), and extending studies to college campuses in other cultures. Finally, differences in pace of life across types and sizes of colleges both within and across cultures would be interesting to investigate as would differences between types of students and age groups. More knowledge about pace of life on college campuses and how cultures differ may eventually improve international education. Such knowledge may help prepare international travelers and ease culture shock. More knowledge about pace of life in general may improve international relations or health care practices.

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# Exploring Implications of
# Mood on Suggestibility and Memory

## Allison M. Pfaff

*Creighton University*

*When people experience misleading information after witnessing an event, they incorporate the suggested information into their memory of the event (e.g., Weingardt, Loftus, & Lindsay, 1995). Researchers have investigated numerous variables that relate to suggestibility. However, little research has examined the effect of mood and suggestibility on memory. Researchers have conducted many studies on the relation between mood and cognitive processes, including type and mood of the material presented, the mood of the participant during both encoding and recall, and affect intensity. Because of the intimate connection between mood and suggestibility, this article addresses the implications and need for research on this potential interaction.*

A growing body of research supports the observation that people exposed to misleading information after witnessing an event often "remember" the misleading information as part of the event (Belli, 1989; Ceci, Ross, & Toglia, 1987; Loftus, 1975; Loftus, Donders, Hoffman, & Schooler, 1989; Tversky & Tuchin, 1989; Weingardt, Loftus, & Lindsay, 1995). This phenomenon is known as the misinformation effect, which can occur anytime people who experience the same event talk to each other, overhear each other talk, or are exposed to new information from the media, interrogators, or other sources (Loftus & Hoffman, 1989). The degree of suggestibility, or the extent to which people will come to accept postevent information and incorporate it into their "memory," varies from person to person (Powers, Andriks, & Loftus, 1979). Many researchers have investigated suggestibility and the variables with which it interacts. However, no one has examined the relation between mood and suggestibility. In this article, I will explore the possible relation between mood and memory suggestibility and propose potential interactions between the two.

## Research on Suggestibility

The typical procedure for investigating suggestibility is commonly known as the "standard test" or "Loftus test" and involves three stages. First, participants witness an event on a video or slide show. Second, misleading information about the event is presented to participants in the form of narrative summaries or alternatively embedded in questions. Finally, participants take a test on their memory for the event by choosing between the original information and the postevent information. The experimenter then examines whether the participants incorporated the misleading information into their memory. Generally, participants recall objects as part of the event that were really only present in the suggestive narrative or questions. For example, the experimenter might mislead participants by asking, "Which car had the stop sign?" (Kidorf & Cox, 1996). As a result, participants may recall seeing a stop sign in a photograph of an accident when there was a yield sign.

Numerous researchers have examined the effects of different variables on suggestibility, including self-monitoring (Lassiter, Stone, & Weigold, 1987), reading speed (Tousignant, Hall, & Loftus, 1986), introversion and high use of intuition (Ward & Loftus, 1985). Suggestibility can also be affected by the method used to retrieve the memory as well as by the form of the questions asked (Loftus & Zanni, 1975). This research has demonstrated that people's memories are malleable. However, despite all the research on these variables and suggestibility, researchers have yet to examine how mood states may affect suggestibility.

## Research on Mood

There are several reasons to believe that emotion may affect suggestibility. Researchers (Forgas, 1995; Matlin & Stang, 1978; Seibert & Ellis, 1991) have demonstrated that emotional states influence cognitive processes through alterations in social, personal, and spatial judgments, mood congruence effects, mood-state dependence, and recall impairment. Emotional states can improve or impair performance. Researchers have examined how different variables in mood influence memory.

Matlin and Stang (1978) explored the mood of the displayed material. They found that participants had better recall for pleasant items than for negative or neutral items, especially if the delay between learning and recall

was long. They explained this finding by the "Pollyanna Principle," which states that people usually process pleasant items more efficiently and more accurately than less pleasant items. Because of this increased accessibility to pleasant items in memory, people can more quickly and accurately recall pleasant items.

Forgas (1995) also examined how the material presented in a scenario influences mood by observing mood effects on typical and atypical information (e.g., a stop sign in an accident scene versus a no crossing sign). He found that participants performed extended processing on atypical targets. Extended processing increases the size of mood effects on memory and judgment because it allows a greater scope for mood-primed associations to influence judgments. Thus, atypical targets exhibited larger mood effects on memory and judgments because of this extended processing. This result may have implications for the time at which suggestive postevent material is more easily incorporated into memory. For example, individuals would process more thoroughly information that is atypical, therefore, increasing the effect of mood. This intense mood state could then make the person more susceptible to misinformation.

Researchers have also examined the mood of the participant when learning the material. Seibert and Ellis (1991) found that people in happy and sad moods had worse recall performance than did participants in a neutral condition. They hypothesized that any emotional state could include task-irrelevant thoughts that divert attention away from the successful resolution of the task, thus impairing cognitive performance. By inducing mood in the participants, giving them a memory task, and then obtaining the reports of their thoughts, Seibert and Ellis determined that the happy and sad conditions produced more irrelevant thoughts than the neutral mood. In turn, more irrelevant thoughts lead to worse recall performance. These task-irrelevant thoughts produced by emotional states could detract participants from the original task and make them more susceptible to misleading postevent information.

Bower (1981) combined the two variables of mood of the material and mood of the participant when learning the material and found a mood congruence effect. Bower discovered that people in a pleasant mood recalled more of their recorded pleasant experiences, whereas people in an unpleasant mood recalled more of their recorded unpleasant experiences. Forgas and Bower (1987) found that material congruent with participants' mood resulted in deeper and richer processing of the incoming information at many different levels, therefore improving memo-

ry. If participants whose mood matches the information presented or the ongoing event process that information more deeply, they may be less vulnerable to future misinformation. Mood-state dependence, another effect observed by researchers, occurs when memory is better if the mood of the participant at encoding and retrieval are similar.

Not only is the mood of the participant when learning the material important, but we must also consider the participant's mood when recalling the material. Because of previously inconsistent results, Ucros (1989) conducted a meta-analysis on the research concerning whether mood during encoding matches mood during recall. She found a moderately strong relation between matching mood states and the amount of material recalled. This finding supports the idea of mood-state dependence, which asserts that recall when in a certain mood depends partially on the mood in which a person originally learned the material.

Another variable researchers have considered is how people in different moods process information. Participants in happy moods use heuristic processing, or short-cuts, whereas participants in sad moods use systematic processing, elaborating on the presented information (Clore, Schwarz, & Conway, 1994). Bless et al. (1996) determined that happy participants were more likely to incorrectly judge items as being presented if an item was typical for the script. The participants in the sad and neutral conditions were less likely to infer that typical items were presented. Thus, because of more elaborative processing and less reliance on general knowledge structures, people in negative moods may have more accurate memory. They may also be less likely to assimilate false postevent information into memory.

One individual difference variable that can interact with mood is affect intensity (AI). Basso, Schefft, and Hoffmann (1994) stated that AI, the degree in which affect is experienced, is a lifelong characteristic of temperament. More frequent mood shifts correlate with people who score high on AI (Larsen & Diener, 1987). High AI also correlates with more personalization and elaboration of information, focusing especially on affectively toned information (Diener & Cropanzano, 1987). However, Basso et al. found an inverse relation between mood and affect intensity. In a positive mood, those people who scored high in AI performed poorly on recall and recognition tasks, whereas those people who scored low in AI performed better. In contrast, those people in a negative mood who scored high in AI performed better than those people who scored low in AI. People scoring high

in AI seek out positive stimuli, thereby inhibiting memory for the task when in a positive mood. This result occurs because their attention is directed away from the task toward positive stimuli, but aiding the performance when in a negative mood because they are trying to avoid the negative stimulation. Thus, the degree to which affect is experienced does make a difference on mood and memory.

Many different variables are important when studying cognitive processes and affect. If emotional states can influence cognitive processes in numerous ways, then a reasonable question is whether these emotional states might also affect suggestibility. Surprisingly, researchers have not examined the interaction of mood and suggestibility.

## Potential Interaction of Mood and

## Suggestibility

A person's mood may affect in several ways his or her susceptibility to suggestive postevent information. First, if the information is atypical, the person may process it more extensively, which then increases the size of mood effects. This intense mood state could then make the person more susceptible to misinformation. Second, a person experiencing strong emotions may have more task-irrelevant thoughts, which could take attention away from the task at hand and make that person more susceptible to misleading postevent information. Finally, people in positive mood states may be more prone to assimilate false postevent information because they use heuristic processing and rely more on general knowledge structures. Therefore, they infer typical information that may not be present.

Eyewitness testimony is one area in which suggestibility plays an important role. Often individuals are asked to describe in detail the events that took place in a crime or in an accident. Many trials depend on eyewitnesses, sometimes as the only evidence to ascertain the truth. Postevent information given to eyewitnesses by others who also witnessed the event or leading questions asked by police, detectives, and lawyers can affect what eyewitnesses recall (Greene, Flynn, & Loftus, 1982). This misinformation may influence the witness to remember something that was not actually present or that did not truly happen. The suggestive information may cause a witness to confuse details or may bring forth a previous memory that the witness then incorporates and believes was part of the event. For this reason, determining what factors influence susceptibility to postevent

information in order to evaluate the reliability of an eyewitness is very important.

Both the event witnessed and testifying in court can be very emotional experiences. Often the event the eyewitness observes causes distress, pain, or sadness. Then, the person must endure interrogations and legal procedures, while also having to cope with personal involvement in the event. In addition, this person has to testify and relive the event in court. All of these factors can greatly impact the eyewitness emotionally. For these reasons, knowing how emotional states affect suggestibility may determine the lines of questioning employed situations and the accuracy of eyewitnesses' testimony.

## Conclusion

Future research should examine the relation between mood and suggestibility. At this time, no research has looked at these factors simultaneously. However, examination of the extant research suggests that there is a strong probability that these two variables will interact. For example, if a witness observes an upsetting event while in a negative mood, a mood congruence effect may cause the person to process the information more deeply and therefore be less susceptible to misinformation (Bower, 1981). However, another possibility is that the emotional states caused by witnessing an event could produce task-irrelevant thoughts, detracting witnesses from the task of reporting what they saw and making them more susceptible to misinformation (Seibert & Ellis, 1991). Further, if people high in affect intensity witness a disturbing event, they may be more prone to misleading postevent information because of avoiding negative stimulation (Basso et al., 1994).

Another variable that researchers should consider is the content of the material. If the information is atypical, the effect that mood has on the witness will increase. In addition, because positive material is more easily recalled, there is a greater likelihood that an eyewitness would more easily incorporate unpleasant information into memory. These relations are merely a few of the possible ways mood may interact with suggestibility. Researchers should carefully examine this relation; it could have serious implications in eyewitness testimony.

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# Solving the Organ Shortage: Presumed Consent, Compensation, and a Functional Approach

Michael J. Welker

*Creighton University*

*A critical shortage of organs and tissue for transplantation exists in the United States. This article reviews two commonly proposed initiatives for addressing this shortage and suggests a functional theory as an alternative. The public does not support changes in policy to a presumed consent or compensation system. Functional analysis presents a useful theory for promoting planned helping behavior. A functional approach to the promotion of organ donation would appeal to personal motivations for deciding to donate.*

Currently, over 60,000 individuals in the United States are on the organ or tissue transplant waiting list (United Network for Organ Sharing [UNOS], 2000a) with another name added every 16 min (UNOS, 2000b). For the period between 1988 and 1998 in the United States, the demand for organs grew 300%, from 16,026 registrations to 64,423 (UNOS, 1999b), while the yearly number of organ donations increased only 58%, from 5,904 to 8,059 (UNOS, 1999a). Expecting any organ procurement system to fully satisfy this rapidly growing demand for life-saving organs and tissue is unrealistic; however, the current U.S. system is hampered by significant unrealized potential (Evans, Orians, & Ascher, 1992). A 1993 Gallup survey on attitudes toward organ donation found that although 85% of Americans supported organ donation, only 28% had signed a donor card. The most prevalent proposals for addressing this inaction are presumed consent and compensation (Keyserlingk, 1990). However, an alternative psychological approach, based on functional analysis of volunteerism (Clary et al., 1998), might be a more practical initiative than a change in policy from presumed refusal to presumed consent or compensation.

## Presumed Consent

Adoption of presumed consent would require individuals who do not wish to donate their organs upon death to register their denial, similar to how one currently—under presumed refusal—registers intent to donate. Proponents of presumed consent point to the failure of the presumed refusal system to procure efficiently organs from individuals who support organ donation. As noted earlier, less than half of all individuals who support organ

donation have signed a donor card (The Gallup Organization, 1993). Furthermore, even when the deceased's signed donor card is readily available for verification of his or her intent, medical professionals typically are loath to proceed with organ procurement without final consent directly from the family of the deceased (Spital, 1995).

Under presumed consent, with a need only to verify the absence of a registered objection, the process of organ procurement can begin closer to the time of death, increasing the likelihood for a successful transplant (Fentiman, 1994). Grieving families would not be burdened with a decision that could exacerbate their trauma and potentially defy the deceased's wishes. Moreover, under presumed consent the deceased's registered decision could be more easily respected when met with families' objections—medical professionals can simply refrain from initiating the procurement procedure, leaving the body intact.

Several European countries, including Austria, Belgium, and Spain, have had increases in the supply of organs since adopting presumed consent systems (Kennedy et al., 1998), with Spain breaking its own world records in 1998 for donation and transplantation levels (Bosch, 1998). Presumed consent remains relatively unacceptable by the U.S. public, however. Surveys generally have found only about a 30-40% acceptance for presumed consent (Kurtz & Saks, 1996). A primary objection to presumed consent is the issue of autonomy—that the state should not require a person to choose actively to remain intact after death. Advocates of the system justify the denial of one's right not to choose by citing the severity of the organ shortage and its consequences (UNOS Ethics Committee, 1993a).

## Compensation

With the acceptance of a presumed consent system in the United States appearing remote, offering, primarily financial incentives for donation may seem a more realistic method for solving the organ shortage. Proponents

denounce what they see as the hypocrisy of a system that allows all to profit except the donor, who is expected to comply strictly on the basis of altruism. In response to the current policy, Daar (1998) facetiously suggested that the transplant staff set the humanitarian example by working free. Ideally, any compensation for donation of organs would be regulated, with the federal government enumerating suitable incentives for various organs and tissue (Fentiman, 1994).

Recent UNOS surveys indicate that the idea of creating financial incentives for organ donation is supported by about half of the U.S. public (UNOS Ethics Committee, 1993b). Other surveys have found markedly different attitudes with respect to intentions to donate. For example, the 1993 Gallup survey found that only 12% of respondents said they would be more likely to donate with a financial incentive, and 5% of respondents claimed they would actually be less likely to donate given a financial incentive. The vast majority, 78% of respondents, claimed that financial incentives would have no effect in increasing (or decreasing) their likelihood of donating.

Besides the apparent lack of public support, common objections to offering financial incentives for donation include possible exploitation of the poor with unfair advantage for the rich (Daar, 1998), prohibitive costs, serious ethical issues raised by treating body parts as commodities (Prottas, 1992), and the perceived dissolution of altruism as a motive for donation (Dejong, Drachman, Gortmaker, Beasley, & Evanisko, 1995). As an alternative to explicit financial reimbursement, a system of indirect compensation (e.g., payment of medical expenses or funeral and burial costs) might serve to lessen the perception of selling tissue or organs for profit. However, the appeal of compensation may be dampened when the ultimate motivation is excessively cloaked (Prottas).

In sum, a change from the current U.S. organ procurement policy of presumed refusal either to presumed consent or compensation does not seem to be forthcoming. A more plausible social initiative might focus on the individual motives that can be involved in making the autonomous decision to donate (under current policy) to effectively promote the decision itself. Recognizing organ donation as a form of planned helping, unlike spontaneous helping, involves substantial deliberation of the benefits, costs, and kind of helping (Clary et al., 1998). Of the few theories explaining the motivations for planned helping, functional analysis of volunteerism is the predominant psychological approach (Penner & Finkelstein, 1998).

## Functional Approach

Clary et al.'s (1998) functional analysis extends previous research on the breadth of volunteers' motivations (see Clary & Snyder, 1991) and builds on the work of functional theorists (e.g., Katz, 1960; Smith, Bruner, & White, 1956) who argued that the same beliefs, attitudes, and actions could serve different psychological functions for different individuals. The functional approach to volunteerism proposes six different functions that exist in unique degrees of interest for each individual. Volunteerism may serve (a) a values function, by allowing one to express altruistic and humanitarian values, (b) an understanding function, by offering learning experiences, (c) a social function, by providing opportunities for social interaction and approval, (d) a career function, by providing career-beneficial experiences, (e) a protective function, by offering escape from negative feelings of self, such as guilt over one's good fortune relative to others', and (f) an enhancement function, by promoting positive feelings of self.

Perhaps the most significant implication of this functional approach is that individuals can be persuaded to volunteer through appeals to relevant psychological functions. Past research on functional theories of attitudes has supported the hypothesis that matching message content to audience motivations facilitates persuasion. DeBono (1987) found that individuals whose attitudes serve primarily a social function experienced more attitude change after exposure to a message addressing that function than after exposure to a message addressing the values function. Individuals for whom attitudes serve primarily a values function were more influenced by a values message than a social message. In this study, participants' completion of the Self-Monitoring Scale (Snyder, 1974) identified high self-monitors and low-self monitors, and this distinction in turn identified social and values functions. Because high self-monitors are concerned with adapting themselves to fit social norms, the attitudes of these individuals logically would serve the social function. Because the behavior of low self-monitors primarily is guided by internal values, the attitudes of these individuals would serve the values function. The use of the self-monitoring construct in this study to identify attitudinal functions underscores the limitations of research on the functional approach. Without a reliable and valid assessment device to identify relevant functions, functional theories cannot be tested empirically

(Snyder & DeBono, 1989). Thus, application of the matching strategy to volunteerism necessarily involves identifying individuals' motivations for volunteering in order to match persuasive messages to those motivations.

The Volunteer Functions Inventory (VFI), developed by Clary et al. (1998), measures the functions served by general volunteerism. The VFI is consists of 30 items, each a reason for volunteering (e.g., "Volunteering increases my self-esteem," p. 1520), with respondents indicating on a 1 to 7 scale the personal accuracy of each—the higher the score, the more important the motivation. VFI assesses each function with five items. Clary et al. (1998, Studies 1 and 2) administered the VFI to a sample of various kinds of volunteers, for whom the volunteering motives was salient, and then to a sample of university students, which included both volunteers and nonvolunteers. In both studies, analyses of participants' responses identified six factors that were congruent between samples and corresponded to the six functions proposed in the functional approach. These findings supported the functional approach and the use of VFI as a measure of the functions served by volunteerism.

To investigate the utility of the functional approach in recruiting volunteers, Clary et al. (1998, Study 4) examined the importance of matching persuasive messages to the functions of interest to individual recipients. After completing the VFI, participants rated six advertisements in terms of persuasiveness. Each advertisement was a brochure promoting volunteerism by appealing to one of the six psychological functions (e.g., "Volunteer work looks good on your resume and employers are often impressed by it." p. 1523). The results showed that participants' corresponding VFI scale scores were the best predictors of their evaluations of each advertisement—participants judged each message as persuasive to the extent that it appealed to their primary motives.

Clary, Snyder, Ridge, Miene, and Haugen (1994) obtained similar results. In their study, participants completed a questionnaire (a forerunner to the VFI) assessing motivations for volunteerism. The participants then viewed videos promoting volunteerism through appeals either to their most important function (functionally matched) or their least important function (functionally mismatched) based on their questionnaire scores. After viewing the video five times, participants evaluated their respective advertisements. Participants who viewed functionally matched messages rated the messages as more persuasive and reported greater intentions of volunteering than participants who viewed functionally mismatched messages.

These findings suggest that functional analysis can be a valuable theory for understanding the motivational processes of volunteerism and planned helping in general. To the extent that relevant motivations can be accurately identified, promotions of volunteer work and the work itself can be adapted accordingly to maximize persuasion (Clary et al., 1994; 1998), satisfaction with service (Clary et al., 1998), and, in turn, longevity of service (Omoto & Snyder, 1995; Penner & Finkelstein, 1998). This strategy, along with other research on functionalism in general, reflects a reemergence of interest in motivation as a personality and social psychology construct, one that has practical significance in addressing certain problems of inaction (e.g., volunteerism, voting; Snyder, 1993). The functional approach would suggest that altruism is only one of a number of motivations for planned helping, and inaction might be addressed by promoting the benefits to the helper as much as, or more than, the benefits to the helped.

## Implications for Organ Donation

The act of postmortem organ donation would seem to serve only the altruistic function—after all, the donor cannot benefit from the experience after he or she is deceased. However, the actual decision to donate could involve more functions (than only the values function) by assessing organ donation in terms of the personal benefits one could receive before the actual transplantation (i.e., while still alive). Making the decision to donate could serve the social function if becoming an organ donor is socially desirable. The protective function can be served for an individual whose negative thoughts of his or her own mortality would be moderated by the possibility of saving another's life. A boost in self-esteem from making the decision would be an example of the enhancement function. Education on organ procurement could serve the understanding or career function. Thus, the potential exists to promote more incentives for donation than solely the values function, which in reality can only be served in the event of successful organ transplantation.

The functional approach for effectively promoting the decision to donate involves identifying the functions that deciding to donate can serve and matching persuasive messages to those motivations. Most of the organ donation literature has focused on attitudes toward organ donation (Radecki & Jaccard, 1997); none has explicitly adopted a functional approach. However, recent research on factors related to donation willingness suggests the functional approach has merit.

To examine attitude, belief, and situational factors related to willingness to donate, Skowronski (1997) asked participants to complete a questionnaire assessing their attitudes and beliefs regarding organ donation and their donation willingness in certain situations. In addition, responses to two questions on donor cards classified participants into donation categories of donor willing, uncertain, or unwilling. Certain positive and negative attitudes and beliefs were better than others in discriminating among donation categories. Participants who were more willing to donate wanted to help others, sought to contribute to science, and anticipated support from a religious leader or community. In that case, the appeal of the enhancement and social functions as well as the values function is evident. Participants who were more unwilling to donate were reluctant to think about death and had religious concerns regarding the afterlife, which seems to indicate a perception of donation as failing to serve the protective and enhancement functions. Skowronski also found that all participants, including the unwilling group, were willing to donate while living if the recipient would be a family member. Interestingly, participants in the unwilling group showed the greatest decline among the groups in donation willingness when the situation changed from living donation to postmortem donation. This finding suggests that these individuals might be motivated by the opportunity for social approval or other benefits, an opportunity perceived as being offered only by living donation.

Thus, self-interested motivations can influence individuals' willingness to donate. Future research might seek to develop an assessment device, similar to the VFI (Clary et al., 1998), to identify accurately the functions deciding to donate can serve. Promotion of the decision to donate can match persuasive messages to those motivations by targeting specific audience segments (e.g., appealing to the social function for students). This strategy would entail an expansion of promotional campaigns beyond the current focus on altruism—"Share your life. Share your decision" (Coalition on Donation, 1998). To target individuals for whom altruism is not a primary motive, promotions would attend to the egoistic motivations of the potential donor—for example, appealing to the social function by citing the popular support for organ donation.

The functional approach challenges the idealistic notion that organ donation is strictly an altruistic act. However, if authorities can persuade by the functional approach individuals who are unwilling to donate because they hold this notion, then we should welcome such a challenge. The potential for persuasion exists, because almost half of the 25% of individuals who are unwilling to donate do not have a specific reason for their position (The Gallup Organization, 1993).

Functional analysis presents a clear strategy for persuasion: Identify motivations of a target audience and then match message appeals accordingly. Studies (Clary et al., 1994, 1998) support this strategy for promoting volunteerism. Application of functional theory to promoting organ donation would entail identifying and appealing to motivations for making the decision to donate, which, unlike the actual donation itself, can serve more functions than only the values function. Social psychologists can argue that solving the organ shortage might require a decided shift in emphasis from the physical interests of the transplant recipient to the psychological interests of the potential donor.

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# Functions, Benefits, and Phases of Mentoring in a Business Environment

## Maureen C. Baker

*Creighton University*

*The results of a literature review revealed the function of mentor relationships, the benefits of mentoring, and the phases of a mentoring relationship. Mentoring consists of an intense interpersonal exchange between a more experienced senior colleague (mentor) and a less experienced junior colleague (protégé). The mentor provides support, direction, and feedback regarding career plans and personal development, and in return often receives a sense of satisfaction and fulfillment. Specific benefits for the protégé include faster promotions, higher compensation, accelerated career mobility, and higher self-esteem. A mentoring relationship typically evolves from an initiation phase, through cultivation, separation, and finally, redefinition. The article concludes by discussing advantages of informal mentoring, as well as the potential gender effects on mentoring relationships.*

Mentoring, or the extensive and personal provision of advice to a junior colleague, has been around for centuries; nonetheless, only since the early 1980's has there been research focusing mainly on the phases and functions of mentoring relationships (Hunt & Michael, 1983; Kram, 1983; Noe, 1988). More recently, studies have evaluated the benefits of mentoring (Ragins & Scandura, 1999), the different ways of implementing an effective mentoring relationship (Ragins & Cotton, 1999), and the impact gender plays in obtaining a mentor (Ragins & Cotton, 1991). Because of the potential benefits to both the protégé and mentor, understanding what mentoring is and ways to improve it are important. Therefore, this literature review explores research on mentor functions, benefits of mentoring relationships, the phases of mentoring, formal versus informal mentor relationships, and how gender affects these relationships, to understand more completely mentoring and to implement more effectively mentoring programs in organizations.

## Mentor Functions

Using data from interviews with managers, Kram (1983) found that mentors serve both career and psychosocial functions. Hunt and Michael (1983) characterized mentors as individuals who are committed to providing support to junior members in an effort to remove organizational barriers and to increase the upward mobility of their protégés. Mentors accomplish those goals by: (a) sponsoring promotions and lateral moves; (b) coaching the protégé; (c) protecting the protégé from adverse forces; (d) providing challenging assignments; and (e) increasing the protégé's exposure and visibility.

Although the career development function depends on the mentor's power and position in the organization, the psychosocial function focuses more on interpersonal aspects and serves to enhance the protégé's sense of competence, identity, self-efficacy, and work-role effectiveness. Thus, the psychosocial function depends more on the quality of the emotional bond in the relationship, requiring the mentor to provide acceptance, counseling, and friendship (Russell & Adams, 1997). Kram (1983) theorized that mentors can provide four specific psychosocial functions: (a) helping the protégé develop a sense of professional self; (b) acting as a sounding board; (c) giving respect and support; and (d) providing identification and role modeling. Although a functional mentoring relationship may provide a mixture of the above (Ragins & Cotton, 1999), Kram's (1985) in-depth research on mentoring relationships suggested that the greater the number of functions fulfilled by the mentor, the more beneficial the relationship will be to the protégé.

## Benefits of Mentoring

Because of the functions mentors might serve, authorities generally defined the mentoring relationship as an intense interpersonal exchange between a senior experienced colleague (mentor) and a less experienced junior colleague (protégé) in which the mentor provides support, direction, and feedback regarding career plans and personal development (Levinson, Darrow, Klein, Levinson, & McKee, 1978). The mentoring relationship benefits the protégé. Rewards for the protégé may include, but are not limited to, faster promotion rates, higher compensation, accelerated career mobility, higher career and pay satisfaction, and higher self-esteem (Chao, Walz, & Gardner, 1992). During this period in life, questions about one's competence, effectiveness, and ability to achieve future dreams are most salient

(Levinson et al.). By participating in a mentoring relationship, protégés can be provided with opportunities for resolving these life dilemmas (Kram, 1983). Because benefits can be so valuable, protégé's should consider identification with a mentor as a major developmental task of the early career (Russell & Adams, 1997). These benefits may explain the increasing popularity in mentoring and why more organizations are turning to mentoring as a form of training for their employees. This trend is found in over 500 articles on mentoring published in popular and academic publications in business and education during the past 10 years (Allen & Johnston, 1997 as cited in Russell & Adams, 1997) and in a recent poll that 38% of workers have had a mentor (McShulskis, 1996).

Although many people often assume that the protégé is the only one who benefits from a mentoring relationship, current research indicates several benefits associated with being a mentor (Kram, 1985; Ragins & Scandura, 1999). The primary benefit is the sense of satisfaction and fulfillment received from fostering the development of a less experienced colleague (Ragins & Scandura). Levinson et al. (1978) indicated that the mentor is a more experienced adult, often at midlife and mid-career, and likely in a period of reassessment during which time past accomplishments are reviewed, and the person is challenged with the readjustment of future dreams and coming to terms with past accomplishments. This time in a person's life can be particularly stressful as one realizes that life is half over and his or her career has been primarily determined. If there are no available outlets for growth or future accomplishments, this time in a person's life can be particularly difficult (Levinson et al.). However, by entering a mentoring relationship, the more experienced adult can use life's wisdom and knowledge about the job and redirect energies into productive action (Kram, 1983). Erikson (1968) labeled this life stage as "generativity versus stagnation." By aiding someone younger, mentors often feel challenged, stimulated, and more creative. The youthful energy that mentors encounter with protégés is rejuvenating (Ragins & Scandura). Kram (1985) suggested that mentors may also receive tangible, work-related benefits. By providing technical and psychological support, protégés can provide a loyal base of support from which the mentor may improve his or her own job performance. An additional benefit for the mentor might be receiving praise and recognition from fellow workers for developing talent in the organization (Ragins & Scandura).

Organizations as a whole have also found mentoring beneficial. Research findings have supported links between mentoring relationships and increased employee productivity (Orpen, 1995), lower levels of turnover (Viator & Scandura, 1991), and enhanced organizational commitment (Aryee, Chay, & Chew, 1996). Professionals have widely accepted mentoring as a key career resource for developing managerial talent and imparting organizational values (Ragins & Scandura, 1999). Hunt and Michael (1983) also found that former protégés (versus nonmentored executives) are better educated, better paid, less mobile, and more satisfied with their work and career progress. By developing workers to the best of their abilities through mentoring, companies maintain a competitive advantage and are able to fulfill employee's personal career goals simultaneously (Aryee et al., 1996).

## Phases of Mentoring

Because of the potential impact of mentoring, studying how the relationship changes over time can be useful. Although mentoring relationships vary greatly, Kram's (1985) intensive interviews of 18 mentor relationships led her to conclude that the majority go through four successive phases. First there is an initiation phase, a cultivation phase, which is followed by a separation phase, and finally a redefinition phase. The initiation phase typically occurs in the first six to twelve months of the relationship and is characterized by the fantasies the protégé and mentor have about the pairing (Chao, 1997). Kram's (1983) interviews with managers revealed that in this stage of the relationship, the protégé will ideally develop a strong positive fantasy view of the mentor and believe that the mentor will support attempts for career advancement. The newer employee typically views the senior employee as someone to admire and whose behavior he or she should model. In time, the mentor's behavior should solidify these initial views, and the protégé will begin to feel cared for, supported, and respected by someone who is admired in the company and who can provide important career and psychosocial functions (Kram, 1983). Mentors in this phase ideally viewed the protégé as someone who deserved attention, had potential, was coachable, and was enjoyable to work with (Kram, 1983). A fantasy evolves of someone who can become an object for the transmission of the mentor's values and perspectives on the world. Mentors believe that their coaching is imperative to the protégé's growth and success (Kram, 1983). The events of the first year serve to transform the initial fantasies into concrete expectations that help pave the way to the second phase, cultivation.

The cultivation phase usually lasts approximately two to five years, and it is during this time, mentoring functions are maximized. Initial fantasies are constantly tested against reality, and the real protégé discovers the

value of the relationship (Kram, 1983). Career functions usually emerge first, with the mentor providing challenging assignments, additional exposure, and protection. Not until the interpersonal bond strengthens between the two does the psychosocial functions develop more fully. This process normally entails acceptance and confirmation, but depending on how intimate the relationship is, the relationship can extend to friendship. Career functions are dependent on the mentor's power, position, and experience, whereas the psychosocial functions depend on the degree of trust, mutuality, and intimacy that are part of the relationship. For the mentor, this phase typically results in a deep satisfaction in knowing that he or she was responsible for the development and success of the protégé (Kram).

After the cultivation phase, the mentor and protégé may begin to break apart, and authorities characterize the relationship as having a separation phase, which may occur over 6 to 24 months (Russell & Adams, 1997). The separation phase typically consists of some turmoil, anxiety, and feelings of loss (Kram, 1983). The equilibrium both partners experienced for several years is disrupted, and many new adjustments must be made. During this time, the protégé experiences new independence and autonomy, and the relationship becomes less central to both individual's lives (Kram). If this separation phase occurs prematurely for the protégé, he or she will most likely feel abandoned and unprepared to meet new challenges. The loss of critical career and psychosocial functions can be traumatic (Kram). The separation phase is crucial to the development of protégés, and if handled correctly, will provide them with the opportunity to demonstrate the job skills they have acquired and to prove that they are capable of being successful without the constant aid of their mentor. At the same time, mentors are able to demonstrate that they played a critical part in the development of new talent for the organization. The end of this phase occurs when both partners realize that the relationship is no longer needed in its previous form (Kram).

The fourth and last phase of mentoring consists of redefining the relationship. The partners typically evolve the relationship into one of informal contact and mutual support, and a more peerlike friendship emerges (Chao, 1997). Although there is less evidence of career and psychosocial functions, counseling and giving support from a distance often occur. The mentor continues to support the protégé's endeavors and takes pride in his or her accomplishments. The protégé serves as proof that the mentor was successful in passing on important values, knowledge, and skills (Kram, 1983). The protégé, working independently of the mentor, can now enter into the relationship on a more equal footing. The protégé may no longer place the mentor on a pedestal, but the protégé will continue to feel indebted for all that the mentor has done (Kram). The needs of each individual will have changed in such a way that the previous relationship will no longer be needed or desired.

If the mentoring process proceeds as previously discussed, it often results in a positive outcome. Unfortunately, not all mentoring situations are successful, and some become destructive for one or both individuals (Kram, 1983). Ragins and Scandura (1999) noted that mentors may run the risk of being displaced by successful protégés or backstabbed by opportunistic ones. In addition, some people may view mentors as giving an unfair advantage to their protégés, which may hurt their reputation and effectiveness (Ragins & Scandura). If a mentor's protégé performs well and is successful, that accomplishment can reflect positively on the senior worker, however, if the protégé performs poorly, that failure can reflect negatively on the mentor's judgment and competency (Kram, 1985). Finally, mentors might feel threatened by particularly successful protégés and may be tempted to hold back the junior workers and deny them promotions. This outcome is likely to occur when the senior worker is going through a particularly difficult midlife transition (Kram, 1983).

## Types of Mentoring

Ragins and Cotton (1999) hypothesized that many mentor- protégé problems are because the types of mentoring relationship. There are two types of mentoring: formal and informal. The key difference between formal and informal mentoring is that formal mentoring relationships develop with the aid of the organization, whereas informal relationships develop spontaneously. Also, a formal mentoring relationship tends to be much shorter than an informal one (Ragins & Cotton). Many organizations assume that by implementing a formal mentoring program they will experience the same success as organizations that have used informal methods, but research results do not support that belief. In fact, Ragins and Cotton supported the claim that informal relationships are typically more beneficial than formal relationships, and to make mentoring as beneficial as possible, organizations should be encouraged to use informal rather than formal mentoring.

Ragins and Cotton (1999) found that informal mentoring was more beneficial because protégés with informal mentors reported more career development functions

(sponsoring, coaching, protection, challenging assignments, and exposure) than protégés with formal mentors. Recipients of informal mentoring also reported more psychosocial functions involving social support, friendship, role modeling, acceptance, and greater overall satisfaction with their mentors. Informal protégés also received slightly more compensation and promotions than formal protégés.

The success of informal mentoring, in contrast to formal mentoring, is because informal mentoring uses a mutual selection process and is often based on mutual identification. Mentors usually select protégés who are younger versions of themselves, and protégés select mentors who they view as role models. In contrast, members of formal relationships are typically assigned to each other via a third party on the basis of application forms, whereby the mentor and protégé do not even meet until after the match has been made. The mutual identification that characterizes the informal relationship leads to an intensity that is often compared to a parent-child relationship, which the formal relationships lack (Ragins & Cotton, 1999).

A second reason for the success of informal relationships is their length. Informal relationships last between three and six years (Kram, 1983), whereas formal relationships are usually contracted to last between six months and a year (Zey, 1985). Members of informal pairings meet when they desire, but the mode, frequency, and location of contact for formal pairings are often specified in a contract that both parties must sign (Ragins & Cotton, 1999). Mentoring may not always have an immediate effect on the career of the protégé. Such results take time to emerge. If the relationship only lasts for six months, the benefits might not have time to come to fruition. A shortened time period may also restrict the development of an interpersonal bond between the partners (Ragins & Cotton). Therefore, a longer lasting relationship, which would typically be informal according to the above definitions would be more beneficial to both parties.

That formal mentors may be less motivated to be mentors is a third reason why informal mentoring is superior to formal mentoring (Ragins & Cotton, 1999). Supervisors often told formal mentors they have to do the job. They are not given a choice in the matter. Because these mentors are unable to select the workers they will mentor, they may not identify with their protégés and may be less motivated to help them. If workers are forced into mentoring, they might not be ready to serve in that capacity and might lack the necessary communication

and coaching skills that are indispensable to being an effective mentor. Mentors are also less likely to receive the internal rewards associated with mentoring if they are not sufficiently motivated to do the job (Ragins & Cotton).

Finally, many organizations that implement formal mentoring programs match members from different departments or functional units in an attempt to avoid charges of favoritism. This practice may impede the mentor's ability to provide the protégé with the most effective guidance (Ragins & Cotton, 1999). Informal pairings usually evolve because the partners have mutual career interests, and the senior worker has knowledge and abilities that can aid the newer worker. If the mentor does not work in the same type of environment as the protégé, giving accurate career advice and role modeling can be extremely difficult (Ragins & Cotton). Perhaps further research will reveal additional explanations. The field of mentoring is relatively new,  and we need additional research findings to define more clearly what is needed for the most favorable mentoring outcomes.

## Gender Issues in Mentoring

Mentoring relationships can greatly benefit both individuals. For some people, especially women, the problem lies in finding suitable mentors (Olian, Carroll, & Giannantonio, 1993). Hunt and Michael (1983) found that women reported more barriers to obtaining a mentor than men. The shortage of women in high organizational positions leads to a shortage of adequate female mentors (Ragins, 1989). Men have numerous same gender coworkers they can consider as mentors, whereas most women often much approach someone of the opposite gender if they want a suitable mentor (Ragins & Cotton, 1991). Although women do not necessarily require female mentors, Kram (1985) found that initiating cross-gender mentoring relationships was more difficult than same-gender relationships, therefore putting women at a disadvantage. Researchers have proposed three main reasons for this difficulty.

One reason women may be reluctant to initiate a mentoring relationship with a man is fear. They may fear that initation will be misconstrued as a sexual advance, and men may not choose to accept an invitation to be a mentor to a woman because of destructive office gossip and discrediting innuendoes (Noe, 1988). A second reason relates to traditional gender roles that state that men, not women, should be aggressive (Ragins & Cotton, 1991). Women might be afraid of threatening potential mentors by appearing too aggressive. This fear might

influence some women to wait until a man initiates a relationship and, because of the problems already mentioned, such invitation might never happen, thereby leaving the woman without a mentor (Ragins & Cotton). A third reason women face such difficulties is that they are often less visible to upper level workers than their male counterparts. Women lack access to many of the informal social settings that male mentors frequent such as men's clubs and sports activities (Ragins & Cotton). Hunt and Michael (1983) determined that mentors often select protégés based on their involvement in key, visible projects. Women tend to occupy lower level positions, which reduces their opportunities to participate in these projects, which further diminishes their chances for obtaining a mentor. Although the women in the Ragins and Cotton study perceived greater barriers to obtaining mentors than their male coworkers, they were just as likely to obtain mentors. One explanation is that the barriers they described were perceived but not real. Another explanation is that these barriers were in fact real, but the women simply exerted an extra effort to overcome these barriers to obtain a mentor (Ragins & Cotton). Additional research findings may clarify this issue.

## Conclusion

In conclusion, a literature review revealed many benefits from mentoring relationships (Kram, 1983; Ragins & Scandura, 1999). Further, studies suggest that informal mentoring relationships are often more helpful than formal relationships, both for the protégé and mentor (Ragins & Cotton, 1999). We need more extensive research in this area, however, before any final conclusions can be drawn. Specifically, determining what types of organizational environments are most successful in maintaining an informal mentoring program, and whether there are some types of organizations that would benefit more from a formal program is important. Also, we need to identify obstacles in making the transition from a formal to an informal program. Determining how gender affects the initiation and benefits associated with mentoring awaits the results of further research. Some investigators have hypothesized that women must overcome more barriers in finding suitable mentors (Hunt & Michael, 1983). The nature of these barriers and whether they are real or simply perceived remains unclear. Even if women only perceive barriers, changes are necessary to transform these negative perceptions. Results from studies investigating these issues would aid organizations implement a mentoring program that would benefit everyone. If future research results supports the view that women have more difficulties obtaining mentors, managers and supervisors must take steps to alleviate this problem

because of the increased number of women entering the workforce, and those women deserve the benefits of this training tool as much as men. Mentoring may be extremely profitable for organizations, but first superiors must use it effectively and without discrimination.

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# Special Features

## Richard L. Miller and William Wozniak

*University of Nebraska at Kearney*

*This Special Features section addresses two topics that should be of considerable interest to students of psychology. The "Call for Papers" invited students to undertake a psychological analysis of a movie or television program. Students chose a variety of movies to illustrate several psychological concepts and principles.*

*Russ Ruszczyk examined characteristics and conditions associated with stress as depicted in* Platoon. Leaving Las Vegas *was the context in which Jeremy Nicolarsen described how alcohol abuse can contribute to aggression. Identifying conditions for resolving intergroup conflict was the goal of Stephanie Anderson's essay about* Remember the Titans.

*Claire Kaura used* Primal Fear *to evaluate whether the character of Aaron Stampler exhibited malingering or antisocial personality disorder.* A Few Good Men *was the film Paul Hruby selected to examine the social psychological phenomenon of obedience to authory. Khurrum S. Sheikh gave a novel portrayal of psychoanalytic concepts using* The Devil's Advocate.

*Students are again invited to submit point-counterpoint papers for the next issue of the* Journal. *Some topics you might want to consider exploring include the role of religion in clinical treatment, psychological issues in the "right to die" controversy, and social versus biological explanations for homosexuality.*

## Stress as Portrayed in the Movie *Platoon*

### L. Russ Ruszczyk

*Creighton University*

The stress in the two-hour movie *Platoon* multiplied by 4380 equals one tour in Vietnam for each survivor. There are few situations in life more stressful than being in a combat situation. The Vietnam War was unique because the enemy was not contained in specific combat areas; there were no definite non-combat or stress free areas. During a tour of duty in Vietnam, the stress was present 24 hours a day for 365 days a year. The attempt to demonstrate the stress of Vietnam in the movie *Platoon* may not be entirely successful, but there are some extremely vivid scenes.

### Attitude in Vietnam

Oliver Stone's *Platoon* (Kopelson & Stone, 1986), reflected his tour in Vietnam from 1967 to 1968; the film is not a typical John-Wayne-good-guy-the-Americans-always-win, movie about men in combat. Using actors, props, stunt men, and pyrotechnics on a movie set in the Philippines, Stone managed to convey the attitudes and experiences of men who saw combat in Vietnam. The movie is neither pro nor anti-war but is based on Stone's memories of his experience with the existence of the unreal, the untrained, the uncaring, and the uncertain. The stress of Vietnam was not only during combat but also present between the times of sheer terror when engaged in combat.

Instead of gleaming airplanes and massive battleships, this movie presents combat as the participants experienced it; man against man, man against nature, and each man against himself. Viewers experience the movie through the eyes of Chris (Charlie Sheen), who discovers that he is a college drop-out surrounded by bottom of the barrel personnel, fighting because their country sent them to preserve freedom. Chris starts with a uniquely positive viewpoint, "Maybe I can see something I don't yet fear, learn something I don't yet know" (Kopelson & Stone, 1986). The short-timers, men who are getting close to going home, see a cherry, (i.e., a new arrival), as "someone who might wish to get killed early in his tour, that way you don't suffer as much" (Kopelson & Stone).

Chris arrives during September of 1967, and after that, all time is referred to as "a number of days and a wake-up" (Kopelson & Stone, 1986). The important date is the DEROS, date of estimated return from overseas, and the day of the survivor's final wake-up in Nam. The movie does include one other date, January 1, 1968, as

reference to the build up by the Viet Cong and North Vietnamese Army (NVA) for the Tet Offensive, which occurred January 31. The Tet Offensive changed the combat soldiers' position from offensive to defensive, proactive to reactive, increasing the stress by having less control. Near the end of the movie another soldier shares his philosophy with Chris, "All you got to do is make it out of here, and it's all gravy, every day for the rest of your life, gravy" (Kopelson & Stone). Chris shares every grunt's goal of making it out of Nam.  Some returned in body bags, others returned as living empty shells of what they once were.

## Individual Response to Stress

The body has the same mechanism for reacting to dangerous situations, such as combat with modern day weapons, as it did previously for wild animal attacks thousands of years ago. Stress is a state of physical or psychological arousal in response to a stressor, which may be an actual or perceived threat. This "fight-or-flight" response, or alarm reaction, causes a release of epinephrine and norepinephrine, which stimulates the sympathetic nervous system to prepare for an emergency. Pulse rate, blood pressure, and respiration increase; blood flow is shunted from the skin causing perspiration. Pupils dilate, muscle tension increases, blood glucose levels rise and an overall sense of anxiety appear (Bledsoe, Porter, & Shade, 1997).

Stress is also "the state in which valued goals are threatened, or lost, or where individuals are unable to create the necessary conditions for obtaining or sustaining these goals. On a primary level these goals are related to survival of the group" (Hobfoll, 1998). A group of men in a combat situation, in a platoon, share the common goal of keeping the other members alive, which ensures each member of the group stays alive. The members of a platoon sometimes see their numbers decrease over time and know that they could be the next to die or to watch a friend die. "The unacceptability of death contained in the image of prematurity, grotesqueness, and absurdity" (Wilson, Harel, & Kohana, 1988) adds greatly to the stress of survivor guilt when one is surrounded by death.

Selye's general adaptation syndrome (GAS) consists of three stages—alarm, resistance, and exhaustion (Myers, 1998). When stress is recurring, the body must constantly pass from the exhaustion stage, where the individual has depleted the body's reserves, back to the alarm stage, as threats are perceived. The signs of the alarm stage reappear, but they are more difficult to reverse. The gun is loaded, the bow is taut, and the body is ready to respond when needed.

Persistent stress, when the body is prepared to respond but does not, can lead to physical as well as psychological disorders. Angry outbursts resulting in verbal or physical abuse, panic reactions of hyperactivity or paralysis, difficulty making decisions or crying spells may be evident. Butterflies in the stomach, stage fright, nausea, vomiting, and diarrhea may occur as usual reactions to an abnormal or stressful situation. These signs and symptoms of stress are evident in the combat situation and usually go unrecognized and untreated because they are "unmanly." The average soldier had little if any training in stress management to deal with his or her own stress or to provide support for other members of his or her unit. The spirit of the bayonet fighter is "to kill or be killed," the consequences were not part of the grunts (i.e., combat infantrymen) basic or advanced combat training.

## An Example of Virtual Stress

One scene in *Platoon* displays many of the signs of stress encountered by soldiers in Vietnam. Chris has completed his shift of perimeter guard, watching for the enemy at night. The platoon spent the day walking and cutting its way through the jungle, ate their cold C-ration meal, and appeared tired and miserable. During the monsoon season, there is constant rain and everything is cold and wet. Chris passes off his shift to a fellow grunt and falls asleep in the rain. He exhibits few signs of stress because he has reached the exhaustion stage. His hostile environment has become the norm, not the unusual.

Ants crawling on Chris awaken him, and he notices his buddy has fallen asleep. His training causes him to peer into the jungle where he sees the enemy approaching. The moisture on his face is not from the rain; it is sweat, one of the early signs of the sympathetic "fight-or-flight" response. His skin is pale as the body moves blood from skin to more important areas of the body such as heart, lungs, kidneys and brain, the organs necessary for survival. His pupils are extremely dilated allowing him to gather more light in the dark. As the enemy, which appears to be NVA, approaches, he glances quickly between the enemy, his sleeping comrade, and the detonator for the Claymore mine, which would kill the intruder.

The sound of his heartbeat increases in volume, as does the amount of blood pumped by the heart causing an increase in blood pressure. With a pounding in the head, his eyes dart repeatedly between his choices. He is stressed to the maximum limit; his body has mobilized all

resources to respond, but his mind does not know how to commit them. Chris and the enemy make eye contact as another member of the enemy trips a wire exploding a mine set up along the perimeter as a warning device.

This scene is an excellent example of the repeated stress of combat and could only be improved by the audience sitting in the rain after an exhausting day with four hours of sleep the previous night. Unless one has "been there" and "done that," they would not appreciate the stress in the other scenes whether they be attacking, defending, waiting, or even attempting denial by way of alcohol or drugs. Men who share food, foxholes, bunkers and latrines also share their response to or denial of stress with the available recreational chemicals, adding the stress of chemical dependency for some. The music and the mood of the time reflect an attempt at escape from the war or from life.

The body's response to stress assists survival when needed. Rush-hour traffic may be stressful to some people, whereas others may consider a term paper or final exam stressful. A physician in a tense surgical circumstance, a firefighter in a burning building, or a paramedic performing CPR may be stressed for a period of time, but these events are not constant for an entire year. The men in Vietnam could not leave the office, call in sick, or take off a day. The effects of prolonged stress affected memory, general health, and immunity to future disease (McCance & Huether, 1998).

## After Vietnam

Soldiers often returned home 24 hours after leaving Vietnam, returning to a lifestyle that was now foreign. A year was missing from their knowledge as members of normal, routine American society; more than a year of wisdom was added to veterans' lives that most others will never know. There are circumstances that will always be stressful. The director combined movie magic with his personal experience in Vietnam to present stress honestly and realistically to the public. Stone described the relationship between Vietnam, the movie *Platoon*, and stress as "The worst nightmare I ever had about Vietnam was that I had to go back … I woke up in a sweat, in total terror" (Disney Enterprises, Inc., 2000). As a Vietnam veteran of the Tet Offensive, 1968-69, I have shared that feeling.

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# Alcoholism and Aggression in *Leaving Las Vegas*

### Jeremy Nicolarsen

*Creighton University*

Fifty percent of sexual assaults and other violent crimes are committed by intoxicated individuals (Myers, 1998). When examining an individual's reaction to frustrating situations while under the influence of alcohol, a person can better understand alcohol's effects. In frustrating situations, a sober individual will often react differently than an intoxicated individual because of alcohol's effect on the nervous systems that control aggression (Myers). Watching a movie provides an avenue for observing simulated alcohol related aggression.

The movie *Leaving Las Vegas* (Fischer, Simone, & Markus, 1995) illustrates alcohol's contribution to increasing an individual's susceptibility to reacting aggressively to frustrating situations. Specific scenes from the movie provide numerous examples. The direct effect of alcohol on an individual's behavior and the increased aggression caused by consuming alcohol will be defined in this essay by first summarizing the movie, then relating aggression to alcoholism, and finally by comparing alcoholism and aggression to the movie.

## Reel Review

*Leaving Las Vegas* is the story of an alcoholic's decline as his addiction to alcohol takes control of his life and he becomes increasingly physically dependent on the drug. As the main character Ben, played by Nicholas Cage, becomes completely controlled by alcohol, his life deteriorates. Eventually, he travels to Las Vegas to drink himself to death. Through the intervention of a Las Vegas prostitute, played by Elisabeth Shue, Ben lives out the last weeks of his life with some purpose and comfort.

The movie begins with a glimpse into Ben's daily life—full of binge trips to the liquor mart, early visits to the bar, and the occasional "shakes" that he gets if he does not have a drink. Ben gets fired from his job and leaves for Las Vegas with nothing but some bottles and the clothes on his back. After checking into a hotel, he proceeds to buy and consume alcohol in large quantities throughout the day. Ben meets a prostitute named Sera and instead of paying her for sex, Ben pays her to talk to him. Ben continues on his downward spiral of binge drinking in spite of his new connection with Sera. When Sera invites him into her home, he says to her, "You can never, ever ask me to stop drinking" (Fischer, Simone, & Markus, 1995). This statement demonstrates Ben's devotion to the drug, regardless of any relationship he has with Sera. Ben continues to drink and eventually dies from alcohol-related complications.

## Aggression and Alcoholism: A Hand-in-

## Hand Relationship

In *Leaving Las Vegas,* Ben reacts aggressively to frustrating events. According to Myers (1998), alcohol influences the neural systems that control aggression. Alcohol decreases inhibitions to the extent that an individual judges his or her own actions as acceptable. The individual may act more aggressively under the influence of alcohol than in a sober state. However, alcohol is only one factor that leads to increased aggression; it is not always the exclusive cause of aggressive acts.

What is aggression? Aggression is any behavior intended to hurt or destroy (Myers, 1998). Ben demonstrated aggression when he became frustrated while drinking. His acts can partly be explained by the frustration-aggression principle. The frustration-aggression principle asserts that frustration creates anger, which in turn generate aggression (Myers). For example, in some cases involving professional soccer, frustration at losing a game can create anger in fans who then react with force against other fans or an official (Myers).

In violent soccer games, alcohol is usually a factor. Recall that alcohol decreases an individual's inhibitions so that his actions become acceptable in his eyes. Reacting to a bad call or a loss by directly inflicting harm on someone or something may be acceptable to an intoxicated fan, whereas these actions may be unacceptable to a fan who is sober. Research indicates combining alcohol with frustration increases an individual's susceptibility to aggression. Under frustrating conditions, alcohol intensifies aggression from a moderately intoxicated person versus a sober person (Gustafson, 1991).

Research findings indicate that not just any type of alcoholic beverage promotes aggression when combined with frustration. Beer and wine do not increase aggression (Gustafson, 1991). In another experiment, an "aggression machine," originally designed by Buss (1961), was modified to measure active, direct, and physical aggression of intoxicated and non-intoxicated participants (Gustafson). The machine monitors a participant's reactions to a partner's performance on a general knowledge test. An intoxicated participant is paired with a partner who takes the test. Investigators tell the intoxicated participant that he will receive a monetary reward if his partner does well on the test. The participant is to respond with either an uncomfortable electric shock (aggressive alternative) or a comfortable vibration (non-aggressive alternative) to his partner's answer. The partner taking the test is instructed to give the wrong answer to the question and decrease the intoxicated participant's chances of winning money. Thus, aggression is monitored by examining reactions to the partner's incorrect answers. These reactions are compared to reactions of a sober participant. All versions of Buss's "aggression machine" demonstrate that moderate alcohol intoxication (0.6 to 1.3 ml/kg) tends to increase human physical aggression (Gustafson).

In summary, an instance of frustration can spark aggression in an intoxicated individual. For example, losing a hand in a casino can be a frustrating event, even for a sober person. When alcohol is part of the context, the individual is more prone to an aggressive reaction. *Leaving Las Vegas* depicted instances of reacting aggressively because of alcohol. The next section illustrates an aggressive act in the movie.

## The Big Picture:

## A Comparison of Movie and Topic

In *Leaving Las Vegas,* Ben's frustration reached a pinnacle when he began losing hands at the Blackjack table. He had been drinking incessantly and, when

approached by a bar maid offering another drink, he ordered a Bloody Mary. The bar maid tells him she will get him the drink, and suddenly Ben reacts violently. He shoves the bar maid and she falls, breaking glasses. He upturns the Blackjack table while screaming and begins to hit the table, making more and more commotion with every punch. Sera attempts to calm him but fails. A group of security guards pull Ben from the table and escort him outside.

This casino scene is uncharacteristic of Ben's usual actions, but very characteristic of how alcohol can contribute to aggression. Throughout the movie, Ben is rather docile, even when drunk. However, his frustration with losing combined with alcohol trigger a violent reaction. Alcohol is a depressant, thus explaining an intoxicated individual's calm demeanor. Behind this harmless visage, though, is the possibility of a violent reaction if the individual also experiences a frustrating event. Frustration coupled with these alcohol-affected neural systems can result in aggressive reactions that are often violent.

## Conclusion

Alcohol use, combined with frustration, has an impact on behavior. This combination can lead to a greater susceptibility for an individual to react aggressively to a situation. As depicted in *Leaving Las Vegas*, a calm individual under the influence of alcohol may erupt in a violent and unpredictable display of emotion if frustrated.

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## *Remember the Titans:* Contact and Intergroup Relations

Stephanie Lian Anderson

*University of Nebraska at Kearney*

*Remember the Titans* (Bruckheimer, Oman, & Yakin, 2000), a recent movie starring Denzel Washington, is based on a true story. In 1971, tension between White and Black residents of Alexandria, VA peaked. In July of the same year, a White storeowner killed a Black teenager, infuriating the Black community. The decision to consolidate an all-White school and an all-Black school into T. C. Williams High School angered White residents who opposed busing and integration. In addition, the school board hired a Black man, Herman Boone (played by Washington), as head coach of the T. C. Williams football team, the Titans, to replace Bill Yoast (played by Will Patton), the school's very successful and well-liked White coach. Yoast was then demoted to assistant coach.

The movie depicts the progress of the Titan football team through the season, focusing on Coach Boone's efforts to improve relations between the White and Black players. By the end of the season, the Titan football team, players and coaches alike, as well as the community, demonstrate harmonious intergroup relations. This film illustrates several psychological concepts, including blatant prejudice and stereotyping, as well as intergroup contact and its consequences.

Several authorities have asserted that contact between groups can improve relations. Allport (1954) proposed contact hypothesis asserted that intergroup contact will lead to an increase in liking and a subsequent reduction in prejudice when the individuals of different groups are of equal status, are in pursuit of a common goal, and are on cooperative rather than competitive terms. Amir (1994) expanded on these three factors, also noting that intimate contact, rather than superficial and normative support, such as that provided by public figures or institutions, are also important in determining the outcome of intergroup contact. The contact hypothesis, a guiding principle behind the Supreme Court's 1954 decision to abandon segregated schools, has not always resulted in more favorable race relations and attitudes; the conditions under which desegregation occurred were rarely those specified by the contact hypothesis deems necessary (Cook, 1985). But in the movie, the success of the Titan football team reflected vastly improved inter-

group relations and provided a model for what desegregation aims to achieve.

At the beginning of the movie, Washington's character, Coach Boone, prepared to take his new team on a preseason training camp. Two White players approached Boone before boarding the bus. Gerry Burtier, the team captain and star player, informed Boone that only a few positions were available for Black players; the rest were already filled by White athletes. Boone immediately asserted his authority as a coach by ridiculing Burtier's attempt to direct him, making it clear that as coach, he was in control. Because Boone was emphatic that the best athletes would play, regardless of race or previous accomplishments, all of the players were on even ground, possessing equal power and importance within the context of the team. Thus, the equal status condition of the contact hypothesis (Amir, 1969) was met.

Immediately after the previous incident, Boone formed pairs consisting of one Black player and one White player each, informing the athletes that the individual with whom he was paired would be his roommate for the remainder of the trip. Later, Boone required players to spend time getting to know the other memmber of the pair—their likes and dislikes, family life, and so on—and reporting back to him. Whereas this close contact first provoked fighting and insults between players, the players begin to look beyond skin color and learn to appreciate, or at least tolerate, differences. The intimate contact that these experiences provided the players was one of the essential factors that ultimately led to positive intergroup relations (Amir, 1994).

Cooperation, another one of the major influencing variables (Allport, 1954; Amir, 1994), was also present on the Titan football team. After a few days at camp characterized by poor relations between White and Black players, Boone led the team on an early morning run. He stopped when he reached a cemetery and informed the players that they were standing on the site where the Battle of Gettysburg was fought, warning his team, "if we don't come together … we, too, will be destroyed." The players realized that they were in pursuit of the same goal—a state championship—a goal that became much more tangible after the first few wins of the season. Not only did the players realize that they were in pursuit of a common goal, but they also became aware of the superordinate nature of their goal. In the classic Robber's Cave experiment, Sherif (1956) pointed out that in order to win the players had to work together for the good of the team rather than for individual rewards.

Toward the end of camp, Burtier—the team captain—assumed a position of leadership, demanding that a White teammate pull his weight for the good of the team. Later in the film, Burtier asked for permission to cut a member of the team who was purposely missing blocks for Black teammates. Under Burtier's leadership, players realized that they were after the same goal, and they become aware that competition within the team was detrimental to achieving the goal.

Normative support constitutes the final factor that contributed to improved relations between Black and White players in the film. Although the school as an institution outwardly supported desegregation, individuals within the system did not initially support integration, nor did the community. However, the Titan team's immense success—winning a total of 13 games and eventually capturing a state title and a national runner-up title—promoted school spirit, which led to a gradual change of heart within the community. Members of the community began to look past their differences. Evidence for this change in normative support, which increased the likelihood of positive intergroup relations (Amir, 1994), was especially salient after big wins. After winning the regional title, a police officer stopped to congratulate Julius, a Black player, on an excellent game, and Boone's all-White neighborhood greeted him with cheers upon his arrival. A final source of support came from Yoast, who asked Boone for help in front of the entire team during the state championship game. Intergroup contact was thus viewed as appropriate, even necessary, when endorsed by authority figures.

*Remember the Titans* provides an excellent model for school desegregation, and it demonstrates how the contact hypothesis can be used to foster positive intergroup relations. The screenplay, based upon the 1971 Virginia state champion football team, the T. C. Williams Titans, illustrated the same conditions upon which the contact hypothesis relies: intimate contact between equal status individuals, pursuit of a common goal, cooperation, and normative support. As indicated in the movie and by the success of the actual Titan football team, contact can lead to a reduction in prejudice by allowing individuals to look beyond differences. As Gerry Burtier, near the end of the movie, told Julius, "I was afraid of you, Julius. I only saw what I was afraid of. Now I know I was only hatin' my brother." Contact between groups under certain conditions can lead to positive intergroup relations.

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## Malingering: As Depicted in *Primal Fear*

Claire S. Kaura

*Creighton University*

We often hear the saying, "There is more to a person than meets the eye." Aparently, Martin Vail in the movie *Primal Fear* (Hobbit, 1996) did not act on that expression. Vail, portrayed by Richard Gere, is a high-powered, fast talking attorney defending 19-year-old altar boy, Aaron Stampler played by Edward Norton, in Chicago's "trial of the century." The innocent face, boyish look, and stutter of the altar boy appeared innocent to Vail. When asked by a co-worker what Stampler looked like, Vail replied by saying, "a Boy Scout." This characterization turned out to be a classic example of why many people say "looks can be deceiving." What Vail later learned was that Stampler apparently suffered from dissociative identity disorder. However, the movie took a surprising twist at the end when Vail came face to face with the truth. Aaron Stampler pretended to suffer from dissociative identity disorder to receive a verdict of "not guilty due to insanity," which resulted in avoiding the death penalty. This deceptive act portrayed by the character is known as malingering.

What is malingering? As defined by the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV*) (American Psychiatric Association, 1994), malingering is the generation of false or exaggerated symptoms of phys-ical or psychological conditions created for external gain. According to the *DSM-IV* (1994) a diagnosis of malingering is especially likely when any of the following conditions is present, there is a medico-legal context involved, for example a clinician examines an individual at the request of an attorney. In *Primal Fear,* the viewer discovers this condition when Martin Vail has Stampler examined by a psychiatrist. If the presence of antisocial personality disorder is suspected, malingering may then also be a possibility (*DSM-IV*). The presence of antisocial personality disorder was not illustrated with Stampler but rather with "Roy," which will be part of a later discussion. Some viewers can argue that malingering is clearly depicted in this movie as Stampler displays dissociative identity disorder by feigning to have another personality, Roy. By claiming this disorder, Stampler tried to avoid the consequences for his actions, the murdering of the archbishop.

The audience's first glimpse of Stampler is one in which he is covered with blood, running frantically away from police officers. Eventually, police take Stampler into custody and charge him with the murder of the arch-bishop, thus setting the stage for the remainder of the movie. The first thought that most viewers have is, "Did the 19-year-old commit the crime?" Initially, Stampler claims that besides him, there was a third person present in the room in which the archbishop died, however, Stampler cannot remember who the third person was because he "loses time." Vail calls in a psychiatrist to evaluate Stampler's amnesia.

The psychiatrist, Dr. Arrington, provokes Stampler to talk about his girlfriend, and Stampler becomes mildly upset and begins to tell the doctor that he does not want to talk about his girlfriend. Next, Stampler forcefully snaps at Dr. Arrington, using language and a tone not heard before, almost as if it were someone other than Stampler speaking. The doctor is surprised when she sees this sudden change in the usual shy, stuttering, Stampler. This scene is short-lived, and the full character of the alter personality is unveiled when Vail taunts Stampler into telling him the truth so he can win the case. Stampler becomes quiet, looking as if he is frustrated, and then reverts to bad mouthing, violent Roy, as he calls himself. He says that, "Aaron didn't kill anyone, he didn't have the guts too, but 'I' on the other hand did." Stampler turns violent, even attacking Vail, but the debut of Roy comes to an end as Dr. Arrington returns and calls out to her client, Aaron, bringing back the altar boy depicted earlier in the movie.

Both the psychiatrist and Vail are convinced that Stampler does indeed suffer from dissociative identity

disorder. The disorder is characterized by an individual having two or more distinct personalities, each containing its own set of behaviors, cognitions, and feelings (Comer, 1998). Stampler gives all indications he is suffering from this disorder when he pleads his innocence. Stampler says he has no idea what happened in the room in which the archbishop was killed, thus we are led to believe that Roy committed the malicious deed of murdering the archbishop.

Vail attempts to convince the jury that Stampler should be found "not guilty due to insanity." To defend Stampler's innocence, Vail states that Stampler is not responsible for the murder of the archbishop, but rather Roy, over whom Stampler has no control, is responsible. This conclusion is confirmed during the final courtroom scene in which the last transformation of Aaron into Roy comes as Aaron testifies, claiming that he does not know someone named Roy and that he did not murder the bishop. As the prosecutor begins to mock the idea of Stampler having another personality, Roy, Stampler first anxiously moves his hands, then places his hands on his forehand, and in an instant becomes Roy. Because Stampler seems to suffer from dissociative identity disorder, the jury decides that he is "not guilty due to insanity." As a result, the court places Stampler in an institution where he can receive treatment and released once his condition improves.

Just as the audience thinks the story is complete, the movie depicts more about Stampler. As Vail bids his final goodbye to his client, Stampler discloses that there never was a Stampler, but rather only Roy. The creation of a bashful, naive Stampler was a scheme conjured up by Roy to mislead those involved in his trial. This discovery is ironic because one of the first statements about Stampler that the prosecutor made to the jurors was, "… do not be fooled by the defendant's innocent appearance and demeanor." With the truth revealed, viewers learn that a dissociative identity disorder never existed. Everything done was a bogus act created by the mind of a murderer.

Although the movie exposes Roy to the audience for only a limited amount of time, viewers can suspect that Roy had an antisocial personality disorder because he performed acts that were grounds for arrest, cons others through lies, is irritable and aggressive, and when the jury votes him "not guilty," he chuckles, showing no remorse for his actions. These behaviors of Roy meet several criteria for a diagnosis of antisocial personality disorder according to the *DSM-IV*. The criteria for antisocial personality disorder also includes that the individual be at

least 18 years of age. Aaron was 19-years-old. Another criterion for the disorder is that the individual with antisocial personality disorder had a conduct disorder onset before the age of 15 years *(DSM-IV,* 1994), but we do not know whether Roy met this criterion. One might speculate that Roy really had antisocial personality disorder but because of a lack of information we are, not able to make a final conclusion, but on the other hand, we can say with confidence that Roy feigned his illness of dissociative identity disorder. The movie portrays malingering to its fullest extent because Stampler gets others to believe that he is suffering from a medical condition, in this case dissociative identity disorder, to free himself from the consequences resulting from his actions.

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## *A Few Good Men:*

# Handling the Truth About Obedience and Operant Conditioning

Paul M. Hruby

Creighton University

Most movies incorporate psychological concepts but in few are these concepts as crucial to the plot as in *A Few Good Men* (Reiner, 1992). Although not readily apparent, this movie uses concepts concerning obedience and operant conditioning to understand the mechanisms behind a young Marine's murder and, eventually, to relieve the accused of the responsibility for his death. *A Few Good Men* is an accurate and frightening portrayal of external psychological forces and the power they can yield.

*A Few Good Men* focuses on the Naval trial of two U.S. Marines: Private First Class (Pfc.) Lowden Downey and Lance Corporal Harold W. Dawson. The Marines charge Downey and Dawson with the murder of Pfc. William Santiago, a below-average Marine. Prior to

Santiago's death, Downey and Dawson's platoon commander, Lieutenant (Lt.) Jonathan Kendrick, ordered them to shave Santiago's head as punishment for poor performance, a disciplinary engagement classified as a "Code Red." The two men obeyed Kendrick's orders by stuffing a rag in his mouth to keep him quiet before they shaved his head. Downey and Dawson were unaware that Santiago had a severe coronary condition that caused his lungs to bleed when the rag was put in his mouth; Santiago died one hour later. Downey and Dawson were subsequently taken into custody.

The resulting trial's purpose was not to discover whether Downey and Dawson had directly caused Santiago's death because the two had readily confessed to their actions. Rather, the dispute about accountability. The jury needed to decide whether the men could have refused the Code Red order. Through Kendrick's responses on the witness stand, viewers discovered that men under his command were not permitted to disobey orders. Kendrick's testimony, along with that of other witnesses, demonstrated to the jury that Marines such as Downey and Dawson must follow orders or face severe consequences; the two Marines had no choice but to give Santiago a Code Red. Having reached this conclusion, the jury acquitted Downey and Dawson of the murder charges.

The psychological sources of pressure on Downey and Dawson consisted of the concepts of obedience and operant conditioning, a common means for behavior modification (Hockenbury & Hockenbury, 1997). Stanley Milgram's classic experiments on obedience help illuminate the reasons for involvement in potentially harmful acts. For example, Milgram (1974) found that obedience is highest when the person giving orders is close at hand. In the film, Downey and Dawson essentially lived with their superiors. Obedience is also elevated when a prestigious institution supports the authority figure and when people perceive this person's authority as legitimate (Milgram). Likewise, the U.S. Marine Corps supported Downey and Dawson's superiors, and these superiors held prestigious positions. Lastly, Milgram found that people have an extremely difficult time disobeying commands when there are no role models for defiance. In the Marine Corps, conformity is an intrinsic and an arguably essential quality. Deviation from the norm is quickly disciplined and eliminated, as illustrated by the use of Code Reds. According to Milgram's experimental data, Downey and Dawson were unlikely candidates for defiance. Finally, Milgram's findings even led to the discovery that, when "kindness and obedience [were] on a col-

lision coarse, obedience usually won" (Myers, 1999, p. 501).

Initially, Dawson was friendly to Santiago, but Dawson quickly grasped that obedience preceded benevolence. We can understand Dawson's change in perspective with principles of operant conditioning. Marines, under the command of Lt. Kendrick, were taught to follow orders through the disciplinary use of Code Reds. A specific example was the "Bell incident," in which Kendrick gave Dawson an order to make sure Private Bell received only water and vitamin supplements for a period of seven days. Dawson snuck food to Private Bell during the designated disciplinary period, thereby disobeying Kendrick's order. After Kendrick learned about the subversion, he gave Dawson a below average conduct report and thus prevented Dawson's promotion to full Corporal. This action was taken to reduce the occurrence of Dawson's disobedient behavior. Kendrick's aversive action was punishment of Dawson's behavior. Dawson learned about the advantages of following orders; he knew that if he disobeyed, he would be punished again. Both Downey and Dawson were effectively shaped to follow the rules of the Marine Corps through the use of Code Reds.

The Code Red that led to Santiago's death is the main illustration of operant conditioning in the movie. Santiago was a below average Marine. He lagged behind on runs, failed to finish obstacle courses, and was unable to perform many other standard tasks required of a U.S. Marine. In addition, Santiago broke the chain of command through an unauthorized offer of information about an illegal fence-line shooting. To persuade Santiago to apply more effort into his duties as a Marine and to obey the chain of command, Kendrick told Downey and Dawson to shave Santiago's head. Shaving is an aversive stimulus to weaken Santiago's aberrant behavior. Santiago failed to learn from this operant conditioning and died because of manner in which the punishment was administered.

That Downey and Dawson followed the Code Red order illustrates the powerful effects of operant conditioning. The two men had previously deviated from orders and had been punished, thereby weakening their defiant behavior. They learned that they could follow the order of a superior or disobey it and receive an aversive stimulus. Although Code Red was potentially harmful to Santiago, Downey and Dawson did not recognize it as such. Instead, they saw Code Reds as mere institutionalized nuisances and so followed orders to avoid the fore-

seeable consequences to themselves

*A Few Good Men,* to put it simply, is an excellent movie. This lofty description is not only credited to the movie's entertaining plot and excellent cast but also to its vivid and accurate illustration of psychological implications in a real life situation. Although the movie's writers concerned themselves with making a movie that closely resembled life in the Marine Corps, they probably did not make a conscious effort to incorporate the psychological concepts of obedience and operant conditioning. The Marine Corps was an ideal setting for the expression of these concepts.

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## Freudian Personality Traits in

## *The Devil's Advocate*

### Khurrum S. Sheikh

*Creighton University*

Ambition, drive, and materialism are common American values. Keanu Reeves's character, Kevin Lomax, depicted those traits in the movie *The Devil's Advocate* (Hackford, 1997). Kevin is a hotshot lawyer from the south, who gets the opportunity to practice law in the New York City. He is a success in the courtroom and never loses, no matter how distasteful the crime or how guilty the defendant. He moves to New York City with his wife, Mary Ann, played by Charlize Theron, where they meet his new boss John Milton, played by Al Pacino. Kevin is asked to defend a wealthy real-estate developer who is accused of three brutal murders. Kevin loves the challenge, but his wife does not like living in the big city and wants them to return to their home in the south. She tells Kevin that nothing is as it seems, but new surroundings dazzle him, and he compulsively continues his pursuit of being a winning lawyer.

During the movie, Kevin's attitude toward being a lawyer changes. He begins to focus only on the pleasures of life. He acts according to the id and lacks a superego. He does not think about his actions or what is ideal for him, his wife or friends, but he only pursues what satisfies him. The id is a Freudian term used to denote instinctual needs, drives, and impulses. The id operates according to the pleasure principle seeking immediate gratification (Comer, 1998).

Kevin displays money orientation and mentions money before defending anyone. Money is the first thing he mentions when presented with a case, instead of asking how he can help the individual. Kevin also begins smoking, which he had previously quit, and his wife asked him not to resume. A person could view behaviors as a sign of oral fixation. He becomes fascinated with objects in his mouth, such as cigarettes. Oral fixation according to Freud is characteristic of the id personality. He loves his new house, his office, the status of his job, and who he has become. He indulges in the sins of the city and acts as if motivated by whatever feels good.

Kevin displays all the traits of an id character. One example is his obsession with one of his co-workers. Kevin is very sexually attracted to her and while sleeping with his wife fantasizes about sleeping with the other woman. In another instance, even though his wife distinctly asked him not to leave her at a company social gathering, Kevin leaves to spend time with the co-worker. His pleasure seeking is the focus of his actions.

The movie also depicts the actions of the ego. The ego negotiates between the id and the world using the reality principle, which is the knowledge an individual uses to distinguish among dangerous events (Comer, 1998). The ego is a moderator. John Milton, played by Al Pacino, the devil in the movie, characterizes this personality characteristic. Most viewers might assume that the devil in this movie would portray the id characteristic. The devil is the one who is historically paired with pleasure, desires, and impulses and would obviously fit the id criteria. However, in this movie John offers Kevin opposing options. Throughout the movie John asks Kevin to explore both of his actions before settling on one. John consistently gives Kevin a way not to pursue the pleasures presented to him and do what is moral by societal norms. Kevin is always seeking gratification, and frequently does not listen to John's warnings and alternatives. Kevin is fueled to follow his desires, and thus fits

the id personality. Also, the name of the devil is John Milton, which gives a link to the author John Milton who wrote Paradise Lost in 1665. The devil in that story was a creative angel who had free will. Parallels in the movie are that Kevin can choose among scenarios on how to behave. Kevin chooses to follow pleasure.

For example, when Kevin's wife required more and more attention, John offered to take Kevin off the case. John said that Kevin's wife needed him and that she was weighing on Kevin's mind, which was more important than the case. Kevin responded with the brash remark that he did not want to hate his wife because she took him away from the biggest case in his career. Kevin continued to pursue the case, until he won it. This incident is another example of Kevin's motivation driven by the id, despite the attempt by John to alter his decision. Kevin is the id personality because he lives by what his desires want and what he will give him pleasure.

Another example of John representing the ego occurs when Kevin finds the loophole that his defendant could not have committed the crimes because he was having an affair with his secretary. Kevin knows that she is lying and is not an honest alibi but puts her on the stand to protect his client. Kevin is only focused on the gratification of winning and is willing to do so by any means. John mentions that Kevin does not have a strong case for his client and that now is time to lose his first case. John tells Kevin that he should not put someone on the stand that Kevin, himself, is not sure is telling the truth. However, Kevin knowingly puts a liar on the stand to save his record and reputation.

The final triad of Freud's personality structure is the superego. The superego grows from the ego and is the force that counters the objectionable id impulses. According to Freud, individuals identify with and incorporate their parents values and judge themselves against that standard. When people live up to these expectations, they feel good, and when they do not think or act consistently with those standards, they feel guilty. The two parts of the superego are the conscience and the ego ideal. The conscience is our reminder of whether an act is good or bad, whereas the ego ideal is the type of person for which we ideally strive to be (Comer, 1998)

Mary Ann, Kevin's wife, represents the superego. She tries repeatedly to pull Kevin away from all the wrongs she witnesses since their move to the city. She tells him that the wives of all the associates are corrupt and evil. They are fake and just focused on money, power, and status. She sees these qualities as a problem, and they do not agree with her principles. She is uncomfortable around John and urges Kevin to stay away from him. The most explicit example of Mary Ann as the superego occurs when Kevin's mother visits and does not like John. Mary Ann agrees with her and pleads with Kevin to return home with his mother. She values and tries to live up to the ideals of her husband's parents. Finally, she also strives for perfection and the ideal home setting. She constantly rearranges and redesigns the look of the house to create the most ideal home. Mary Ann strips the walls of one room because they did not match her ideal of principles and expectations. She represents the epitome of trying to remain good and to live up to the parent's wishes and ideals, while Kevin is focused on self-gratification.

According to Freud, the three parts of the personality—id, ego, and superego—are in conflict. Such conflict provokes us to act, think, and feel in contradictory ways (Comer, 1998). The movie depicts these contradictions and the characters representing the personality traits. Kevin does what he desires and what pleases him most, whereas John offers Kevin alternate solutions. Mary Ann shows Kevin that the true and only way to make decisions is on the basis of returning to the simpler life and to those ideals of his mother. Kevin wants pleasure. John also wants pleasure but tries to stay within the grips of reality and tries to show Kevin the dangers of his choices. Despite being the devil, John was a human in the real world. John lived as a person in typical living situations, but he had some supernatural powers. Mary Ann wanted to follow the ideal example set by her highest principles and those set by Kevin's mother. The characters in the movie demonstrated the contradictory predicaments an individual faces when trying to make decisions. Alas, only one of the three will eventually win, which leads to the predicament in the movie as well as that in life.

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# Psychologically Speaking:
# An Interview with Charles L. Brewer

## Emily Balcetis, Richard L. Miller, and Mark E. Ware

*University of Nebraska at Kearney*        *Creighton University*

*Charles L. Brewer received a bachelor's degree from Hendrix College after which he obtained MS and PhD degrees from the University of Arkansas. He also did graduate work at Indiana University and postdoctoral work at Harvard University and The University of Michigan. Dr. Brewer has been a member of the faculty at Furman University since 1967. Topics of particular interest to him include learning, memory, history of psychology, and research methods.*

*Dr. Brewer edited* Teaching of Psychology *for 12 years and co-edited the* Handbook for Teaching Introductory Psychology *and the* Handbook for Teaching Statistics and Research Methods. *He also published numerous articles and book reviews. He has presented many invited addresses on teaching at regional and national professional conventions. Dr. Brewer's contributions to psychology organizations have been extensive, including service as president or chair of several national and regional groups. Currently, he is a member of the Board of Directors of the American Psychological Association.*

*Dr. Brewer visited the University of Nebraska at Kearney (UNK) and gave a keynote address at the Joint Convention of the Nebraska Psychological Society and the Association for Psychological and Educational Research in Kansas in November, 2000. Emily Balcetis, a UNK senior psychology major, organized and led the interview. Dr. Richard Miller, Professor of Psychology at UNK and Dr. Mark Ware, Professor of Psychology at Creighton University in Omaha, NE also participated in the interview.*

## Influential Teachers

**Balcetis:** I'm familiar with your presentation, titled "Bending Twigs and Affecting Eternity," in which you discussed people who played a significant role in your education. Could you talk specifically about people who influenced you to become a psychologist?

**Brewer:** I will be delighted to do that, because several wonderful people influenced me to become a teacher and a psychologist. First, there was Miss Laverne Kennaway, my third grade teacher. Something about being in her classroom was fascinating. She was a friend of my family, and I often went to her class in the morning when I was about 4 years old. I hadn't even started school, but going to her class was exciting.

Much later, I encountered several other outstanding teachers, the most important of whom was Dr. John Anderson at Hendrix College in Conway, Arkansas. I was thinking about majoring in history, English, political science, or philosophy, but I wasn't sure which. Being a sophomore, I had to make a decision by the end of that school year. Then I took General Psychology with Dr. Anderson. He was an exemplary teacher, and his course changed my life; it prompted me to decide not only to be a teacher but to teach psychology—and that's where it started.

I had another marvelous teacher when serving as an apprentice at Little Rock Central High School. Miss Emily Penton had a master's degree from the University of Chicago and taught history. She was one of the best teachers I've ever seen.

In graduate school at the University of Arkansas, I worked with Dr. Hardy Wilcoxon and Dr. Donald Kausler, who were both rigorous teachers and good researchers. Those were a few of the people who influenced me as a teacher and stimulated my interest in becoming a psychologist.

**Miller:** Let's go back a moment to Dr. Anderson, your undergraduate professor. Students at that stage get excited about different aspects of psychology. What aspect really convinced you that psychology was something you wanted to pursue?

**Brewer:** As I indicated earlier, I really couldn't make up my mind about a major in college. The way Dr. Anderson presented psychology made it seem like the ideal major, because it dealt with several other disciplines. There was biology, math, statistics, soci-

ology, and anthropology. Psychology was an attractive major, because it crossed so many disciplinary boundaries. Being uncertain about which of these I wanted to pursue, I could choose psychology and continue to pursue them all.

**Miller:** Psychology: A discipline for all seasons.

**Brewer:** Yes! I really believe that what interested me in the discipline was that it catered to so many of my interests. I must to tell you, however, that if I had studied with a less adroit teacher, psychology wouldn't have had the same fascination for me, even if it involved every discipline from art to zoology. I think it was psychology as practiced by this masterful teacher. Therefore, these two things probably interacted with each other. If I had a different teacher who did not stress that "everything is related to everything else," psychology probably would have appealed to me a lot less than it did with Dr. Anderson teaching it.

> *[Dr. Anderson] was articulate, always well prepared, very demanding, and he made you think.*

**Ware:** In what ways do you see him as a masterful teacher?

**Brewer:** He was masterful because he was articulate, always well prepared, very demanding, and he made you think. I worked harder in his courses than in any other courses I ever took, and my grades in his courses were not all As.

You may not want to use what I am going to say now in the interview, but it is a good story. I won a national teaching award several years ago, and the student newspaper at Furman reported it. The headline of the story was "Brewer Kicks More Academic Butt Than Any Faculty Member At Furman," which I thought was the supreme compliment. One of my former students, who is now a PhD clinical psychologist in Charlotte, North Carolina, saw that article and, in a note to me, she wrote what has become my mantra: "Brewer, leave no academic butt unkicked." Isn't that good?

Going to Hendrix College was good for me, because academic standards and expectations were high but attainable. I shall never forget how hard we worked for Dr. Anderson and for other professors, including Dean Buthman and Dr. Yates who taught history and political science. We worked feverishly, but the work was exciting, and we had fun doing it.

I have used the high academic expectations at Hendrix as my model all these years in my own teaching. As I mentioned earlier, these good teachers were always well prepared. Emulating them, I always try to be well prepared. I tell students on the first day of class that, if they will work as hard in my course as I am going to work, they won't have to worry about their grades.

**Ware:** Was it the challenge, that this was maybe one of the first intellectual challenges you faced, or the stimulation that was so appealing for you?

**Brewer:** No. I have had many intellectual challenges. In fact, I have been "intellectually challenged" for most of my life (laughter). It wasn't that by itself. I've had other rigorous professors, but they weren't nearly so articulate, engaging, stimulating, or interesting—but they were certainly challenging. So it's not just demanding the impossible, but it's doing it with flair, with grace, and with style. I like that approach and try to use it in my own teaching.

## Role of Research

**Balcetis:** If Dr. Anderson influenced your decision to become a teacher and to pursue scholarship, what motivated you to decide to do research? What were some of your research interests, and who helped you to decide to initiate some of those inquiries?

**Brewer:** That is an interesting question. As an undergraduate, I conducted two independent research projects in psychology. In those days (the early 1950s) undergraduate research in psychology was unusual. In your program now, of course, many undergraduates conduct research in collaboration with faculty members, present posters, and read papers at professional meetings. During my college years, these were rare experiences for undergraduates. Nevertheless, I took two independent study courses in which I conducted research in collaboration with a faculty member. My interest in research emerged during my junior year in college.

**Balcetis:** Those weren't required for your program but something you decided to pursue?

> *Sheer curiosity was a delightful aspect of doing research.*

**Brewer:** No, they weren't required. During my 4 years at Hendrix, I was probably the only student who took independent study courses in psychology. Research was fascinating because we were asking interesting questions and looking for equally interesting answers. Sheer curiosity was a delightful aspect of doing research.

Later, in graduate school, I was regularly in the laboratory working with Professor Kausler or Professor Wilcoxon. In addition, of course, I had to write a thesis for the master's degree and a dissertation for the PhD degree. I published an article in the *Journal of Experimental Psychology* before finishing my master's degree at the University of Arkansas. Seeing your name in print for the first time is thrilling, and I remember that feeling after all these years.

**Miller:** Let's go back for a moment to that first study as an graduate student. What was it about?

**Brewer:** It was about a topic that will now seem arcane. In those days, the Taylor Manifest Anxiety Scale, (TMAS) developed by Janet Taylor (later Janet Taylor Spence), was widely used as a measure of generalized drive state in the Hullian system. Essentially, we designed an experiment to test the hypothesis that high drive would enhance the learning of a simple task but would impair the learning of a complex task. As many other investigators had done, we used the TMAS to identify high-anxious students and low-anxious students.

In a factorial design, we gave these two groups of participants simple and complex learning tasks. As expected, we found that the high-anxious group did better on the simple task but less well on the complex task. Our findings were consistent with the notion that the TMAS was a measure of Hullian generalized drive state. In addition to confirming this hypothesis, our data also provided indirect evidence for the construct validity of the TMAS. As I said earlier, the experiment now seems obscure, and I have not seen one like it for decades. That was our first collaborative study and my first publication in psychology.

**Balcetis:** Was that a project you had pursued on your own.

**Brewer:** No, it was under the tutelage of Professor Kausler and Professor Philip Trapp, who was a clinical psychologist and an active researcher at the University of Arkansas when I was a graduate student there.

**Balcetis:** These research experiences you had, do you see any of them as something that you have taken with you and now incorporate into your own teaching style or your own style of working with students in undergraduate research?

**Brewer:** Oh, yes. When I went to Furman University in 1967, one of the first things I did was to write a National Science Foundation (NSF) equipment grant. When I arrived, we had very little laboratory space and no laboratory equipment. I wrote an NSF equipment grant in each of my first 5 years at Furman, and they were all funded. Once the laboratory was built up to a moderate level and students were doing lab work, then some of them got interested in doing research with faculty members.

After a few years, we sent some Furman students to the University of Virginia and the University of Michigan on summer research programs. After several more years, we had our own NSF research programs for psychology students at Furman. Early on, we wanted to involve undergraduates in the research process and, I can say in all modesty, we have been stunningly successful in getting undergraduates involved. The posters they present and the papers they read at student research conferences and at professional meetings are impressive. Like you in Nebraska, we have a bragging box at Furman where we post lists of all our students' research papers. People who see these get excited, because they realize that not all undergraduates have opportunities to conduct research of this quality.

> *… undergraduate research is an integral facet of education in psychology.*

Appropriate undergraduate research is an integral facet of education in psychology. Learning how to do good research is like learning how to drive a car. You can read every book that has ever been published on how to drive a car, but you don't learn to

drive a car until you drive a car. Similarly, you can read all the books on research methods and statistical analysis, but you learn how to do research when you do research. I discovered early in my career that the research you do is very different from research reports in published articles, and I try to convey this difference to my students. Research that you read about sounds sterile. Most articles are written in the same format. Readers get the impression that researchers simply go through the lock-step procedures from one step to the next to the next, and so on. Authors seldom tell readers how many times their procedure failed and they had to start over, or that they lost all their data in a computer crash.

**Balcetis:** I know about that.

**Brewer:** Until you conduct research, you don't understand what research entails, because you will not get the full story by reading published articles in psychology journals. Research is just not like that. One person (I think it was Joe McGuigan in his textbook titled *Experimental Psychology: Methods of Research*) said that doing research does not involve the ties, tails, and evening gowns that you read about in journals; instead, doing research is more like dirty blue jeans and sneakers. That is a good way to highlight the difference.

Doing research is not what you read about, because authors never write about all the problems they encountered. I try to convey realistic impressions of the research enterprise by getting students into the lab as soon as possible, usually in the second course in our curriculum. After General Psychology, our next course is a lab course in which students conduct two research projects and report them in proper American Psychological Association (APA) style and format.

**Ware:** You have spoken about some of the frustrations one encounters in doing research and that really does put one in touch with the reality of research. From your perspective, what are some of the joys, some of the satisfactions of research, the process and the product?

**Brewer:** Both the process and the product, when they turn out well, far outweigh the frustrations when things don't go well. The most exciting thing, after seeing your name in print for the first time, is that you had an idea about a particular hypothesis that nobody else has had. In testing the hypothesis, you

may have generated knowledge that is unique in the history of the world. Nobody else has learned this particular thing, which might be so mundane that nobody else gives a rip about it either. Nevertheless, you have learned something that nobody else has ever known.

> *In testing the hypothesis, you may have generated knowledge that is unique in the history of the world.*

Excitement generated by this process is not unique. I guess it's the excitement of discovery—the excitement of answering a question that nobody else has ever answered. For me, that's the thrill of doing research.

**Miller:** Let's go back to that very first lab course with your students. There are several models for how undergraduates become involved in the research process. Tell us a little bit about the mechanics of what you do. Who comes up with the question, and what is the involvement of undergraduates in that process.

**Brewer:** You must understand that my course is unusual. When I first started to teach, I taught a separate statistics course in the fall semester that was a prerequisite for the experimental psychology course in the spring semester. After a year of trying to teach statistics separate from research methodology, I vowed that I would never do that again. When you teach statistics separate from their application, students are not likely to understand why they are having to know and do the things you expect the to know and do. After that frustrating first year, I designed a 4-hour course that combines experimental methods and applied statistics. I have taught it that way for 36 years.

The course briefly covers research methods, descriptive statistics, inferential statistics through the factorial analysis of variance, correlational research, single-subject research, and quasi-experimental designs. Students write two papers in APA style and format. Armed with extensive handouts, they go to the lab on the first day of the term to begin an operant conditioning experiment that compares the effects of continuous and partial reinforcement on the extinction of bar pressing behavior in rats. The

second project, a full-fledged proposal of an experiment in an area of keen interest to the student, requires more independent thinking and independent work.

After reviewing the relevant literature, students write proposals as if they will actually conduct the experiment. In the results section, they speculate about the most likely outcomes. Here's the payoff! Many of these students will take my Learning course the next term. For the research project required in Learning, several students will refine their proposals from the previous course, collect and analyze the data, write up the results, and present posters or papers at student research conferences or professional meetings. More posters and papers probably result from that course than from any other psychology course at Furman. The reason is that you show students how to do it, you encourage their own individual thinking about a topic of interest to them, and then you send them to the lab to investigate their own hypotheses. That logical sequence is hard to beat.

But back to the course called Experimental and Statistical Methods. The course is demanding because students have to learn to read journal articles, they have to learn to write in APA style and format, they have to learn statistical analysis, and so much more. When I tell other psychologists that I cover all this in one course, they are incredulous. They insist that nobody can do all that in a 4-hour course in one term. I tell them that they are exactly right and that I have done it for 36 years! Incidentally, students who take this course seem not to suffer irreparable damage from the experience. Almost 200 of my students have earned PhD degrees in psychology, and not many of them have had the courage to report on the inadequacy of their background at Furman.

**Balcetis:** Going back to something you previously talked about—the advantages for students in starting research early in their undergraduate career. They can see their name in print and they know they are contributing knowledge to a field that is perhaps new to all of us. What are the advantages for faculty in having undergraduates as research collaborators?

**Brewer:** Let me remind you that my teaching career has been spent in undergraduate colleges. I have never taught or collaborated with graduate students. Frankly, I am pleased about that, because undergraduates seem more eager to learn. Graduate students have their own agendas. They may be working in your lab, but their dissertation research may be supervised by another faculty member. Demands on their time pull them in several directions.

By contrast, undergraduates are more docile. They are more likely to do what you tell them to do. The advantage is that faculty members get more research done with the help of undergraduates than would have been possible without this collaboration. I have never recruited a psychology major or a research collaborator, but I have been lucky to have had many excellent students ask to be research assistants or teaching assistants. I must admit, however, that we stack the cards in our favor at Furman. For example, a colleague and I conduct two sessions each year in which we discuss issues related to graduate school in psychology and related fields.

I always tell students that three important

> *… three important things [re] graduate school [admission], and those three things are research, research, and research.*

things will influence whether they get into a good graduate school, and those three things are research, research, and research. I mention research experiences of former students who have been admitted to outstanding graduate programs. One program in the southeast has the Charles Brewer Fellowship, which is routinely awarded to a student who has been my teaching assistant in the Experimental and Statistical Methods course that we discussed earlier. That person is then recruited by the graduate school to supervise its undergraduate statistics lab. They know that the person who has taken my course, which I remind you is impossible to teach the way I teach it, will be an excellent lab instructor for their undergraduate statistics course. I won't name of the university, but you would recognize it.

This is another advantage of Furman's approach to working with undergraduates. When students operate at this level, they learn that memorizing material and making As in courses are not the goals of education. That's another thing I tell them about graduate school. Many Furman students are compulsive grade grabbers. They come here expecting to go to graduate school, medical school, law school, or other professional schools at highly

respected universities. I tell them that graduate school has almost nothing to do with making As. In fact, making As in graduate school is sometimes considered to be a fault; if you are making As, then you are not spending enough time in the laboratory.

Back to research, research, and research. My students who have the most difficulty adjusting to a rigorous graduate program are those who think that making As is what graduate work involves. I try to dispel that notion by insisting that success in graduate school is about self-motivation, independent thinking, independent work, and "neurotic tenacity." These things are more important determinants of success in graduate school than is making As.

## Teaching Undergraduate Psychology

**Balcetis:** Let's talk a little more about teaching. Tenure requirements for beginning professors are rising. The amount of research needed is rising. How do new faculty members balance improvement of their teaching style with these other expectations for their professional performance.

**Brewer:** That is a splendid question, which has become more important in the last 10 years. Even small liberal arts colleges, which have traditionally emphasized teaching, now have research expectations. For example, two small colleges have recently asked me to evaluate the research contributions of psychologists being considered for tenure or promotion. Twenty years ago these liberal arts colleges would never have mentioned scholarship as being important for tenure or promotion. Expectations on that dimension have changed dramatically in the last 20 years, and even more noticeably in the last decade.

How would I advise young faculty members? First, decide what you want the major emphasis of your career to be. If you are a dedicated teacher and if you want to spend most of your time teaching, then don't go to research universities that consider teaching to be frittering away valuable time. Try to match your talents and aspirations as an academic psychologist with those of appropriate institutions. Second, once you get what you think is a good match, then be sure that you understand the criteria by which your performance will be judged. Your department is obligated to be as clear as possible about those expectations.

Incidentally, when I talk about this dimension in liberal arts colleges, I intentionally do not use the word research. I use the word scholarship, because research is considered by many to be empirical research conducted in a laboratory. I don't think that is the only kind of research that will enhance your status as an academic psychologist or as a teacher. For example, many research universities do not consider textbooks to represent research. Writing a textbook may even count against you, because it is a "secondary source," and these research factories are committed to creating new knowledge. That is perfectly asinine. A textbook may have more impact on generations of students than will an obscure research project that manipulates an obscure independent variable to learn about an equally obscure dependent variable. The published report of such a study may interest no more than three people, and those three people are probably in the same laboratory at the same research university. Do you understand why I distinguish between scholarship and research?

A third point concerns editing. Several people in Nebraska are excellent editors, but editing may not be considered an important scholarly activity by people who stress cutting-edge research. Some people consider editing, like writing textbooks, to be a waste of time. If editors were not editing, they could be doing "real psychology." I think that is a stupid conclusion.

Fourth, in addition to being clear about its expectations for new faculty members, a department has an equally important obligation to provide unambiguous and frequent feedback about the progress that faculty members are making toward tenure and promotion. In visiting scores of undergraduate psychology programs in North America, I have observed that many untenured faculty members don't know what they are expected to do. In addition, they are not getting enough information about their progress in meeting whatever the expectations are. People who want to improve the quality of instruction in their department should pay more attention to these things.

Some departments, unfortunately, don't give a rip about the quality of instruction. A former student of mine was teaching psychology in a major research university. The department chair told her that she had the highest student ratings in the department but that she was spending too much time on her teaching. What you need to be doing, he told her, is publishing more research articles and obtaining more grant money. Knowing that she was in the wrong place,

she left this prestigious department, and her career has flourished. Many major research institutions are now making a lot of noise about excellence in undergraduate teaching. Much of that rhetoric, I'm sad to say, is mostly intended for public consumption. These universities are not emphasizing excellence in teaching in their decisions about tenure and promotion. Research is still the basic criterion. Someone said that graduate deans can't read but they can count, and that comment makes the point convincingly. People in research universities will say otherwise, but I know better.

**Miller:** The sad thing is that many liberal arts colleges are beginning to follow this trend.

**Brewer:** Exactly. In my department at Furman, we insist that faculty members' scholarship (notice that I did not say research) must be visible beyond Travelers Rest, South Carolina, as I put it. They must be recognized beyond the local campus for their scholarship, which includes writing textbooks and editing. As you know, a move is underway to reexamine scholarship, and The Society for the Teaching of Psychology (Division 2 of the APA) is involved in redefining scholarship for the 21st century. That project, spearheaded by Diane Halpern, is a step in the direction that I think we should be taking. Changes in this commitment to research as the only criterion for academic respectability will occur, and I hope to live long enough to see them.

**Balcetis:** Could you talk about some of the APA's initia-

> *The Society for the Teaching of Psychology (Division 2 of the APA) is involved in redefining scholarship for the 21st century.*

tives to increase undergraduate research or scholarship?

**Brewer:** The APA has not put undergraduate concerns at the top of its list of priorities. For decades, indeed since the 1950s, the APA has been interested in national conferences on undergraduate education. Trying to champion the cause of undergraduate education in a recent meeting, I said to a distinguished group of national leaders, who were more interested in graduate education and professional issues: "You

may not consider undergraduate education important, but I don't know a single PhD psychologist who was never an undergraduate" (laughter). You got the point, didn't you?

I insist that if we don't have good undergraduate programs in psychology, then we won't have good PhD psychologists. In recent years, the APA has devoted more attention to undergraduate education. (I hope that my work may have had a little to do with that.) It now has a summer science institute that started at The Johns Hopkins University and then moved to The University of California at Berkeley.

The APA's Board of Educational Affairs recently appointed a Task Force on the Undergraduate Psychology Curriculum, and a roster of good people will be working on that. Another APA committee, Teachers of Psychology in Secondary Schools (TOPSS), has been stunningly successful. When we first started talking about this group, certain people in APA governance weren't eager to support it. I made an impassioned speech on the floor of Council and said "Almost a million students take high school psychology every year. The APA doesn't have another constituency that's anywhere near that large."

TOPSS has made remarkable progress. We now have National Standards for the Teaching of High School Psychology, which are as useful for teaching introductory psychology at the college level as they are for high school teachers. The standards in that document are good guides for teaching introductory psychology wherever it is taught.

Altogether, then, the APA has done a lot for education. Recent reorganization at APA is important. For example, the Education Directorate now has an Office of Precollege and Undergraduate Programs to complement its Office of Graduate Education and Training and its Office of Continuing Professional Education. Adding the Office of Precollege and Undergraduate Programs, with Barney Beins as the director, recognizes the importance of education in high schools and in 2- and 4-year colleges. I am delighted that APA finally acknowledges that education in psychology does not start in PhD programs; instead, it usually ends there.

## Improving Writing

**Balcetis:** You talked about the importance of editing as scholarship, and I know that you were the editor of the journal *Teaching of Psychology* (*ToP*) for a while. Could you talk about common mistakes that undergraduates or young faculty members make when they submit manuscripts?

**Brewer:** To be clear about this, I'm no longer the editor of *Teaching of Psychology*. My good friend Randy Smith is, and I wish him a long and happy life (laughter).

Common mistakes that undergraduates make are the same mistakes that experienced scholars in psychology make. They're mistakes that involve clarity, conciseness, and facility of expression. They're mistakes that involve grammar. They're mistakes that involve a lack of knowledge of the APA style and format. In short, mistakes that my undergraduates make are the mistakes that academic psychologists make.

As an editor, I was shocked by one surprising

> *Common mistakes … involve clarity, conciseness, and facility of expression.*

observation. When I first became editor of *ToP*, most authors submitted manuscripts in typewritten form. As more people used computers to prepare manuscripts, the quality of manuscripts decreased. I would've guessed just the opposite. I have a notion about why this happened, but I have no data whatsoever. Because authors know that corrections are so easy to make, they never get around to making them. They do a perfunctory spell check, print the manuscript, and submit it. By contrast, if you are typing a manuscript, then you are almost forced to scrutinize it for substantive content, as well as style and format, in ways that you will never do if you're just looking at it on a computer screen and never see a hard copy. Decreasing quality of manuscripts that accompanied increasing computer use was one of my biggest surprises as an editor.

**Miller:** An alternative explanation for the negative correlation between manuscript quality and the use of computers might be that along with the rise of computers there has also been an enlagement of the pool from which you solicit manuscripts. People who never would have tried to publish in the past, now may be feeling the pressure to publish. It may be a completely different set of authors who are submit-

ting manuscripts. Beyond what we've talked about concerning standards moving down, there's also the fact that it used to take a great deal of time. It's not the same anymore. As a result, people who never would have chosen to spend that much time on the endeavor might decide that they can do it now.

**Brewer:** That's a good point. For the two reasons that you mentioned, more people need to be writing articles and it's not easy to do. You probably remember how you drew graphs in the olden days. Now you can do it automatically on the computer. Before the computer became omnipresent, you either spent days drawing those graphs or you paid your own money to have them prepared by a professional. In the days when we created graphs with India ink and before erasable bond paper was available, we spent an inordinate amount of time typing the manuscript. Do any of you remember that far back? We sometimes spent weeks on the mechanics of producing a manuscript, apart from the creativity and time that went into planning the experiment, collecting the data, analyzing the results, and writing the manuscript.

**Miller:** Earlier you mentioned the APA publication manual. Is it really important to follow all of the detailed guidelines laid out in the manual?

**Brewer:** It is important to do that. For example, the APA form for citing references in the body of the paper and listing references at the end is the simplest and most efficient form that I've seen. I rejoice that we have it—and so should students. Using another form as an undergraduate, I had to retype countless pages when I was required to put references in footnotes at the bottom of a page. Do you remember that form? If you didn't leave exactly the number of lines required for the footnote at the bottom of a page, you had to type the whole page over and over.

**Miller:** Your comment that students should rejoice is great, because most readers of this interview would not naturally think about rejoicing in the presence of the APA style manual. People who didn't grow up in earlier times don't think of the alternative.

**Brewer:** Oh, I remember the alternative—trying to squeeze something in at the bottom of a page instead of retyping the whole page. In those days, a woman in the graduate school office was paid to sit with her ruler and measure every margin on every page. Universities still do that, but you are much less likely to get it wrong because you can set your computer to meet the requirement. When you had to put

footnotes at the bottom of a page, and you misjudged by one line, you had to type the whole page again. Remember that this was before we had erasable bond paper, and we used old-fashioned carbon paper. People now think that carbon paper is used for dating prehistoric animal bones. No! Carbon paper is for something quite different. Some of us in this room remember carbon paper.

## Strategies to Improve Writing

**Miller:**  Could you give one or two examples of techniques or strategies that will help students improve the quality of their manuscripts?

**Brewer:** First, when you think you have a final draft, print your manuscript and get someone to read it aloud to you. You will probably discover that many things that you thought were perfectly sensible are nonsensical. When you hear another person read what you wrote, you may not even know what you were trying to write. Hearing someone read your manuscript aloud, you will discover more things that need improving than you would discover if you just let it scroll on your computer screen 30 times.

Second, before submitting a manuscript to the editor, get somebody who is well versed in APA style and format to take a look at it. Like most experienced authors, students do not pay enough attention to those things, because they consider them mundane and irrelevant. Certain editors do not consider them mundane or irrelevant. The more polished your manuscript is when you send it in, the less work you will have to do on it later. Polish your manuscript before you submit it; don't expect reviewers and editors to polish it for you.

**Ware:**     Years ago, you wrote to a prominent psychologist who had many fundamental mistakes in his manuscript. Your comment to him was that the reviewers' judgment of the substance of a manuscript might be influenced by the sloppiness of an author's manuscript.

**Brewer:** Yes, that sounds like something I might have said.

**Ware:**    You may have something worthwhile to say, but, if it's cluttered in this noise, the point may never get across.

**Brewer:** That's exactly right. Reviewers will be irritated by sloppiness. They may assume that, if the author is paying so little attention to these details, then we should be suspicious of the substance of the author's manuscript.

Speaking of prominent authors, I must tell you this story about one of the world's foremost and most widely recognized psychologists. After rejecting this author's manuscript, I received a letter from him that was less than kind. The letter implied that the reviewers and I might not be competent to judge his work. I replied that I was completely confident that we were competent to judge his work and that I hoped he would keep our journal in mind for his future good work. I thought that ended the story, but I received another letter from this famous author several months later. He said that, after rereading his manuscript and our comments, he concluded that we were right in deciding to reject it. As you can imagine, my respect for this man increased considerably. That's the only time anybody ever thanked me for a rejection (laughter). Another version of that manuscript appeared in a different publication later, and it was a better article because the author incorporated our suggestions. That showed a lot of class for such a prominent writer to say, "I reread this manuscript, I reread your comments, I reread your rejection letter, and you were right." That was a high point for the editor and the reviewers.

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# Invitation to Contribute to the
# Special Features Section—I

Undergraduate students are invited to work in pairs and contribute to the Special Features section of the next issues of the *Journal of Psychological Inquiry*. The topic is:

# Evaluating Controversial Issues

This topic gives two students an opportunity to work together on different facets of the same issue. Select a controversial issue relevant to an area of psychology (e.g., Does violence on television have harmful effects on children?—developmental psychology; Is homosexuality incompatible with the military?—human sexuality; Are repressed memories real?—cognitive psychology). Each student should take one side of the issue and address current empirical research. Each manuscript should make a persuasive case for one side of the argument.

Submit 3-5 page manuscripts. If accepted, the manuscripts will be published in tandem in the journal. The Special Features section of the first issue of 2000 (pp. 48-52) contains an examples of the type of evaluation students may submit.

*Note to Faculty:* This task would work especially well in courses in which instructors have students debate controversial issues. Faculty are in an ideal position to identify good manuscripts on each side of the issue and contact students about submitting their manuscripts.

Procedures:

1. The postmarked deadline for submission to the next issue's Special Features section is December 15, 2001.
2. All manuscripts should be formatted in accordance with the APA manual (latest edition).
3. Provide the following information:
    (a) Names, current addresses, and phone numbers of all authors. Specify what address and e-mail should be used in correspondence about your submission,
    (b) Name and address of your school,
    (c) Name, phone number, address, and e-mail of your faculty sponsor, and
    (d) Permanent address and phone number (if different from the current one) of the primary author.
4. Include a self-addressed stamped envelope of proper size and with sufficient postage to return all materials.
5. Send three (3) copies of the a 3-5 page manuscript in near letter quality condition using 12 point font.
6. Include a sponsoring statement from a faculty supervisor. (Supervisor: Read and critique papers on content, method, APA style, grammar, and overall presentation.) The sponsoring statement should indicate that the supervisor has read and critiqued the manuscript and that the writing of the essay represents primarily the work of the undergraduate student.

Send submissions to:

Dr. William Wozniak
Department of Psychology
University of Nebraska at Kearney
Kearney, NE 68849

Notes:

# Invitation to Contribute to the
# Special Features Section—II

Undergraduate students are invited to contribute to the Special Features section of the next issue of the *Journal of Psychological Inquiry.* The topic is:

# Conducting Psychological Analyses

Submit a 3-5 page manuscript that contains a psychological analysis of a television program or movie. The Special Features section of the current issue (pp. 115-123) contains several examples of the types of psychological analysis students may submit.

**Option 1—Television Program:**

Select an episode from a popular, 30-60 min television program, describe the salient behaviors, activities, and/or interactions, and interpret that scene using psychological concepts and principles. The presentation should identify the title of the program and the name of the television network. Describe the episode and paraphrase the dialogue. Finally, interpret behavior using appropriate concepts and/or principles that refer to the research literature. Citing references is optional.

**Option 2—Movie Analysis:**

Analyze a feature film, available at a local video store, for its psychological content. Discuss the major themes but try to concentrate on applying some of the more obscure psychological terms, theories, or concepts. For example, the film *Guess Who's Coming to Dinner?* deals with prejudice and stereotypes, but less obviously, there is material related to attribution theory, person perception, attitude change, impression formation, and nonverbal communication. Briefly describe the plot and then select key scenes that illustrate one or more psychological principles. Describe how the principle is illustrated in the movie and provide a critical analysis of the illustration that refers to the research literature. Citing references is optional.

Procedures:

1. The postmarked deadline for submission to the next issue's Special Features section is December 15, 2001.
2. All manuscripts should be formatted in accordance with the APA manual (latest edition).
3. Provide the following information:
    (a) Names, current addresses, and phone numbers of all authors. Specify what address and e-mail should be used in correspondence about your submission,
    (b) Name and address of your school,
    (c) Name, phone number, address, and e-mail of your faculty sponsor, and
    (d) Permanent address and phone number (if different from the current one) of the primary author.
4. Include a self-addressed stamped envelope of proper size and with sufficient postage to return all materials.
5. Send three (3) copies of the a 3-5 page manuscript in near letter quality condition using 12 point font.
6. Include a sponsoring statement from a faculty supervisor. (Supervisor: Read and critique papers on content, method, APA style, grammar, and overall presentation.) The sponsoring statement should indicate that the supervisor has read and critiqued the manuscript and that the writing of the essay represents primarily the work of the undergraduate student.

Send submissions to:

Dr. William Wozniak
Department of Psychology
University of Nebraska at Kearney
Kearney, NE 68849